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Mechanisms of Prescription Drug Diversion Among Impaired Physicians

Simone Marie Cummings, **Lisa Merlo**, and **Linda B. Cottler**
Simone Marie Cummings and Linda Cottler are affiliated with Washington University in St. Louis, St. Louis, MO. Lisa Merlo is affiliated with the University of Florida, Gainesville, FL

Abstract

The diversion of medications by physicians is a seldom discussed problem in the United States. A better understanding of the mechanisms of diversion could assist decision-makers as they seek to develop preventive. To identify these mechanisms, nine focus groups of physicians undergoing monitoring for substance abuse by a state-based physician health program (PHP) were conducted. The content analysis revealed that physicians divert medications by stealing from the office or hospital, by defrauding patients and insurers, by using medication samples, and by misusing valid prescriptions. The implementation of policy interventions targeting these mechanisms has the potential to mitigate the amount of physician diversion that occurs.

INTRODUCTION

The diversion of prescription drugs for personal use by physicians is a significant problem in the United States that is seldom discussed.[1] Physicians who divert may not only cause themselves harm, but may also provide diverted drugs to others for misuse, mislead patients regarding their medications, or practice medicine under the influence, all of which could lead to medical errors and subsequent patient injury or death. Most physicians who divert for personal use do so as a result of a substance use disorder. Data suggest that between 8% and 12% of all physicians will have a substance use disorder at some point in their lifetimes.[2,3] Although these rates are similar to those found among members of the general population, anecdotal evidence suggests that physicians are significantly less likely than the general population to seek help for their substance use disorders.[4,5] Unlike the public, physicians generally have considerable access to drugs of abuse because they are able to write prescriptions for controlled medications, obtain free medication samples, and access hospital drug supplies. These activities, combined with their reticence for seeking help, could potentially result in the diversion of significant amounts of prescription drugs by physicians, with a consequential risk of harm to public safety.

To mitigate the amount of prescription drug diversion that occurs, several federal, state, and local regulations have been enacted in the United States. At the federal level, the Controlled Substances Act, Title II of the Comprehensive Drug Abuse Prevention and Control Act of

Address correspondence to: Simone Marie Cummings, MHA, PhD, 40 N. Kingshighway, Suite 3, St. Louis, MO 63108 (Cummings@wustl.edu).

1970, requires any hospital, pharmacy, physician, manufacturer, or distributor of certain controlled substances to register with the Drug Enforcement Administration (DEA) to facilitate monitoring of the movement of controlled substances.[6] This monitoring can expose those who attempt to divert prescription drugs directly from a manufacturer or wholesaler but provides no control for any diversion that occurs after drugs have been received in a pharmacy or clinic.[6] At the state level, one of the most frequently used options for reducing diversion is the development of prescription drug monitoring programs (PDMP), which generally require pharmacies to send information on all prescriptions filled to the PDMP. Approximately 34 states have developed these programs[7] and in those states, PDMPs have the potential to identify individuals who see multiple physicians to obtain controlled substances (i.e. “doctor shopping”), discern prescription forgeries, and identify indiscriminate prescribing practices.[6, 8] At the local level, many hospitals and clinics have implemented anti-diversion programs to create additional barriers. Such policies may include requiring multiple signatures to sign-out medications, requiring witnessed disposal of unused medication, and restricting controlled substance access to specific individuals who are monitored closely.[9,10]

Despite the best intentions of these regulations and policies, prescription drug diversion among physicians continues to occur. In this article, we explore the methods by which physicians who misused prescription drugs obtained their diverted medications. To our knowledge, mechanisms of diversion have only rarely been reported in the literature.[11] A better understanding of the modalities used by physicians to obtain illicit prescription drugs could assist decision makers as they seek to develop policies to prevent prescription drug diversion in this population.

