Licit, Illicit, and Non-medical Prescription Drug Abuse Among Pharmacists

Anna McDonald
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The use of licit, illicit, and non-medical prescription drug abuse among pharmacists is a growing problem in the U.S. Studies and surveys have shown that health care professionals, including pharmacists, are more likely than the general population to abuse drugs, particularly prescription drugs. As pharmacists, this poses an ethical problem for all of us. As a pharmacist, we are one of the most trusted professions. When one of us chooses to abuse a substance, we are giving the public a great reason to no longer trust us. As a substance abusing pharmacist, we are opening the possibility that we may somehow injure or bring harm to our patients, our co-workers, and even ourselves. We can no longer be trusted to safely dispense and counsel patients when we have been impaired by a substance.

Why are we more likely to abuse the drugs we are dispensing to help others? How can we help those among us who are using illicit and abusing licit drugs? What can be done to prevent this abuse? There have been many reasons suggested for pharmacists and healthcare professionals increased likelihood of abuse including access, no education on drug abuse, being exposed to colleagues who abuse, possessing favorable views on self-medicating and previous abuse before starting college. Regardless of the reasoning for this, it is a problem that needs to be addressed by everyone in the health care community to prevent the occurrence of drug abuse. This paper will examine the drugs that are commonly abused and the effects they produce, the incidence of drug use and abuse among healthcare professionals including a survey on drug use from current pharmacy students, current programs in place to aid recovery for pharmacists, and what we can do as pharmacists and a community to aid those who abuse.

The Diagnostic and Statistical Manual of Mental Disorders –IV (DSM-IV) defines substance dependence, substance abuse, and substance intoxication. Substance dependence is “A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12 month period”: 4 tolerance to the substance, withdrawal effects when use of the substance is discontinued , heavy use for an extended period, persistent desire to use or inability to stop using, lots of time spent getting the drug, other important things are sacrificed to drugs, or the person uses even though they know they should not. Substance abuse is defined as one or more of the following occurring within a 12-month period: recurrent substance use resulting in a failure
to fulfill major obligations at work, school or home, recurrent substance use in situations in which it is physically hazardous, recurrent substance-related legal problems, or continued substance use despite having persistent social or interpersonal problems related to the substance. Substance intoxication is defined as the development of reversible substance-specific syndromes due to recent ingestion of (or other exposure to) a substance or clinically significant maladaptive behavior or psychological changes (mood, judgment, thought disturbances) that are due to the effects of the substance on the CNS and develop during or shortly after use of the substance and the symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Commonly abused drugs include both prescription and illicit drugs and provide a wide variety of intoxication effects. These drugs are classified into schedules by the DEA. A DEA schedule I drug is one with a high potential for abuse, has no currently accepted medical use in the U.S., and has lack of accepted safety for the drug under medical supervision. A drug classified as a schedule II drug is a drug with a high potential for abuse, has a currently accepted medical use in treatment in the U.S., and abuse of the drug may to severe psychological or physical dependence. A schedule III drug is one which has a potential for abuse less than schedules I and II, the drug has a currently accepted medical use in the U.S., and abuse of the drug may lead to moderate or low physical dependence or high psychological dependence. A drug that is classified as a schedule IV is one that has low abuse potential in relation to schedule III, has a currently accepted medical use in the U.S., and abuse of the drug may lead to limited physical dependence or psychological dependence in relation to schedule III drugs. Schedule V drugs are ones with low abuse potential relative to schedule IV, has a currently accepted medical use, and abuse of the drug may lead to limited physical or psychological dependence relative to schedule IV.

Commonly abused drugs include cannabinoids, depressants, dissociative anesthetics, hallucinogens, opiates and morphine derivatives, stimulants, and several other compounds such as steroids, dextromethorphan, and inhalants. Cannabinoids such as marijuana is one type of drug of abuse. Street names include blunt, dope, ganja, grass, herb, joints, Mary Jane, pot, reefer, skunk, and weed. It is a DEA controlled I substance and can be swallowed or smoked to produce its effect. Almost immediately after marijuana is smoked, the drug will enter the brain with effects lasting several hours. Once inhaled, the heart rate will increase, the eyes become dilated and bloodshot and the airways become relaxed and enlarged. THC will lead to the euphoric feeling by stimulating the release of dopamine. Potential health consequences include frequent respiratory infections, impaired memory and learning, increased heart rate, increased
appetite, anxiety, panic attacks, and hallucinations with high enough doses.\textsuperscript{2,5}

