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INITIATION TO PHARMACEUTICAL OPIOIDS AND PATTERNS OF MISUSE: PRELIMINARY QUALITATIVE FINDINGS OBTAINED BY THE OHIO SUBSTANCE ABUSE MONITORING NETWORK

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Pharmaceutical opioid misuse has been recognized as a growing public health problem across the nation. To develop appropriate treatment and prevention programs, the population of pharmaceutical opioid abusers has to be well understood. This exploratory study is based on qualitative interviews with 24 people in the Dayton/Columbus, Ohio, area. Interviews were conducted for the Ohio Substance Abuse Monitoring Network, a statewide epidemiological surveillance system. Participants ranged in age from 18 to 48 years; the majority was White and male. To explain initiation and continued use of pharmaceutical opioids, participants discussed a number of different reasons, including self-medication of emotional and physical pain, legitimate medical prescriptions related to chronic pain management, social influences, recreation, and easy access to pharmaceutical opioids. On the basis of participant age and lifetime experiences with pharmaceutical opioid and other drug misuse, six user groups were identified that faced unique risks and prevention/treatment challenges. Research implications are discussed.

INTRODUCTION

In recent years, misuse of pharmaceutical opioids (e.g. Vicodin®, Percocet®, OxyContin®, etc.) has been recognized as a growing public health problem across the nation. The National Survey on Drug Use and Health indicates that the number of first time illicit users of pharmaceutical opioids increased from 600,000 in 1990 to about 2.5 million in 2000 (Substance Abuse and Mental Health Services

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Administration [SAMHSA], 2004). Research suggests that these recent increases in abuse are linked to growing medical use of pharmaceutical opioids (Gilson, Ryan, Joranson, & Dahl, 2004).

Pharmaceutical opioid misuse has been related to serious health consequences, including addiction, injection initiation, overdose, and death (Center for Substance Abuse Treatment, 2004; Siegal, Carlson, Kenne, & Swora, 2003; United States General Accounting Office, 2003). White and colleagues (2005) estimated that opioid abusers have direct health care costs that are about eight times higher than those of nonabusers. Pharmaceutical opioid misuse may have negative implications for legitimate and appropriate use of opioids, including stigmatization and undertreatment of pain (Merrill, Rhodes, Deyo, Marlatt, & Bradley, 2002; Zacny et al., 2003).

Previous studies have indicated that increased risk of pharmaceutical opioid abuse and dependence may be related to poor health and a history of pain management (Brands, Blake, Sproule, Gourlay, & Busto, 2004; Miller & Greenfeld, 2004) as well as illicit drug use and lifetime problems of substance abuse (Inciardi, Surratt, Martin, & Gealt, 2004; Manchikanti, Fellows, Damron, Pampati, & McManus, 2005; McCabe, Teter, & Boyd, 2005; Miller, 2004; Miller & Greenfeld, 2004; Potter, Hennessy, Borrow, Greenfield, & Weiss, 2004; Simoni-Wastila, Ritter, & Strickler, 2004; Zarba, Storr, & Wagner, 2005). Previous studies have suggested potential differences in pharmaceutical opioid misuse with respect to gender, age, and ethnicity, although clear patterns in demographic variation have yet to be established (Green et al., 2003; McCabe et al., 2005; Miller & Greenfeld, 2004; Peters et al., 2003; Simoni-Wastila, 2000; Simoni-Wastila & Strickler, 2004; Szwabo, 1993).

More research is needed to understand the population of illicit users of pharmaceutical opioids (Zacny et al., 2003). Existing research has typically used national and school-based surveys or medical records to identify demographic and clinical characteristics of pharmaceutical opioid misusers (Inciardi et al., 2004; Miller & Greenfeld, 2004; Potter et al., 2004; Simoni-Wastila et al., 2004; Simoni-Wastila & Strickler, 2004). Use of qualitative methodologies in the study of pharmaceutical opioid misuse has been limited. Qualitative methodologies can add new insights by revealing insider perspectives about illicit use of pharmaceutical opioids (Lambert, Ashery, & Needle, 1995).

This exploratory study uses qualitative data collected for the Ohio Substance Abuse Monitoring (OSAM) Network, a statewide substance abuse surveillance system that uses qualitative methodologies to provide an epidemiologic description of drug use over time throughout the state (Daniulaityte et al., 2004; Siegal, Carlson, Kenne, Starr, & Stephens, 2000). In 2003, the OSAM Network conducted a targeted response initiative designed to explore an increasing trend of pharmaceutical opioid

misuse in the state. This paper aims to provide a preliminary ethnographic description of initiation scenarios and variations in patterns of pharmaceutical opioid misuse among 24 individuals recruited in Dayton and Columbus, Ohio. The findings can help to inform prevention and treatment initiatives that address the growing trend of pharmaceutical opioid misuse in the United States.

METHODS

A convenience sample of 24 participants was recruited in two OSAM network research sites located in Dayton and Columbus. Outreach workers and other research staff who facilitated initial recruitment worked for other health research projects involving drug user populations and were familiar with the local drug scene. Chain-referral techniques were also used to recruit additional participants. An attempt was made to diversify the sample in terms of gender, ethnicity, and age. To be eligible for the study, participants must have self-reported illicit use of pharmaceutical opioids in the previous 12 months and have been at least 18 years old at the time of the interview. The study was approved by the University's Institutional Review Board, and an informed consent form was administered before all interviews.

The interviews were conducted in project field offices in Dayton and Columbus between February 2003 and May 2004. Each interview lasted approximately one hour. Interviews were open ended in nature, but an interview guide was used to make sure that issues related to the history of drug use, initiation to pharmaceutical opioids, and patterns of abuse, among other topics, were addressed. Participants were compensated \$20 per interview for the time they devoted responding to the questions.

