America's Pharmademic:

Addiction and Abuse of Prescription Drugs

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The abuse and illegal distribution of prescription drugs is becoming a serious threat to public health and medicine. Opioids, Central Nervous System (CNS) depressants, and stimulants are the three classes of drugs with the highest potential for abuse. The consumption of Opioids, medically synthesized derivatives of heroin, increased from 73mg in 1996 to 329mg in 2006 (Kluger). This is nearly a five-fold increase over ten years, and opioid consumption is still on the rise. Further, the types of prescribed opioids are becoming much more effective (and addictive) as scientists discover new formulas to increase the potency and decrease the half-life of each drug. In addition to increased opioid consumption, CNS depressants and stimulants are being over-prescribed as an increasing number of people are relying on drugs to fix their problems. Doctors are currently prescribing drugs to patients who are not in need because they are either illegally selling prescriptions for personal profit or do not know the dangers associated with the drug. The lack of drug control laws, disorganization throughout the medical community, and promotion of addictive drugs by pharmaceutical companies has created a national "pharmademic" of drug addiction.

America's battle with drug addiction dates back to the Civil War when "Soldier's Disease" plagued the army after soldiers were given large doses of morphine to ease the pain of injuries sustained in battle (Schnoll). Several minor acts were drafted between 1916 and 1925 preventing physicians from prescribing drugs to addicts, but nothing had a major impact on drug prescription until the Controlled Substances Act (1970), which placed drugs into five schedules based on abuse potential. All of these acts, designed to reduce drug abuse and addiction, had no success in decreasing the nonmedical use of prescription drugs throughout the United States.

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Despite increasing numbers of overdoses and prescription drug abusers, medical institutions and organizations have failed to recognize the increasing negative effects that addictive prescription drugs are having on society. In the 1990s, the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), the accrediting body for many medical care facilities, "developed new policies to treat pain more proactively, approaching it not just as an unfortunate side effect of illness but as a fifth vital sign, along with temperature, heart rate, respiratory rate and blood pressure" (Kluger). Although these policies were intended to be a compassionate change that improved patient care, they sparked and continued to fuel the opioid epidemic that our country has been struggling with for the past twenty years.

The disorganization and lack of laws controlling the prescription of addictive drugs is readily seen in Florida, where doctors working for "pill mills" are giving out huge prescriptions of opioids, causing an influx of prescription drug abuse across the eastern coast of the United States. These "pill mills" or illegitimate pain clinics are making considerable profits by hiring doctors to illegally prescribe addictive medications to drug addicts and drug dealers. A recovering addict from Florida recalled, "When my physician refused to prescribe me more pills, he sent me to a clinic. The doctor there didn't even ask my name first. He wrote me a prescription while he was on the phone dealing with some court case he was involved in" (Kluger). As opioids became easier to obtain on the streets, increasing numbers of people became addicted to them and the demand for opioids as well as the number of clinics supplying opioids increased: "In 2008, the DEA estimated that pain clinics in South Florida increased from 60 to 150, with Broward County accounting for 89 of these clinics" (March). Broward County, recently acclaimed "the Painkiller Capital of the United States," became a central hub for opioid addicts and drug dealers, who would travel from states across the East Coast to obtain prescriptions (March). Law enforcement authorities from states across the nation have traced prescription drug abuse and trafficking back to Broward, Miami-Dade, and Palm Beach counties (March). The number of pills being distributed in these three counties alone is shocking: nine million pills of Oxycodone were dispensed by just 45 Florida doctors in the last six months of 2008 (March).

While some of these pain clinics are legitimate, most are run by criminals who bribe doctors into illegally prescribing medicine. In a study conducted by Samantha March (2010), a 41 year old drug treatment participant reported the following about a pain clinic in Florida:

They knew it was being abused, but nothing is ever spoken. I weighed about 90 pounds. I was so sick, and my blood pressure was so low it was bottoming out. I was having seizures. My physical health just deteriorated. I mean, it's obvious if you walk in, you can tell if someone is an active crack head or actively abusing pills (p. 688)

Doctors in most states would have nothing to gain from prescribing opioids to such addicts, but Florida law allows "pain management specialists" to open pharmacies inside their doctor's office (March). With an in-office pharmacy, pain specialists can earn hundreds to thousands of dollars with each prescription they write. Many pill mills were so successful that they started putting advertisements (ads) on the back of local newspapers. These ads included sales tactics such as "first visit free, buy 1 pill get the 2nd free, and receive \$30 gift card for referrals" (March). Many of the drug addicts in March's study reported that they used these ads to identify which pain clinics to visit because the ads "contributed to their impression of the pain clinic as a 'shady' enterprise" (p.688).