METHODS

Study Design and Setting

Given the uniqueness of the population under study (i.e., physicians who misuse prescription drugs) and the need to collect detailed, idiosyncratic information from study participants, a qualitative research design was employed. Focus groups were used to obtain information about prescription drug misuse and diversion among health professionals being monitored for substance abuse by a state-based physician health program, which operate to ensure that physicians receive necessary treatment for substance use and mental health disorders, as well as monitoring to verify abstinence and prevent relapse.[12] Health care professionals may voluntarily sign a contract with a physician health program, or may do so in order to avoid sanctions such as job loss, licensure revocation and legal problems. For impairment relating to substance abuse, health care professionals are generally required to sign a five-year contract agreeing to undergo random drug screens that decrease in frequency from once per week to once per month or less by year five of the contract, attend self-help group meetings (i.e., Narcotics or Alcoholics Anonymous), and attend a monitoring group meeting once per week.[13]

Sample Selection

We used non-probabilistic, purposive (or theoretical) sampling to identify participants for separate physician, pharmacist, and allied health personnel focus groups because of our belief that role differences between these types of health professionals would likely affect their opportunities for diversion, while within-category homogeneity of group status and experiences might be important for generating frank discussion. Monitoring group meeting facilitators in six different cities within one Southeastern state were asked to invite their monitoring group participants to attend a focus group session. The monitoring group meeting facilitators selected were those with the largest populations of physicians, pharmacists, and allied health personnel in their weekly monitoring group meetings. Participants were informed in advance by their monitoring group meeting facilitator that attendance at the focus group session was optional and that no penalties would be imposed for lack of attendance. The focus group sessions were held in the same location and at the same time as a regularly scheduled monitoring group meeting. Monitoring group facilitators did not attend the focus group sessions and were not informed as to which health professionals opted to participate.

A total of 18 focus groups were held to reach all of the professionals being monitored by the selected facilitators. Nine focus groups were conducted with physicians, six with pharmacists, and three with allied health professionals (e.g., respiratory therapists, massage therapists, and radiology technicians). However, this analysis focuses only on the insights gained from the 55 physicians who participated in the nine physician focus groups.

Data Collection

Focus groups were conducted between December 2008 and March 2009. Between 4 and 13 physicians participated in each of the nine focus group sessions. Each session lasted approximately 60 minutes and was digitally recorded to facilitate the development of transcripts. Anonymity was maintained in all focus group sessions through the use of randomly assigned numbers by which focus group participants were asked to refer to themselves and to other focus group participants. All sessions were facilitated by one of two experienced moderators. No monetary incentives were provided for study participation.

Using a protocol approved by the institutional review board, each focus group participant was provided with an information sheet explaining the purpose, risks, and benefits of the study. Each participant was also asked to complete a brief demographic survey, using his or her assigned participant number as an identifier. Focus group participants were informed verbally and in writing that their participation was completely voluntary and would not affect their status within the physician health program. They were also informed that they were free to leave at any time without fear of repercussions. Data from the audio recordings were linked to data from the demographic survey via the assigned focus group participant number.

Each focus group was guided by a set of open-ended questions subdivided into five major categories: 1) initiation and types of prescription and illicit drugs used; 2) frequency and pattern of drugs misused; 3) reasons for and consequences of drug misuse; 4) acquisition

and diversion of prescription and illegal drugs; and 5) perception of treatment and the physician health program.

Data Transcription, Coding, and Analysis

Focus group sessions were transcribed by a commercial transcription company from audio files into Microsoft Word documents. The average transcript was approximately 70 pages in length. Each transcript was reviewed and compared with the original audio recording. Updates to the transcripts were made as needed, after which they were imported from Word into Atlas.ti, a qualitative software package. Coding and analysis involved several steps. First, all transcripts were reviewed by the same two researchers who conducted the focus group sessions, which we believe provided an additional check to ensure the appropriate interpretation of the data. Second, based on an initial reading of the transcripts, a set of potential codes was developed to represent specific concepts related to the misuse of prescription and illicit drugs. Third, an initial transcript was selected to be reviewed, analyzed, and coded independently by each of the two researchers, using the initial code list, as a means of ensuring consistency in the coding process. After discussion and subsequent review and coding of a second transcript, the investigators were able to achieve 100% consistency in their coding regarding the major subcategories. As additional opportunities for coding of emergent categories arose, the two researchers discussed each category and came to a consensus regarding the way in which it should be coded. Finally, the transcripts were reviewed again, with a focus on the codes to determine the existence of any overriding themes in the data. The process of reading, reviewing, and coding continued until all important themes were identified.