All interviews were audiotape recorded and transcribed verbatim. Transcriptions were verified comparing the audiotape to the text. NVivo (QSR International, 2002), a qualitative data analysis software, was used to assist with consistent application of codes. The transcribed texts were subject to line-by-line analysis, and research codes were generated to index text that referred to specific themes. This process is called "open coding" in the grounded theory approach to the analysis of qualitative data (Strauss & Corbin, 1990). Open codes on topics relevant to initiation and patterns of prescription analgesic abuse were searched and compared, and text concerning relevant themes was summarized. All names used in this paper are pseudonyms.

RESULTS

CHARACTERISTICS OF THE STUDY PARTICIPANTS

Among the 24 individuals interviewed, 18 were White, and six were African American. The majority (16) were male. The participants could be grouped in two distinct generations of users. A younger group included 13 individuals between ages 18 and 23. A group of older users included 11 individuals in their 30s and

40s. Eleven participants reported they had some college education, and eight were currently enrolled in college. Three others had incomplete secondary education, and one was finishing high school. The rest had either a high school diploma or a GED. Current employment was reported by six participants, and three of them were also college students. Six participants were married or living as married; the rest were single, divorced or separated.

Eleven participants were currently in an outpatient treatment program for pharmaceutical opioid and/or heroin abuse. The sample included ten primary heroin users, four primary pharmaceutical opioid abusers, six marijuana, two crack, one powdered cocaine, and one primary Adderall® (amphetamine mixture) abuser. The majority (13) reported that OxyContin® (oxycodone controlled-release) was their pharmaceutical opioid of choice. Vicodin® (hydrocodone & acetaminophen) was reported by seven participants. The rest considered methadone tablets (1), Darvocet® (propoxyphene & acetaminophen) (1), Percocet® (oxycodone & acetaminophen) (1), and codeine tablets (1) as their pharmaceutical opioids of choice.

Besides their favorite pharmaceutical opioids, many individuals experimented with a number of different "pills," including Percodan® (oxycodone & aspirin), Lortab® (hydrocodone & acetaminophen), Ultram® (tramadol), Ultracet® (tramadol & acetaminophen), Dilaudid® (hydromorphone), Demerol® (meperidine), and others. Oftentimes, use of alternative forms of pharmaceutical opioids was determined by availability. The majority explained that their choices were also defined by potency, undesirable side effects, or different types of highs associated with specific pharmaceutical opioids. For example, Tina, a 48-year-old White woman, pointed out that she did not like Percocet® because she did not get the same kind of "speedy" high she got from Vicodin®: "My drug of choice was Vicodin® extra strength, and I only like the Watson's [generic brand] because they had the Tylenol in them. And when I did them, I liked that Tylenol rush."

Modes of administration varied depending on the pharmaceutical opioid type. TJ, a 20-year-old White man, shared his knowledge about OxyContin®: "You can get high either which way, shooting, snorting, taking them [orally]. Just take the coating off, so it's not time released, just put it in your mouth, get it wet, back of your shirt, rub it off. Once it turns white, it's good to go...." The majority (10) of the participants who used OxyContin® typically snorted it. Only one participant reported she preferred to "chew the tablets up." Three other participants reported they injected OxyContin® tablets dissolved in water. However, this practice was described as very tedious. Only those individuals who had prior experience with injection drug use had the courage to experiment with shooting OxyContin®. Three older users reported past experiences with intravenous use of Talwin® (pentazocine

& nalaxone), Dilaudid®, and some other pharmaceutical opioids, but these practices were described as relatively rare among current users.

Vicodin®, Percocet®, Darvocet®, codeine, Ultram®, Ultracet®, methadone tablets and some other currently abused pharmaceutical opioids were typically taken orally. Only a group of six younger individuals, all college students, reported that in some situations they preferred to snort these pharmaceutical opioids. Two of these young users reported that they tried to smoke marijuana laced with crushed pharmaceutical opioids. Typically, they were disappointed with the effects. TJ commented, “I’ve smoked Darvocet® before ‘cause someone told me it was supposed to be like crack. But I don’t think it was. It was just like, it tasted bad, and it was kinda just a head buzz, lightheaded.”

INITIATION TO PHARMACEUTICAL OPIOIDS

Participant age at first use varied between 12 and 35 years, but the majority (21) were in their teenage years at the time of their initiation to pharmaceutical opioids. About half of all participants reported that their experiences were limited to alcohol and marijuana at the time they first tried pharmaceutical opioids. Many of them reported that at about the same time they also initiated use of a range of other pharmaceutical drugs, including benzodiazepines, barbiturates, and/or amphetamines. All of these individuals reported that soon after their first experiences with pharmaceuticals, they tried other illegal drugs, typically hallucinogens and/or powdered cocaine. Five reported subsequent initiation to crack and/or heroin.

The other half of the participants were further along in their drug use careers at the time they first used pharmaceutical opioids. They reported prior experiences with hallucinogens, powdered cocaine, and in a few instances crack and/or heroin.

Three individuals considered that their initiation to the “pharmaceutical opioid high” occurred when they received treatment for legitimate medical problems. Brad, a 33-year-old White man, commented, “First pain pill I had, it was.... I had a surgery, and they gave me Vicodin®. And I was like at 14-years-old, I had appendicitis. And, ya know, I liked that, and sometimes I’d go in the hospital and fake pain, so I could get the narcotic.” Three other individuals commented that their initiation to pharmaceutical opioids occurred in the family setting. Robert, a 33-year-old African-American man, described his first use: “I was watching a movie with my stepsister, and she gave me some Ativan®, which made me feel real good. And then I took some pain killers, and I felt even better.”

More frequently, though, first use occurred in the social settings of “partying” and “hanging out.” Typically, such recreational situations included alcohol and marijuana use. Eighteen participants obtained their first “pain pill” from other party goers, “best” friends, or significant others. For example, Bill, a 19-year-old White

college student who first tried Vicodin® about two months before the interview, described his first use: "I was probably drinking a couple beers, and a buddy had them 'cause he got his wisdom teeth pulled. I probably took two of them and we just hung out and watched TV." Jan, a 20-year-old White woman, described her initiation to OxyContin® when she was 18: "It was my boyfriend, we had just met at the time and um, he just said that they made him feel good, so I was like okay...."