March also points out the newspaper ads used to advertise prescription drugs:

Look on the back of Excel (local paper) ... Flip the magazine over, and there are about 500 pain clinics, and the biggest ones are on the back page and then flip, flip, flip. All it has is pain doctors and escorts. I mean, have you ever heard of a doctor running ads with an escort service side by side? They're legal drug dealers. (p. 688)

In addition to these newspaper ads, online advertisements and websites for Florida pain clinics are also completely focused on selling prescription drugs. One of the first websites that comes up in a "Florida pain clinic" Google search represents the east coast pain clinic in West Palm Beach, Florida. Located on the center of the page is "Oxycodone 30mg, Oxycontin 80mg, Morphine, Xanax 2mg," followed by "In house pharmacy. No Florida ID Required." The website also states that only cash and credit cards are accepted and that a \$200 follow-up appointment is required every 28 days.

In March 2010, DEA agents raided three Florida pain clinics that were suspected of illegal activities (Friedman). All three of these clinics were co-owned by two ex-convicts, 29-year-old twins, Christopher and Jeffrey George. According to the court documents, the George brothers were employing five doctors at one of the clinics and paying them \$860,000 to \$1.2 million per year depending on how many patients they saw. An undercover DEA agent infiltrated one of the clinics and reported that Christopher George told him he had \$40 million in "assets" (drugs) he needed laundered (Friedman). Authorities also reported that an employee left one of the clinics with \$50,000 in cash earned in one day of business (LaForgia). Despite the criminal investigation, authorities could not pin any charges on the George brothers and the three pain clinics continued to operate. The George brothers are not the only criminals running pill mills: Palm Beach County Sherriff Ric Bradshaw stated, "There are between 200 and 300 'bad pain clinics' in the state that authorities hope to shut down" (Friedman).

Another problem with prescription drug control laws is the ability for an individual to obtain several prescriptions from different doctors in under one month. In Florida, the large number of illegal pill mills allows addicts and drug dealers to "doctor shop" from clinic to clinic obtaining huge numbers of pills each month. Another participant in March's study, a 33-year-old white female, said:

It started costing more and more to keep me and my friends high, so I started selling them. Then you go out on the street and you flip all the pills, and you can make like \$5,000 in a month. And then you do it again that next Monday, and you do it again and again and again, and then you and your friends can get high. (p. 691)

Doctor shopping allows drug abusers to support their drug habits by selling half of their prescription on the street and taking the other half. In 34 states, Doctor shopping is difficult because Prescription Drug Monitoring Programs (PDMPs) provide an electronic database that collects data on dispensed substances, which prevents multiple prescriptions from being filled (U.S. Department of Justice). However, in states such as Florida that have not yet adopted PDMPs, drug addicts can safely fill multiple prescriptions from different doctors through private in-office pharmacies.

The relationship between substance abuse and opioid prescription is important in determining whether individuals truly need the medications that are being prescribed. Several studies conducted by Svetlana Skurtveit show that individuals with a history of substance abuse have a much higher chance of obtaining opioid prescriptions. In a study relating nicotine dependence to opioid use, Skurtveit (2010b) observed that nicotine dependence lead to more frequent use of opioids. In another study relating previous benzodiazepine use and opioid use, Skurtveit (2010a) concluded that previous benzodiazepine use is a "stronger predictor of later

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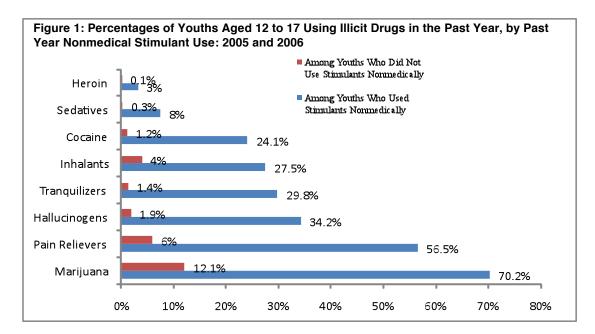
opioid use than self-reported chronic pain [excluding opioid use in treatment of malignant diseases]"(p. 811). These studies indicate that a high number of individuals with opioid prescriptions are taking the drug for the "high" rather than pain relief. Doctors need to be more cautious when prescribing opioids to chronic pain patients by determining whether each patient has a history of substance abuse and whether they truly need opioids to null the pain. Also, policies for stricter control on opioids should be instated in order to prevent their prescription under certain circumstances (e.g. milder forms of chronic pain).