RESULTS

Nine focus groups of physicians were conducted with 55 physicians, most of whom were White men (Table 1). Specialties of these physicians were suppressed for all but the most common specialties reported.

The content analysis from the focus groups revealed four predominant mechanisms by which physicians divert prescription medications: 1) by stealing from the office/hospital; 2) by defrauding patients and insurers; 3) by using medication samples; and 4) by misusing valid prescriptions. These mechanisms of prescription drug diversion were consistently reported across the nine physician focus groups.

Stealing from Office/Hospital Inventories

The most commonly reported method of prescription drug diversion was stealing prescription drugs from office or hospital inventories. Several physicians noted that the availability of large quantities of prescription drugs in their offices contributed to their misuse and the diversion of these medications. Most physicians reporting such diversion noted that in addition to the state license required for prescribing, they had also obtained a state dispensing license, which allowed them to order drugs in bulk for their medical practices to dispense pain relief to their patients. These physicians stated that as their

addiction progressed, they found themselves ordering prescription drugs in bulk for their own personal use:

> I had a dispensing license, like many of us do, in addition to a prescribing license, and I would just fax the warehouse and have it delivered to my office in large quantities.

> I was ordering from [Company X], I was ordering Dilaudid, I was ordering Demerol, I was ordering Ativan, I was ordering Vicoden by the bottle, 500 at a time…I started ordering them through mail order companies, through medical supply companies, sent to the office, billed to the office. I do sedation in my office, so I would order Demerol, Valium, Dilaudid, morphine, whatever.

Participants noted that ease of access to potential drugs of abuse, even when availability was minimized, facilitated diversion for those physicians who were susceptible to diverting medications:

> I started off by using Ambien. From there it took me down an ugly road of prescribing meds for myself. As I'm a doctor that does house calls, they just kept restocking my bag. I would pay for it and they would just keep restocking it. I knew what they were treating me with and the dosages and being as that I had that on my shelf, when I couldn't get to someplace to get treatment, I started medicating myself.

In other cases, physicians reported diverting from the organizations in which they were employed, most of which were hospitals. Ease of access for those who desired to divert and lax organizational controls with regard to medications appeared to facilitate this mode of diversion.

> I diverted in [Organization X] because there I had access to the Pyxis (an automated pharmaceutical dispensing system).

> I started using Fentanyl IV. In the beginning, it was leftover from what I used in the operating room, and [I] started using it at the end of the day.

Defrauding Patients

Although several physicians noted that they would never engage in any type of drug diversion that might cause harm to patients, others reported diverting in such a way as to potentially cause serious injury. In some cases, physicians reported prescribing unnecessary drugs to patients only to exchange them for a more appropriate drug later while keeping the originally prescribed controlled medication. In more extreme cases, physicians reported providing patients with diluted medications or fewer drugs than they otherwise would have been prescribed.

> I would have [patients] bring their prescriptions to the office, preoperatively. And I would say, "Oh, I didn't mean to give you this medication." And in the meantime, will have switched their 45 Lortab for 45 Extra-Strength Tylenols. And, in front of them, I would dispose of them, and give them a new prescription. So, every operative patient that I had, I got 45 Lortab from.

> There have been incidences where patients have brought into the emergency room an old prescription. I'd go through the pills and I'd say, "Ah – here's a bottle of Oxycodone, hey that's mine." Nobody really pays any attention.
>
> I diverted injectibles from my patients. If I'd do a case, I'd check out a 5cc ampoule of Fentanyl. I'd only use two or three for the case and I'd have two left for me. At the time, nobody kept their anesthesia carts locked and a lot of people had little stashes of Fentanyl ampoules and it was not difficult for me to find it when I didn't have enough from the cases that I did.
>
> I was stealing it from the OR [operating room]. Patients weren't getting the proper effects because what they were getting were half-doses.
>
> They [patients] brought their pills in and I'd say, "Oh, I don't know what this is. Let me take this and look it up in the PDR." And I'd go out and dump the bottle. They had a hundred, hundred and fifty pills, they wouldn't know if 70 were missing.