The majority of the participants, especially those who were introduced to pharmaceutical opioids in recreational situations, explained their initiation in terms of peer influences and curiosity about the high. Participant explanations were more elaborate when they were asked to reflect on motivations and life circumstances that influenced their continued use of pharmaceutical opioids.

*MOTIVATIONS AND RATIONALIZATIONS OF CONTINUED USE
FOR PLEASURE AND PAIN*

Many individuals explained their continued use of nonprescribed opioids in terms of pleasure-seeking reasons. Jan commented, "I was getting ready to go to college, and I was wanting to like party and stuff all the time. And instead of drinking, 'cause I hated to have hangovers, I just substituted OxyContin® for drinking."

The majority commented that they liked pharmaceutical opioids because of their relaxing effects. Jan put it in the following way: "I would just feel so like relaxed and calm [after taking OxyContin®], and like just not worry about anything, just a really calming feeling." In contrast, some other participants felt a boost of energy after taking pharmaceutical opioids. Tina, a 48-year-old White woman, described the OxyContin® high: "To me, it's a lot like a combination of speed and cocaine. It's just that, ya know, that blast of energy."

Five individuals explained their continued use in terms of legitimate medical prescriptions they received for numerous health problems. Sherry, a 30-year-old White woman who first used pharmaceutical opioids recreationally when she was a teenager, explained how her use "got out of control" a few years later:

After I had my third child, I had some "female problems" going on ... And the doctor started prescribing me Vicodin® ES. Well, first it was Vicodin®, and then Vicodin® ES, 'cause it wasn't strong enough, and it progressed into ... I got to where I was taking handfuls and handfuls....

Some of those who related pharmaceutical opioid abuse to legitimate medical prescriptions, had histories of troubled family backgrounds and experiences of victimization and abuse. Kim, a 39-year-old White woman, commented,

I was beat on by my daughter's daddy. I never married him, but he had beat on me. And then I got with my son's daddy, and he started beating on me. So I had broke bones, and I started taking medication ... And I was drinking before a little bit.

Several individuals reported using pharmaceutical opioids to deal with emotional trauma or other forms of psychosocial stress. For example, Robert explained, "They [pharmaceuticals] made me feel better—It took the pain away, 'cause I lost my mom, and my father, and my sister in the same year, and I was hurting at the time...."

Besides emotional pain, pharmaceutical opioids were taken to self-medicate physical discomforts associated with everyday aches and pains. Terry, a 39-year-old African-American woman, explained her most recent period of pharmaceutical opioid misuse in the following way: "I started taking them [codeine tablets] 'cause I'm working hard, long hours, and I'm having leg pains and a back pain, and I'm having cramps real bad. So I started taking the codeine...." In a similar way Jan, who used pharmaceutical opioids for recreational purposes, described situations when she took them for occasional headaches:

I always got really bad headaches, 'cause my roommate smoked around me. And like I smoke, but when somebody smokes in a little enclosed area, it would give me a really bad headache. So sometimes my headaches wouldn't go away, so I tried to get like Vicodin® or Percocet®.

Even though hedonistic and pain-related reasons were interrelated for some individuals, for others they were perceived as two very different things. Terry made a clear distinction between "getting high" and self-medication. As she commented, "I wasn't taking the pills [codeine] just to get high, you know what I'm saying? I really was just taking them to feel better. And then, ya know, it's just that I got hooked on them where I had to have them every day...."

"CAUSE THEY WERE AROUND..."

Many participants felt that easy access to pharmaceutical opioids was among the most important factors that contributed to their continued use. Jan commented, "I decided not to do it [OxyContin®] anymore, and then like when I'd come home from college or on my breaks and stuff like that, I would end up doing some just 'cause they were around."

Ease of access was described in several distinct ways. Some individuals were embedded in social networks where pharmaceutical opioid abuse was common.

Sherry commented, "I was running out of my pain medicine, and he [boyfriend] would just keep giving handfuls of his 'cause he was getting pain pills from his doctor ... See, I had a boyfriend that was into pain pills, and then I had another boyfriend that was into pain pills...."

Some younger participants reported that their parents' medicine cabinets were their "connections" for pharmaceutical opioids. Mike, a 19-year-old White man, who did not consider pharmaceuticals as his drug of choice, described an episode of intense use when they became easily accessible to him:

I was looking through the cupboard ... And it was the same cabinet as the medical or the pharmaceuticals. And in the back I found a jar, and I looked at it, it said "Percocets." And I knew it was a pain killer off the bat. I guess it was for my dad's back or something. And it was dated 1999. So they're old, and there's probably like 20 left. So I just grabbed the bottle, took it down, and we did them all in about three days.

Several other users felt that high "street" availability and relatively low prices of diverted pharmaceuticals contributed to their continued use. Andy, a 20-year-old White man who initially had a reliable connection for OxyContin® through his friend's father, explained how easily accessible they were for him:

They were selling 'em for \$80 a pill for 80 milligrams, and I was getting 'em for \$40. It was something about, because I was getting 'em so cheap that I felt special or something. And I was always getting 'em. And if I didn't have any money, he would loan 'em to me until I could pay him back....

SELF-BLAME

Several individuals discussed their drug use behavior as an issue of their own personal responsibility. For example, Jan, who was introduced to OxyContin® and later to heroin by her boyfriend, felt it was her personal choice: "I started using [Oxycontin®] because I liked the way that it felt. And I think everyone's always quick to blame somebody else for something, but I blame myself for starting because I like the way that it felt...."