CNS depressants such as barbiturates, benzodiazepines, flunitrazepam, and GHB all can be abused. Examples of barbiturates commercial names include Amytal, Nembutal, Seconal, and Phenobarbital have street names such as barbs, reds, red birds, phennies, tooies, yellows, and yellow jackets. They range in DEA schedule from II to IV and can be injected or swallowed to obtain their effect. The effects of barbiturates include reduced anxiety, a feeling of well being, lowered inhibitions, and sedation. Potential health consequences of use of barbiturates include fatigue, confusion, dizziness, slurred speech, impaired coordination, memory and judgment, and respiratory depression which could lead to death.\textsuperscript{2,5}

Benzodiazepines include Ativan, Halcion, Librium, Valium and Xanax have street names such as candy, downers, sleeping pills, and tranks. They can be injected or swallowed and are classified as schedule IV medications. The intoxication effects of benzodiazepines are similar to barbiturates and include reduced anxiety, a feeling of well being, lowered inhibitions, slowed pulse and breathing, and sedation. Adverse effects of benzodiazepines include decreased blood pressure, memory impairment, drowsiness, visual disturbances, dizziness, confusion, and urinary retention.\textsuperscript{2,5}

Flunitrazepam is another type of CNS depressant that is commonly abused. It is also known as Rohypnol with street names such as the forget-me pill, Mexican Valium, R2, Roche, roofies, roofinol, rope, and rophies and is sometimes known as the “date-rape” drug. It can be swallowed or snorted and is a schedule IV drug according to the DEA. It is considered to be a benzodiazepine with the same effects when taken but also provides significant memory loss for the time when the person is under its effect.\textsuperscript{2,5}

GHB or gamma-hydroxybutyrate is also a CNS depressant but with no medical use in the U.S. It is a schedule I drug that is swallowed for its effects with street names including G, Georgia home boy, and liquid ecstasy. GHB effects when ingested include amnesia, anesthesia, decreased cardiac output, severe respiratory depression and coma. It is also characterized as a date-rape drug due to its memory loss effect.\textsuperscript{2,5}

Dissociative anesthetics such as ketamine and PCP are also drugs that are commonly abused. Ketamine is also known as K, special K, and vitamin K and is classified as a schedule III drug that can be injected, snorted or smoked to produce its effect. PCP or phencyclidine is also known as angel dust, boat, hog, love boat, and peace pill. It is a schedule I or II drug that can be injected, swallowed, or smoked. The intoxication effects of ketamine and PCP are increased heart rate and blood pressure,
impaired motor function, delirium, and panic. Potential health consequences include memory loss, nausea and vomiting, respiratory depression and arrest.\(^2\,^5\)

Hallucinogens include LSD, mescaline, and psilocybin. LSD or lysergic acid diethylamide is also known as acid, blotter, boomers, cubes, and yellow sunshine. It can be swallowed or absorbed through the mouth tissues and is a schedule I drug. It produces an altered state of perception and feeling. Adverse effects of LSD include nausea, increased body temperature, blood pressure and heart rate, and persistent mental disorders. Mescaline, also known as buttons, cactus, mesc, or peyote is a schedule I drug that can be swallowed or smoked. Its effects are very similar to LSD. Psilocybin or magic mushrooms are a schedule I drug that is swallowed to produce effects similar to LSD with the addition of nervousness and paranoia.\(^2\,^5\)