A commonly used mechanism to divert prescription drugs reported by physicians was to call in a prescription to a pharmacy in the name of a patient, friend, or family member for the physician's own personal use. Generally, physicians who engaged in this mechanism of diversion would select actual patients from their practices and memorize their names, addresses, and telephone numbers, and collect prescription medications from a pharmacy in their names by posing as a husband or relative. Several physicians pointed out that to facilitate this method of diversion, they would even use the patient's insurance to purchase the drugs.

> I've called in prescriptions in patients' names to [Pharmacy X] and memorized their address, birthday, [etc.] and presented myself as their spouse to pick them up.
>
> I would have a patient in and have done surgery on him, I would know what drugstore they used and I would know what their insurance company was, and then a week or so after I wrote the prescription then I would go to the same drugstore, with the same prescription that I had just written for them, and even use their insurance to go get the same drug.
>
> By using my own medical license, I would just forge prescriptions for my dad. In conjunction with antibiotic prescriptions I was writing for a sinus infection, I'd write for the hydrocodone and they [family members] didn't like it, so they would bring it to me

Using Medication Samples

The use of medication samples meant for patients was also a commonly reported method of prescription drug diversion. Many of the physicians who used medication samples reported prior experience using controlled substances and described remembering the pleasant feelings that these drugs provided. Those physicians indicated that having access to a large number of drug samples represented a significant temptation. Other physicians reported that they began using drug samples to self-medicate for mental health issues or for injuries. In all cases, physicians noted that ease of access facilitated their diversion.

> When I first went into private practice, all of a sudden, samples of Vicodin started showing up on my desk. They came in the mail and I knew I liked opiates, but I never would have thought of writing a prescription or anything like that, but these boxes of opiates, of hydrocodone, kept on showing up on my desk every month. And one day, I said, "Well, this'll be a nice thing. It'll make the evening a little easier." And that's how it started.
>
> My oncologist had a drug cabinet with samples. We'd just reach in the cabinet and grab a couple bottles of Lortab when he wasn't looking and take it.
>
> I took antidepressants that I gave to patients that I had samples of, just because I was depressed and I want[ed] to make sure that the doc was prescribing the right antidepressants for me.

Participants commented that the temptation to misuse drug samples was facilitated by the sheer volume of samples delivered to their offices. They noted that drug representatives would provide them with more samples without checking to determine whether the previous inventory had been used.

> The reps would come around and just bring boxes and boxes and boxes and drop it off. And I would sign for it, and I had like a whole closet of it. And one day, I decided to take one… And then the ball started rolling.
>
> The drug detail men would deliver huge quantities of opiates to my office, as courtesy samples, and that's how I got started.
>
> They would come every week. And they would just refill the [cabinet]. It was easy.
>
> The drawers at [my] office were full of samples…So one pill a day, you know. One little bottle a day, at the end of the day, five o'clock. Knock one down, go home and have a few drinks. And that became the standard method of operation for years.

Misusing Valid Prescription

Several physicians reported that their diversion began after first receiving a valid prescription, generally for a physical injury or mental health symptoms. These physicians noted that their personal doctors provided them with significant amounts of potentially addictive medications, under the assumption that because they are physicians, they have the ability to limit their consumption of these medications..

> [I] kept the prescription and then started using it a month or two later and then just never stopped.
>
> I was under pain management and… I had an endless supply of drugs. They prescribed a whole bunch for the month… They were like a candy store.

DISCUSSION

Prescription drug abuse and diversion are significant concerns that have recently garnered more attention in the United States.[14,15] Diversion of prescription drugs by physicians may merit special focus, due to the increased potential for patient harm. Results from this

analysis suggest that four mechanisms of prescription drug diversion among physicians predominate: stealing from office/hospital inventories; defrauding patients and insurers; using medication samples; and misusing valid prescriptions. These findings document the need for action and suggest potential targets for prevention/intervention efforts.