In some cases, the theme of self-blame was framed as an issue of individual vulnerability; some participants related explanations of their drug use to innate qualities of their personalities, which in some situations implied a notion of fatalism and helplessness. Brad put it in the following words, "I've got a very addictive personality, I was told, ya know, maybe that has something to do with it...." JJ also

felt it was his personality that contributed to his long-term addiction: “Just the kind of person I am, I guess. I find myself using anything that gives me that euphoric feeling of, um, just feeling good, just feeling like I can handle life and situations.”

PATTERNS OF PHARMACEUTICAL OPIOID MISUSE

Participants represented a wide range of lifetime experiences with pharmaceutical opioids and other psychoactive substances (Table 1). The participants were first categorized into two groups—those who believed they were addicted to opioids as indicated by frequency of use and withdrawal symptoms, and those who were occasional users. Addicted and occasional users were further subdivided to elicit differences in current patterns of use, age, and lifetime histories of pharmaceutical opioid and other drug use.

ADDICTED USERS

Twelve participants reported that they became regular users of pharmaceutical opioids and eventually developed dependence. Addiction or dependence was described as a progressive “disease,” “sickness” or “craving” that took control over their bodies and their lives. For example, Kim explained, “After a while your body craves that medicine. It doesn’t want food or anything. I couldn’t eat if I didn’t have the pain pill because my bowels would run ... And then if I got the pain pill, then everything was okay, everything was normal, I could eat and clean house....”

Addicted users reported spending between \$20 and more than \$200 per day on prescription opioid “pills.” Typically, the number of “pills” used was the most important measure of changing patterns of use and escalating dependence. Terry

TABLE 1

USER GROUPS BY AGE, PATTERNS OF PHARMACEUTICAL OPIOID ABUSE, AND OVERALL DRUG USE HISTORIES

Age groups Pharmaceutical opioid abuse	Older group, age 30-48 (n = 11)	Younger group, age 19-23 (n = 13)
Developed addiction to pharmaceutical opioids (n = 12)	(1) Early addiction, long-term use of pharmaceutical opioids (2) Late addiction, complex drug use histories	(3) New generation “heavy” users
Occasional users of pharmaceutical opioids (n = 12)	(1) Old generation heroin users (2) Primary stimulant users	(3) New generation “recreational” users



summarized the progression of her use in the following way: “At first, it started out just like, uh, well, maybe four maybe six a day, ya know, or every other day, ya know. But at least that many. Then I was taking at least 15 to 16 pills a day, sometimes more.”

The majority of the addicted users (10 out of 12) considered OxyContin® their preferred pharmaceutical opioid. Tina described her experiences: “After I snorted it [OxyContin®] that day, shoo! I was in love. It was like, almost like the first time I ever shot cocaine. I was in love. So, it was like I, we all, me and everybody that lived in the house at that time, we all got addicted to Oxys.”

For most of these individuals, discovery of an “OxyContin® high” marked a pivotal moment in their drug use careers—some developed dependence after they started using it. Others, who first became dependent on other pharmaceutical opioids, blamed OxyContin® for rapid, “out of control” progression of their “disease.” As Sherry commented, “But I got really bad, really, really bad when I started the Oxys.” Seven OxyContin® abusers eventually transitioned to regular heroin use which they considered more degrading, dangerous, and “dirty” than abuse of pharmaceutical opioids. They all continued to use OxyContin® on occasional basis, typically, when heroin was less available to them.

The majority of the addicted users felt that pharmaceutical opioid abuse harmed their health, had a negative impact on their social relationships, their parenting skills, and ability to maintain a “decent” standard of living. Ten of these individuals were unemployed, several reported living with their relatives, one was homeless, and one reported she did not have electricity or running water in her house.

Besides these shared characteristics, addicted users differed in their lifetime experiences with pharmaceutical opioid and other drug use, and could be grouped in three distinct categories that represent different drug use trajectories (Table 1).

Early addiction, long-term use. The first category was represented by four individuals (all in their 30s) who became addicted to pharmaceutical opioids early in their drug use careers. All four experienced numerous health problems and felt that legitimate medical prescriptions played an important role in escalating their abuse of pharmaceutical opioids.

For all of these individuals, pharmaceutical opioids were the “dominant” drug use problem that they had been dealing with for 10 or more years. Sherry and Kim reported that their use of other substances diminished once they became dependent on pharmaceutical opioids. Brad and Robert began using other substances, including crack and powdered cocaine, but this remained secondary to their opioid addiction. Robert even pointed out that pharmaceutical opioid use allowed him to limit his crack use, which he felt was a much worse and dangerous drug than “pills.” As he stated:

If more people will start using pain killers, I think they would get off of this crack, yes. 'Cause it takes the urges away to use crack cocaine, yes it does. Ativan® already does it [reduces craving for crack], but uh as far as Vicodins, and Percocets, and OxyContin, you take two of those you won't want any crack cocaine at all.

Late addiction, complex drug use histories. The second category was represented by three individuals (Bill, Terry, and Tina), ages between 39 and 48, whose drug use histories included several different stages of intense drug use. They differed from the first group in that all three developed addiction to pharmaceutical opioids later in their drug use careers, and the pharmaceutical opioid phase was typically preceded by several different phases of regular, intense use of other drugs, such as crack, methamphetamine and/or barbiturates. For example, Bill, a 42-year-old White man, went through a phase in his early 20s when he was shooting barbiturates, including phenobarbital. Later, in his early 30s, he used "quite a bit" of "crank" (methamphetamine) and powder cocaine. Through most of these years, he reported sporadic use of Dilaudid® and other pharmaceutical opioids, but his addiction developed only after he "discovered" the "OxyContin® high" in his late 30s.

These individuals were experienced users with a great deal of street knowledge about various drugs and their interactions. For example, Bill realized right away that he could easily become dependent on OxyContin®, and initially tried to moderate his use. His long-term experiences with various drugs were evident in his detailed knowledge about how to prolong the high from pharmaceutical opioids. As he said:

One good fix [of OxyContin®] would last you about eight hours. Say, you're fixed, six and a half, seven hours later, you don't feel the buzz that much. You reach over and grab a joint and smoke a joint. It will bring that Oxy right back; it enhances all over again ... Now, the same works for a cold pill [Sudafed]. You can be sitting there, watching TV, and have your little buzz going. And then you eat a cold pill ... you'll start nodding. And that's the whole point of doing it.