Opiates and morphine derivatives with the potential for abuse include codeine, fentanyl, heroin, morphine, opium, oxycodone, and hydrocodone. Codeine is a schedule II, III, IV, or V drug that can be injected or swallowed for intoxication effects. It is also known as Captain Cody, schoolboy, loads, and pancakes and syrup. Fentanyl (Actiq, Duragesic) has street names including Apache, China girl, China white, dance fever, good fella, TNT, and jackpot. It can be injected, smoked, or snorted and is a schedule I or II drug. Heroin or diacetylmorphine is a schedule I drug that can be injected, smoked, or snorted. It is also known as brown sugar, dope, H, horse, junk, skag, smack, or white horse. Morphine (Roxanol, Duramorph) has street names that include M, Miss Emma, monkey, and white stuff. It is a schedule II or III drug that can be injected, swallowed, or smoked to produce an effect. Opium also known as laudanum or paregoric has street names including big O, black stuff, gum, and hop. It is a schedule II, III, or V drug that can be swallowed or smoked to produce an effect. Oxycodone (Oxycontin) is a schedule II drug that can be swallowed, snorted, or injected and has street names such as Oxy, O.C., and killer. Hydrocodone is a schedule II drug that must be swallowed for effect and has street names of vike and Watson 387. The effects of opiate intoxication include euphoria, dysphoria, apathy, sedation, slurred speech, attention impairment, and constriction of the pupils. Adverse effects include constipation, confusion, respiratory depression and arrest, unconsciousness, coma, and death with overdose.\(^2\,^5\)

Stimulants that are commonly abused include amphetamine, cocaine, MDMA, methamphetamine, and methylphenidate. Amphetamine (Dexedrine) is a schedule II drug that can be injected, swallowed, smoked, or snorted to produce an effect. It has street names that include bennies, black beauties, crosses, hearts, speed, and uppers. Cocaine is a schedule I drug that can be injected, smoked, or snorted for an effect. It
has street names that include blow, bump, C, candy, coke, crack, flake, rock and snow. MDMA (methyl-enedioxy-methamphetamine), also known as ecstasy, Adam, clarity, Eve, peace, X, or XTC, is a schedule I drug that must be swallowed to produce an effect. Methamphetamine is a schedule II drug that can be injected, swallowed, smoked, or snorted for effect and has street names including crystal meth, chalk, crank, fire, glass, ice and speed. Methylphenidate (Ritalin) is a schedule II drug that can be abused by swallowing, injecting or snorting. It has street names of JIF, MPH, R-ball, Skippy, the smart drug, and vitamin R. Effects of cocaine (other stimulants produce similar effects) include elation/euphoria, grandiosity, tachycardia, dilation of the pupils, increased or decreased blood pressure, sweating and chills, and nausea and vomiting. 

The use of illicit drugs and abuse of licit drugs among pharmacist and other health care professionals is higher than among the general population of the U.S. According to a study done in 2004, pharmacists reported a lifetime prevalence of use of alcohol (93.2%), marijuana (44.4%), cocaine (13.5%), hallucinogens (8.3%), minor opiates (24.1%), anxiolytics (14.3%), stimulants (15.8%) and sedative-hypnotics (6.0%) while the general population reported a lifetime prevalence of use of alcohol (86.9%), marijuana (34.5%), cocaine (13.0%), hallucinogens (10.5%), minor opiates (7.5%), anxiolytics (5.9%), stimulants (7.2%), and sedative-hypnotics (4.4%). Pharmacists also reported a past year prevalence of use of alcohol (30.8%), marijuana (3.0%), cocaine (0%), hallucinogens (0%), minor opiates (8.3%), anxiolytics (4.5%), stimulants (0%), and sedative-hypnotics (1.5%), while the general population reported alcohol (20.5%), marijuana (4.1%), cocaine (0.9%), hallucinogens (0.2%), minor opiates (1.8%), anxiolytics (1.0%), stimulants (0.4%), and sedative-hypnotics (0.3%). This study attributes the higher use of certain drugs mainly to job related stress and access to drugs (i.e. opiates and anxiolytics).
In a survey of PharmD III and PharmD IV students at Wayne State University in 2008 showed significant drug use to be known among pharmacy students and pharmacists. The questionnaire consisted as follows:

This survey is voluntary and will be used for purposes of PPR 6180 only. It is intended to be opinion purposes only and all information provided will be anonymous and confidential.