Stealing medications from office and hospital inventories was the most frequently reported mechanism of prescription drug diversion. In many cases, this type of diversion occurred when there was no oversight with respect to prescription drug orders or inventories. To mitigate this type of diversion, we recommend that the states consider auditing organizations and institutions that order significant quantities of controlled substances to ensure that all required documentation exists. In addition, we recommend that organizations implement specific control measures, such as restricted access to controlled substances, requiring witnessed disposal of unused narcotics, and requiring dual signatures to obtain controlled medications.

Physicians' ability to defraud patients was also frequently reported as a mechanism of diversion. This problem is particularly difficult to address because of the asymmetry in medical knowledge that exists between patients and physicians. However, one issue in particular that can be addressed is the ability of physicians to obtain medications at a pharmacy using fraudulent means. We recommend the consideration of potential policies that would require individuals picking up a prescription for a controlled substance to show state identification prior to receiving the prescription. Pharmacies could then track the amount of pills obtained by specific individuals picking up drugs, as well as the amount of pills prescribed to individuals. Precedence for this type of activity has already been set as a result of the rulings associated with products containing pseudoephedrine.

It is noteworthy that the use of medication samples was a commonly reported mechanism for diverting prescription medications. This method is among the least difficult for physicians to employ. Medication samples are provided to physicians without charge, physicians are free to distribute them to patients as they see fit,[16] and according to anecdotal evidence, documentation regarding their specific dispensation is very often lacking. These factors make samples an easy target for diversion. Based on this finding, we recommend increased monitoring of physician compliance with documentation related to the dispensation of medication samples.

The mechanism of diversion reported least was the misuse of a physician's own valid prescription. However, this finding may be a function of the health of the sample rather than a predilection for using other mechanisms of diversion relative to this one. Despite the fact that the misuse of substances appears less acceptable among physicians than in the past, a network of support still exists, which serves to facilitate the diversion of prescription medications by those who could misuse those drugs.[15] Physicians in this study noted that when they needed prescriptions from their friends, they had no difficulty obtaining them. Thus, our data suggest, and we recommend, that physicians monitor their colleagues who are patients in the same way they would monitor any patient for whom they are prescribing medications with abuse potential.

Several limitations to our study should be noted. First, all participants were being actively monitored by a physician health program. Thus, these results may not generalize to physicians without a substance use disorder or who have not participated in a monitoring program. Second, the sample consisted almost entirely of men, the majority of whom were Caucasian. Thus, the data may not reflect the experiences of women or those from other racial/ethnic backgrounds (although 21% of the participants were Latino).

Despite these weaknesses, several strengths are associated with this study. First, this study represents the largest known collection of data from focus groups of physicians with substance use disorders. Second, the use of qualitative methods allowed the researchers to obtain a unique, rich set of data that would have otherwise been very difficult to obtain, primarily due to the sensitive nature of the data involved. Third, because the focus groups were conducted anonymously by focus group facilitators who did not know the participants and with group members who share personal information on a weekly basis, the participants felt free to be open and honest during the discussions. Finally, the diversity in specialty and work environment of the participants enabled the researchers to ensure that a variety of experiences with respect to diversion were represented within the data obtained.

CONCLUSIONS

Physicians are not immune to the disease of addiction. Prescription drug diversion among U.S. physicians remains a significant problem that has adverse implications for public health. Current policies and a lack of oversight create workplace environments that facilitate drug diversion and abuse. Our results suggest the need for additional research on policy interventions that have the potential to reduce prescription drug diversion among physicians.

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Table 1

Characteristics of Physician Focus Group Participants

	Physician Health Program Focus Group Participants (N=55)
Medical specialties	
Anesthesiology	14.5%
Family & General Medicine	21.8%
Internal Medicine/IM Specialty	16.4%
Pediatrics	7.3%
OB-GYN	3.6%
Psychiatry	10.9%
Surgery	14.5%
Other	10.9%
Mean age	53
Race/ethnicity	
White	71.7%
Latino	20.8%
Other	7.5%
Gender	
Male	94.6%
Female	5.4%