New generation "heavy" users. The third group of addicted users included five younger individuals. They all reported early experimentations with a number of different substances. Some of them talked about troubled family backgrounds or medical problems that contributed to escalation of their drug use. Bob, a 22-year-old

White man who got into “pills” when he was about 14 years old, related his drug use history to harsh experiences while growing up:

Well, it started way back when I was young because my father... he was sellin' cocaine, okay. And he was really big, I mean, had lots of money ... And then my mom and them got a divorce, and then when that happened, she got the Epstein-Barr virus--it's like where they're always sick and in the bed all the time. And I was real young, we lived on a trailer, and my dad left us out in the middle of nowhere ... She was so sick, she couldn't do nothin' for herself ... And then she was really messed up on medicine, like Somas, and Xanax's, and Vicodins, and all them, really high depression pills and pain pills....

In one way, these young users described early experiences with drugs that were very similar to what older participants experienced during their teenage years. However, one important difference was rapid progression from the “experimental” stage of drug use to opioid dependence.

This group of users, because of their young age and inexperience, typically had very little knowledge about pharmaceutical opioids and the dangers associated with misuse of these drugs. Jan described her first experiences with OxyContin®, “I didn't even know what they [OxyContin® tablets] were at all ... I didn't know if it was like a pain killer or mood thing or what...” She continued using OxyContin® on a regular basis when she was home during her school breaks. Even though she described herself as being “extra-careful” with prescription drugs, she was not fully aware about its addictive potential, “I think I could've possibly been dependent on it [OxyContin®] then, 'cause when I got back [to school] I felt sick and stuff. But I didn't know what withdrawal was, and I didn't think I could've become addicted to it.”

Bob, who initially was more involved in selling OxyContin®, described his lack of knowledge in the following way:

You know, they were 80 milligram OxyContin's. I didn't know how strong they were, you know. And I was sellin' 'em to these kids, and I coulda killed one of 'em, you know ... I really didn't know, yeah, I didn't know what it was... I know I ate a piece, and it really messed me up. You know, and I figured, oh, I know, these will work then. I used to put 'em in a little M&M mini bottle, and go to the bathroom, twenty bucks a piece.

The majority of these young users reported that often times, especially in recreational situations, they would supplement pharmaceutical opioids with a number of other depressants, such as alcohol, marijuana, benzodiazepines and other substances, to enhance their euphoric effects. Bob put it in the following way:

If I was going to work or something, I would just take the Lortabs and the Oxys. And then if I just wanted to sit at home, I would mix a few Xanax bars or Xanies with a couple Somas and about three or four Vicodins, and I'd be drinkin' a beer, smokin' pot....

OCCASIONAL USERS

A group of 12 individuals used other substances on a more consistent basis, and pharmaceutical opioids played only a supplemental or "secondary" role. They represented three very distinct experiences with pharmaceutical opioid and other drug use (Table 1).

"Old generation" heroin users. Another pattern of pharmaceutical opioid abuse was represented by two African-American men in their late 40s. Even though they experimented with a number of pharmaceuticals in their teenage years, they also tried heroin early in their drug-use careers, and soon became regular users. These long term heroin abusers used a number of different pharmaceutical opioids, depending on availability and popularity trends of the time. For example, JJ started shooting heroin when he was 13 years old. When he was in his late teenage years, heroin became less available and of poorer quality, so he started using codeine more frequently. He commented, "I believe from like 16 to 17, um, I started using a lot more of cough syrup at that time. And, ya know, heroin kind of took a back seat, it became pretty much secondary because the cough syrup was, um, it gave me a better high, I felt." In the most recent period of his drug use, he started using OxyContin® occasionally to supplement his daily heroin habit. He commented: "OxyContin® ... I don't do everyday because I don't have that kind of money, ya know, um, but I do it at least three times a week."

Stimulant users. The second group included two women who were daily crack users and took "pain pills" occasionally, typically when needed to moderate the speedy effects of the stimulants they used. For example, Shanda, a 44-year-old African-American woman, was introduced to crack cocaine in the late 1980s. Besides a few short periods of abstinence, she has been a regular crack smoker for almost 16 years. Shanda used pharmaceutical opioids, most frequently Darvocet®, in addition to tranquilizers to come down from a crack high. She commented, "My drug of choice was crack cocaine, yea. I took the pills just to come down and stuff, ya know."

New generation "recreational" users. This pattern of use was represented by eight young (19- to 20-year-old) White individuals, who were introduced to pharmaceutical opioids less than two years ago. Among these young participants, pharmaceutical misuse was typically limited to a few weekends per month, and was often "opportunistic." These participants rarely planned their use, or went out of their way to obtain "pills." BJ explained his pattern of use: "Availability is the big thing. Whenever it [non-prescribed opioid] is available. Friend gets his wisdom teeth pulled, another friend stumbles upon them...."

These individuals had less extensive histories of drug use than the group of new-generation dependent users described above. The majority first experimented with alcohol and marijuana in their high school years. Initiation of other drug use (including club drugs, cocaine, and in a few cases, heroin and crack cocaine) came later—typically during their senior year in high school or after they started college.

The majority (six) considered that marijuana was their drug of choice. An exception was Lee, who used Adderall® on a nearly daily basis, and TJ who considered that heroin was his drug of choice, although he reported using heroin only on a few separate occasions over the past two months.