Have you ever used any of the following:

Alcohol
Nicotine
Any illegal drugs (marijuana, LSD, ecstasy, cocaine, etc)
Steroids
OTC diet pills
Narcotics, sedatives, amphetamines, etc without a valid medical prescription or condition
Other drugs without a valid medical prescription or condition

Do you know any other pharmacy students or pharmacists who have use any of the following:

Alcohol
Nicotine
Any illegal drugs (marijuana, LSD, ecstasy, cocaine, etc)
Steroids
OTC diet pills
Narcotics, sedatives, amphetamines, etc without a valid medical prescription or condition
Other drugs without a valid medical prescription or condition

Respondents were asked to check yes or no in regards to each type of drug. The survey was emailed to two classes of pharmacy students and asked to voluntarily complete the survey. 63 students completed the survey and the results are as follows:
Both of these studies/surveys suggest that licit and illicit drug use is prevalent among pharmacists and pharmacy students. These studies do not necessarily indicate a prevalence of abuse but the large prevalence of use indicates the potential for abuse. Once a substance has been used by a pharmacist there of course will be an increased likelihood of repeat use which could then turn into substance abuse.

Many states have programs set in place to specifically help health care professionals who have a substance problem. In Michigan we have a unique program called the Michigan Health Professional Recovery Program (HPRP) that has been in place since 1993. It is designed to “encourage health professionals to seek treatment before their impairment harms a patient or damages their careers through disciplinary or regulatory action.” Under Michigan law the following professions are included for assistance under the program: audiologist, allopathic physician (M.D.), athletic trainers, chiropractor, dentist, dental hygienist, dental assistant, marriage & family therapist, nursing home administrator, occupational therapist, occupational therapy assistant, optometrist, osteopathic physician & surgeon (DO), physician's assistant, podiatric physician, professional counselor, registered nurse (R.N.), licensed practical nurse (L.P.N.), nurse practitioner, midwives, pharmacist, physical therapist, psychologist, respiratory therapist, sanitarian, social worker, social worker technician, veterinarian and veterinary technician. ¹²

The program begins with a referral. A pharmacist’s information concerning possible substance use is given to the HPRP from any of
several sources including the person themselves, a co-worker, patient, or family member. This information is kept confidential as long as the information is given in good faith. The next step of the program is intake. This involves finding out what possible problem the pharmacist has. If the person agrees to the requirements of the program and participate in the HPRP, the pharmacist will usually be exempt from disciplinary action from the licensing board due to the substance use. 

After all of the information is gathered, the pharmacist is referred for evaluation by the HPRP. This will establish the type of problem and begin the set up of a recovery plan. If the evaluation shows that the pharmacist has a chemical dependence or mental illness then a referral is made for treatment based on the severity of the problem. HPRP’s treatment method involves multi-disciplinary tactic to treat the person as a whole. HPRP also sets up a Recovery Monitoring Agreement which is a written agreement to the recovery plan. This agreement usually lasts for one to three years and can involve practice limitations, random drug screening, and required meetings with self help groups. 

The participant will be considered to have completed the HPRP when they have completed the recovery monitoring agreement. After five years upon completion, all records are then destroyed and the participant is released from the program. The program believes that chemical dependence and mental illness are treatable conditions and by allowing healthcare providers a chance to access treatment and recover early in the addiction process negative impacts will be minimized. Participants are encouraged to seek help before their disease harms a patient or injures their career. The HPRP allows pharmacists and other health professionals to help themselves and continue with their career before their disease allows them to harm anyone.
So what can we as individuals do to help a pharmacist who has a substance abuse problem or to prevent it in the first place? I believe that prevention would be the key issue. As a pharmacy student, education needs to be broadened and more comprehensive. Many pharmacy schools do not cover substance abuse or addiction and those which do, do so broadly. Most curriculums do not address the fact that as a pharmacist we have many risk factors for substance abuse. Students do not seem to be aware of the true potential of abuse with the drugs we spend so much time learning about. The psychological issue of abuse is seldom covered to the depth that it needs to be to fully understand why a person will abuse and become addicted to a drug.

If substance abuse cannot be prevented we can help those in recovery. Not all states have programs such as Michigan so implementing recovery programs would be important. As a pharmacist, we have an ethical obligation to help those around us who may be affected by substance abuse.
abuse. By encouraging those to get help through programs such as the HPRP, we can help keep our place as a trusted professional and allow our fellow pharmacists to continue helping patients.

Substance abuse among pharmacists and other healthcare professionals is a serious problem that cannot be ignored by any of us. We as a profession need to address the problem and look for new ways to prevent it. We also need to support the recovery process and help those pharmacists that need it.

Reference