In addition to opioids, CNS depressants are being over-prescribed. CNS depressants, also called tranquilizers and sedatives, include barbiturates (Mebaral and Nembutal) and benzodiazepines (Xanax, Ativan, Valium, etc) (Volkow). CNS depressants are often prescribed for anxiety, tension, panic attacks, acute stress reactions, and sleep disorders (Volkow). Benzodiazepines, the more popular type of CNS depressant, are the second most abused class of prescription drugs and pose a serious threat when combined with alcohol. Pain clinic physicians often prescribe Xanax, one of the strongest and most addictive types of benzodiazepine, in order to treat pain; however, there is no evidence showing that Xanax relieves pain (Skurtveit). In fact, an article by Skurtveit (2010a) states, "opioids should be avoided in patients using other addictive drugs such as benzodiazepines, because this may increase the potential for problematic use or abuse" (p. 805). Benzodiazepines are commonly abused because they are easily available; almost anyone can get a prescription because there are no physical signs that someone is having anxiety or sleep disorders, making it nearly impossible for doctors to determine whether a patient is in need of the drug or if they are just looking for the high. In order to prevent CNS depressant abuse, doctors should only prescribe benzodiazepines after extended relations with the patient. Also, patients who are prescribed benzodiazepines for sleep disorders should not remain on them

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permanently. Instead, cycles of different types of sleeping medications should be used to prevent addiction to any specific type of drug.

The prescription of stimulants to children for treatment of ADD and ADHD is causing an increase in stimulant abuse, leading to major depressive episodes (MDEs) and the use of other illicit drugs. In 2006, 2% of children aged 12-17 in the U.S. reported using stimulants non-medically, a rate twice as high as adults aged 26 and over (U.S. Department of Health and Social Services). The increasing number of children taking stimulants non-medically is due to the large number of young children being prescribed amphetamines for treatment of ADD and ADHD. Many of these children do not enjoy taking amphetamines and end up selling their extra pills to classmates, leading to the increase in non-medical abuse. According to the U.S. Department of Health and Social Services, 22.8% of youths aged 12-17 who used stimulants non-medically had a MDE while only 8.1% of youths who did not use stimulants non-medically had an MDE. In addition, children who take stimulants non-medically have a much higher chance of taking other drugs.



U.S. Department of Health and Social Services. (2008). Nonmedical Stimulant use, Other

Drug Use, Delinquent Behaviors, and Depression among Adolescents. *National Survey on Drug use and Health.* < http://www.oas.samhsa.gov/2k8/stimulants/depression.pdf>

The over-prescription of drugs in the United States can be explained by the significant influence of the pharmaceutical industry on healthcare professionals. In 2004, pharmaceutical companies in the United States spent \$57.5 billion, or 24.4% of their annual revenue, on drug promotion (Spurling). The pharmaceutical industry claims that its advertising is meant to "ensure that patients have access to the products they need and that the products are used correctly for maximum patient benefit"; however, healthcare professionals who are exposed to information provided by pharmaceutical companies tend to prescribe medication more frequently, at a higher cost, and with lower prescription quality (Spurling, p. 2). "Promotions" from pharmaceutical companies often include advertisements in journals, prescription software, presentations to healthcare groups, sponsored clinical trials, samples, gifts, and research funding (Spurling). Presentations and advertisements funded by pharmaceutical companies often contain misleading information intended to promote over-prescription of drugs. Pharmaceutical companies also bribe doctors with "gifts" in return for increased prescriptions of specific types and brands of drugs (Mansfield). These gifts range from a box of ballpoint pens to large sums of money or extravagant vacations (Katz). Large gifts have a significant influence on a doctor's prescription methods; however, these types of gifts are being distributed less frequently due to the regulations of healthcare organizations. The American Medical Association (AMA) and the Pharmaceutical Research and Manufacturers of America (PhRMA) adopted voluntary guidelines in 2002 prohibiting doctors from accepting gifts worth more than \$100 from pharmaceutical companies (Katz). However, because these are voluntary guidelines, many doctors continue to accept expensive gifts from pharmaceutical companies. According to an article by Peter Mansfield

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(2003), "[gift-taking] can become a two-way street of bribery and extortion. For example, it is increasingly common for doctors to ask and receive 'research funding' from drug companies, despite publishing little or no real research" (p. 48). Recently, medical institutions (universities, hospitals, etc) have started adopting regulations that prevent doctors from accepting expensive gifts, forcing pharmaceutical companies to rely on smaller gifts in order to promote their product (Katz). Smaller gifts are proven effective at influencing doctors' decisions on prescribing certain types of drugs. According to an article by Dana Katz (2010), these small gifts are having a subconscious impact on healthcare professionals:

Many physicians deny the potential for the receipt of small promotional items to undermine their professional objectivity. In fact, researchers have found that the more gifts a physician receives, the more likely he or she is to believe that they do not influence behavior. While medical professionals might believe themselves to be 'more rational and critical' than the average person, the success of pharmaceutical marketing illustrates that physicians are as susceptible to target marketing as others. Those who do not acknowledge the power of small gifts are the ones most likely to be influenced,

because their defenses are down. (p. 14)

The influence of pharmaceutical promotions on healthcare professionals is fueling the U.S. drug epidemic as addictive drugs continue to be over-prescribed.