These young users reported experimentation with a number of different pharmaceuticals, including Percocet®, Darvocet®, Ultram® or Ultracet®, but Vicodin® was typically the most commonly abused "pill." Three of these individuals have tried OxyContin®, but the majority shared negative attitudes about the drug. BJ commented, "I've heard of OxyContin®. I'm not going to touch that.... I've heard that's just, um, basically a pill version of heroin, so I don't really see the need." In contrast, other pharmaceutical opioids were described as "casual" low risk drugs. BJ described his views about Vicodin®, "I mean it's just a muscle relaxer, that's the way I look at it." Frank, a 19-year-old college student, elaborated more:

Everywhere people are saying, "Don't take OxyContin." It's on the news, "Don't take OxyContin, people are dying," ya know. You hear it everywhere like even people talk about it. But like other drugs, Vicodins, those sorts of things, you never really hear anything about. Like people don't even say so much as like you can die from taking too many Vicodins, or you can overdose on Vicodins.

In most cases, this group of users took pharmaceuticals with alcohol and/or marijuana. The majority did not really like to use pharmaceuticals by themselves. Frank described subtle differences between just "drunk buzz" and alcohol high "enhanced" with pharmaceutical opioids:

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It's usually more like mellow ... You're more chilled rather than like being up and bouncing around and just like crazy drunk. It's more like, ya know, you just want to lounge, I mean you're feeling the same buzz, you're feeling about the same kind of high, but very mellow.

Different from all other participants, these young individuals reported controlled or moderate patterns of pharmaceutical opioid and other drug use. They did not feel their use disrupted their "normal" lives or interfered with their daily responsibilities. All of these individuals attended college and some had part or full time jobs. According to them, pharmaceutical use was as a part of the "normal" college scene. They typically defined themselves as good students who needed to relax after long weeks of studying for their exams. John described his most recent use:

I ate four [Ultram® tablets] probably around eight all at once, and then drank a couple beers. And then I ate three [tablets] more, and then I smoked a lot of pot, celebrating successful economics midterm, for days studying for it—to put myself to sleep.

DISCUSSION AND CONCLUSIONS

Participants described diverse explanations for their initiation and continued use of pharmaceutical opioids, including social influences, recreation, ease of access, and innate qualities of their personalities—themes that are often cited among abusers of other illicit substances (Brown, Gauvey, Meyers, & Stark, 1971; German & Sterk, 2002; MacDonald & Marsh, 2002). There was a group of people who linked their escalation of pharmaceutical opioid abuse to legitimate medical prescriptions related to chronic pain management. Consistent with the existing literature, all of these individuals had prior substance abuse histories (Manchikanti et al., 2005; Michna et al., 2004). Some of them shared stories about prior experiences of victimization and abuse. Other research has shown that prior histories of sexual and physical abuse may be associated with certain chronic pain states (Green, Flowe-Valencia, Rosenblum, & Tait, 1999; Miller, 2004). The life stories shared by the study participants underscore the importance of multidisciplinary approach to chronic pain management that would assess and then adequately address substance abuse histories and other psychosocial vulnerabilities, including a history of victimization and abuse (Green et al., 1999; Michna et al., 2004).

Self-medication was another important theme in participants' explanations of pharmaceutical opioid abuse. Other research has also indicated that not all illicit use of prescription drugs is recreational for the purpose of intoxication (McCabe et

al., 2005). Previous research has described substance abuse behavior as a form of self-medication of symptoms related to psychosocial distress (Khantzian, 1985). Among our study participants, pharmaceutical opioids were used to self-medicate both psychosocial distress and physical symptoms of pain. In some cases, self-medication was conceptualized in holistic terms, encompassing psychosocial and physical aspects of health and well-being. Individuals who used pharmaceuticals for self-medication purposes felt that their use had a justifiable reason, and was less deviant, dangerous, and harmful than recreational use of prescription opioids and other illicit drugs.

Previous research has noted that pharmaceutical opioid misuse may be a marker for other illicit drug use (Inciardi et al., 2004; Leukefeld et al., 2005). About a half of our study participants had fairly little experience with other drugs of abuse at the time they were initiated to illicit use of pharmaceutical opioids. However, the majority eventually developed patterns of multiple drug use where pharmaceutical opioids played primary or secondary roles.

On the basis of participant age and a history of pharmaceutical opioid and other drug use, six user groups were identified. Each group faced unique risks and challenges related to diverse experiences and patterns of pharmaceutical opioid and other drug use. Pharmaceutical opioid abuse among primary heroin and stimulant users was less frequent than among most other categories of users discussed, but carried additional risks of drug overdose (Burns, Martyres, Clode, & Boldero, 2004; Kaye & Darke, 2004). Patterns of drug use among long-term primary opioid abusers were closely interrelated with a history of poor health. Individuals with complex drug use histories and late pharmaceutical opioid dependence differed from other groups in that they started pharmaceutical opioid abuse as quite informed and knowledgeable users. Their drug use careers support a suggestion that some individuals "become 'hooked' on a way of life, in which the use of a chemical is one element in a complex pattern of daily activities" (Weppner & Agar, 1971, p. 17).

The study included a group of new generation users, all between 19 and 23 years of age, who displayed two distinct patterns of engagement with pharmaceutical opioids. A group of "heavy" users developed more destructive patterns of use, became addicted to pharmaceutical opioids, and eventually transitioned to heroin (Siegal, Carlson, Kenne, & Swora, 2003). A group of "occasional" users continued a "recreational" pattern of pharmaceutical opioid use. They differed from young "heavy" users and all other groups in that they reported less social dysfunction and traumatic experiences while growing up, and were better adjusted in their current social situations. Their college enrollment provided stability to their lives and kept their drug use "under control." In addition, young "occasional" users also reported initiation to alcohol and other drugs at an older age than the other group of young

users. These observations are consistent with other research showing that age of first drug use is a strong predictor of further progression in drug use (Kandel & Yamaguchi, 1993).

Young “recreational” users differed from young “heavy” users in their attitudes and experiences with OxyContin®, a relatively new drug that was approved by FDA in 1996 (Inciardi & Goode, 2003). All young “heavy” users reported OxyContin® abuse, and all had very little knowledge about the drug at the time when they first tried it. In contrast, “recreational” users defined OxyContin® as inherently different from other pharmaceutical opioids—more dangerous and “socially unacceptable” than Vicodin®, Percocet® or Ultracet®. “Heavy” users learned about the consequences of OxyContin® abuse from their personal experiences with the drug, while “recreational” users formed their negative attitudes in the context of peer influences and media reports. These differences might be related to the fact that “heavy” users started their drug use careers at an earlier age, and were exposed to pharmaceutical opioids at the time when there was less public knowledge and media coverage about dangers associated with OxyContin® abuse.

Perspectives shared by both “heavy” and “recreational” young users support theories about an increasing trend towards the normative tolerance of drug use among youth (Agar & Reisinger, 2000; MacDonald & Marsh, 2002). Research on normalization theory describes drug use behaviors as a continuum from “ordinary” or recreational users who experiment with socially “acceptable” substances (e.g. marijuana), and “edge” or problem users who are ready to try “harder” and more stigmatized drugs (e.g. heroin) (MacDonald & Marsh, 2002). Interviews with young users suggest that most pharmaceutical opioids, except OxyContin®, are defined as low risk “ordinary” drugs, and are often used in combination with other normalized and socially acceptable substances like alcohol and marijuana. Similar perceptions about pharmaceutical opioid use were observed by other studies conducted in Ohio with individuals reporting diverse substance abuse experiences (Carlson et al., 2004; OSAM Network, 2005). Our study suggests an urgent need for prevention initiatives to address such risk minimizing attitudes about pharmaceutical opioid misuse.

This exploratory study is limited to a small, convenience sample of pharmaceutical opioid abusers recruited in two different cities in Central Ohio. Nevertheless, these preliminary results demonstrate diversity in patterns and motivations of pharmaceutical opioid misuse, and suggest a need for flexible and integrative approaches to prevention and treatment programming. The qualitative approach used by the OSAM Network was able to provide insider-focused assessments of changing drug use practices and further our understanding about a growing problem of pharmaceutical opioid misuse. Further studies, both qualitative and quantitative, should provide a longitudinal perspective on changing patterns of pharmaceutical

opioid misuse, examine lay knowledge and self-medication practices among diverse populations, and address gender as well as ethnic comparisons in pharmaceutical opioid misuse.

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REFERENCES

- Agar, M., & Schacht Reisinger, H.
2000 Explaining drug use trends: Suburban heroin use in Baltimore county. In A. Springer, & A. Uhl (Eds.), *Illicit drugs: Patterns of use - patterns of response* (pp. 143-165). Innsbruck: Studienverlag.
- Brands, B., Blake, J., Sproule, B., Gourlay, D., & Busto, U.
2004 Prescription opioid abuse in patients presenting for methadone maintenance treatment. *Drug and Alcohol Dependence*, 73, 199-207.
- Brown, B. S., Gauvey, S. K., Meyers, M. B., & Stark, S. D.
1971 In their own words: Addict's reasons for initiating and withdrawing from heroin. *The International Journal of the Addictions*, 6(4), 635-645.
- Burns, J. M., Martyres, R. F., Clode, D., & Boldero, J. M.
2004 Overdose in young people using heroin: Associations with mental health, prescription drug use and personal circumstances. *The Medical Journal of Australia*, 181(7 Suppl), S25-8.

PHARMACEUTICAL OPIOID MISUSE

Carlson, R. G., McCaughan, J. A., Falck, R. S., Wang, J., Siegal, H. A., & Daniulaityte, R.

2004 Perceived adverse consequences associated with MDMA/Ecstasy use among young polydrug users in Ohio: Implications for intervention. *International Journal of Drug Policy*, 15, 265-274.

Center for Substance Abuse Treatment

2004 *Methadone-associated mortality: Report of a national assessment, May 8-9, 2003*. (SAMSHA Publication No. 04-3904). Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.

Daniulaityte, R., Siegal, H.A., Carlson, R.G., Kenne, D. R. Starr, S., & DeCamp, B.

2004 Qualitative epidemiologic methods can improve local prevention programming among adolescents. *Journal of Alcohol and Drug Education*, 48, 73-83.

German, D., & Sterk, C. E.

2002 Looking beyond stereotypes: Exploring variations among crack smokers. *Journal of Psychoactive Drugs*, 34, 383-392.

Gilson, A. M., Ryan, K. M., Joranson, D. E., & Dahl, J. L.

2004 A reassessment of trends in the medical use and abuse of opioid analgesics and implications for diversion control: 1997-2002. *Journal of Pain and Symptom Management*, 28(2), 176-188.

Green, C. R., Anderson, K. O., Baker, T. A., Campbell, L. C., Decker, S., & Fillingim, R. B.

2003 The unequal burden of pain: Confronting racial and ethnic disparities in pain. *Pain Medicine*, 4(3), 277-294.

Green, C. R., Flowe-Valencia, H., Rosenblum, L., & Tait, A. R.

1999 Do physical and sexual abuse differentially affect chronic pain states in women? *Journal of Pain and Symptom Management*, 18(6), 420-426.

Inciardi, J. A., & Goode, J. L.

2003 Miracle medicine or problem drug? OxyContin and prescription drug abuse. *Consumer's Research Magazine*, 86(7), 17-21.

Inciardi, J. A., Surratt, H. L., Martin, S. S., & Gealt, R.

2004 Prevalence of narcotic analgesic abuse among students: Individual or polydrug abuse? *Archives of Pediatrics and Adolescent Medicine*, 158, 498-499.

Kandel, D., & Yamaguchi, K.

1993 From beer to crack: Developmental patterns of drug involvement. *American Journal of Public Health*, 83(6), 851-855.

Kaye, S., & Darke, S.

2004 Non-fatal cocaine overdose among injecting and non-injecting cocaine users in Sydney, Australia. *Addiction*, 99, 1315-1322.

Khantzian, E. J.