The increase in opioid and CNS depressant sales are closely associated with the number of prescription-drug overdose deaths. Florida, the highest opioid-distributing state in the U.S. also has the highest number of accidental overdose deaths. According to Barbara Krantz, CEO and medical director of the Hanley Center in Florida, "There are seven deaths per day in Florida from prescription-drug overdoses" (Kluger). The number of accidental overdose deaths in the United States increased from 6000 in 1990 to nearly 28,000 in 2007 (Kluger). Although drug addiction and overdosing is generally attributed to celebrities and young people, statistics show that a majority of overdose-related deaths occur between ages 45-54 (Kluger). The table below shows the number of unintentional drug-overdose deaths per 100,000 people by age and sex

(Kluger):

Table 1		
Unintentional Drug-Overdose Deaths per 100,000 People in 2007, by Age and Sex		
AGE	Female	Male
15-24	3.3	10.3
25-34	7.4	19.2
35-44	11.7	21.3
45-54	15.0	23.5
55-64	6.7	10.6
65-74	2.0	3.1
75-84	2.0	2.1
85+	2.8	2.6
National Toll: 27,658		

Kluger, Jeffrey. (2010). The New Drug Crisis: Addiction by Prescription. Time, Vol.176, Issue 11.

Increased numbers of overdose deaths of people in their late 40s and early 50s can be attributed to the over-prescription of opioids to people with chronic pain. These patients are not educated about the dangers of opioids and start taking them without realizing they will be addicted to the drug for life. The most dangerous opioid side effect is respiratory depression, which is intensified when high doses of opioids are combined with alcohol or benzodiazepines (Kluger).

In order to prevent withdrawal symptoms in patients who are trying to ease off opioids, doctors generally prescribe a slow-acting opioid called Methadone. Methadone successfully relieves withdrawal symptoms, but it is also habit-forming and has a high potential for abuse. If a doctor stops prescribing Oxycontin to an addicted patient who is not willing to give up the drug, the addict has two ways to obtain opioids: 1) purchase Oxycontin off the street for \$1/mg (Oxycontin prescriptions are often 40-80mg), or 2) get a prescription for Methadone and abuse it by taking large doses. According to Barbara Krantz, CEO and medical director of a rehabilitation clinic in Florida, drug addicts and alcoholics "can never use substances in moderation. Once your brain becomes a pickle, it can't go back to being a cucumber" (Kluger). Buprenorphine/Naloxone is a new alternative to Methadone that is difficult to abuse. Buprenorphine is a slow-acting opioid that works to reduce withdrawal symptoms while Naloxone blocks the opioid receptor in the brain, preventing the abuse of other opioids (Byrne). Naloxone makes it impossible for patients to get "high" on opioids. The Buprenorphine/Naloxone combination comes in a single pill with a "built-in mechanism that discourages misuse through crushing, snorting, or injecting" (Byrne, p. 54). Buprenorphine/Naloxone should be used as an alternative to Methadone in order to prevent further abuse of opioids by recovering drug addicts.

Pharmaceutical promotions, disorganization throughout the medical community, and the lack of laws controlling prescription medication are the three main factors that are fueling the drug epidemic in the United States. Several Federal laws need to be drafted in order to organize the medical community and prevent healthcare professionals from profiting by over-prescribing drugs. Drug problems in Florida could be fixed by drafting a law that prohibits doctors from running pharmacies inside their office. Also, a law should be created that criminalizes "pill mill" operations and strips any doctors involved with illegal pain clinics of their medical license. Doctor shopping could be prevented if a National Prescription Drug Monitoring Program was enforced across the country. Pain treatment policies such as the such as the ones drafted in 1990 by the JCAHO that consider pain as a "fifth vital sign" need to be put in place. Prescription drug

abuse and the dangers of opioids, CNS depressants, and stimulants need to be addressed on a national level. Without national laws and regulations controlling prescription drugs, the medical community will remain disorganized and the drug epidemic will continue to worsen.

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