1985 The self-medication hypothesis of addictive disorder: Focus on heroin and cocaine dependence. *American Journal of Psychiatry*, 142, 1259-1264.

Lambert, E. Y., Ashery, R. S., & Needle, R. (Ed.)

1995 *Qualitative methods in drug abuse and HIV research*. Rockville, MD 5600 Fishers Lane, Rockville 20857; Washington, D.C.: U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Drug Abuse.

Leukefeld, C., McDonald, H. S., Mateyoke-Scriver, A., Roberto, H., Walker, R., & Webster, M.

2005 Prescription drug use, health services utilization, and health problems in rural Appalachian Kentucky. *Journal of Drug Issues*, 35(3), 631-644.

MacDonald, R., & Marsh, J.

2002 Crossing the Rubicon: Youth transitions, poverty, drugs and social exclusion. *International Journal of Drug Policy*, 13, 27-38.

Manchikanti, L., Fellows, B., Damron, K. S., Pampati, V., & McManus, C. D.

2005 Prevalence of illicit drug use among individuals with chronic pain in the Commonwealth of Kentucky: An evaluation of patterns and trends. *The Journal of the Kentucky Medical Association*, 103(2), 55-62.

McCabe, S. E., Teter, C. J., & Boyd, C. J.

2005 Illicit use of prescription pain medication among college students. *Drug and Alcohol Dependence*, 77(1), 37-47.

Merrill, J. O., Rhodes, L. A., Deyo, R. A., Marlatt, G. A., & Bradley, K. A.

2002 Mutual mistrust in the medical care of drug users: The keys to the "narc" cabinet. *Journal of General Internal Medicine*, 17(5), 327-333.

Michna, E., Ross, E. L., Hynes, W. L., Nedeljkovic, S. S., Soumekh, S., & Janfaza, D.

2004 Predicting aberrant drug behavior in patients treated for chronic pain: Importance of abuse history. *Journal of Pain and Symptom Management*, 28(3), 250-258.

Miller, N. S.

2004 Prescription opiate medications: Medical uses and consequences, laws and controls. *The Psychiatric Clinics of North America*, 27(4), 689-708.

Miller, N. S., & Greenfeld, A.

2004 Patient characteristics and risk factors for development of dependence on hydrocodone and oxycodone. *American Journal of Therapeutics*, 11, 26-32.

Ohio Substance Abuse Monitoring [OSAM] Network

2005 *Methamphetamine abuse in the state of Ohio: A targeted response initiative, January 2005 - June 2005*. Columbus: Ohio Department of Alcohol and Drug Addiction Services, Wright State University and the University of Akron.

Peters, R. J., Jr, Kelder, S. H., Markham, C. M., Yacoubian, G. S., Jr, Peters, L. A., & Ellis, A.

2003 Beliefs and social norms about codeine and promethazine hydrochloride cough syrup (CPHCS) onset and perceived addiction among urban Houstonian adolescents: An addiction trend in the city of lean. *Journal of Drug Education*, 33(4), 415-425.

Potter, J. S., Hennessy, G., Borrow, J. A., Greenfield, S. F., & Weiss, R. D.

2004 Substance use histories in patients seeking treatment for controlled-release oxycodone dependence. *Drug and Alcohol Dependence*, 76(2), 213-215.

QSR International

2002 NVivo 2.0 (Computer program). QSR International: Doncaster, Australia.

Siegal, H. A., Carlson, R. G., Kenne, D. R., Starr, S., & Stephens, R. C.

2000 The Ohio Substance Abuse Monitoring Network: Constructing and operating a statewide epidemiologic intelligence system. *American Journal of Public Health*, 90(12), 1835-1837.

Siegal, H. A., Carlson, R. G., Kenne, D. R., & Swora, M. G.

2003 Probable relationship between opioid abuse and heroin use. *American Family Physician*, 67(5), 942, 945.

Simoni-Wastila, L.

2000 The use of abusable prescription drugs: The role of gender. *Journal of Women's Health and Gender-Based Medicine*, 9(3), 289-297.

Simoni-Wastila, L., Ritter, G., & Strickler, G.

2004 Gender and other factors associated with the nonmedical use of abusable prescription drugs. *Substance Use & Misuse*, 39(1), 1-23.

Simoni-Wastila, L., & Strickler, G.

2004 Risk factors associated with problem use of prescription drugs. *American Journal of Public Health*, 94(2), 266-268.

Strauss, A., & Corbin, J.

1990 *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications.

Substance Abuse and Mental Health Services Administration (SAMHSA)

2004 *Results from the 2003 National Survey on Drug Use and Health: National findings*. (No. SMA 04-3964). Rockville, MD: Office of Applied Studies.

Szwabo, P. A.

1993 Substance abuse in older women. *Clinics in Geriatric Medicine*, 9(1), 197-208.

United States General Accounting Office

2003 *Prescription drugs: OxyContin abuse and diversion and efforts to address the problem* (Report to Congressional Requesters No. GAO-04-110). Washington, D.C.: U.S. General Accounting Office.

Weppner, R. S., & Agar, M. H.

1971 Immediate precursors to heroin addiction. *Journal of Health and Social Behavior*, 12(1), 10-18.

White, A. G., Birnbaum, H. G., Mareva, M. N., Daher, M., Vallow, S., & Schein, J.

2005 Direct costs of opioid abuse in an insured population in the United States. *Journal of Managed Care Pharmacy* 11(6), 469-479.

Zacny, J., Bigelow, G., Compton, P., Foley, K., Iguchi, M., & Sannerud, C.

2003 College on problems of drug dependence taskforce on prescription opioid non-medical use and abuse: Position statement. *Drug and Alcohol Dependence*, 69(3), 215-232.

Zarba, A., Storr, C. L., & Wagner, F. A.

2005 Carrying habits into old age: Prescription drug use without medical advice by older American adults. *Journal of the American Geriatrics Society*, 53(1), 170-171.