Physicians Impaired by Substance Abuse Disorders
Kimberly B. Gold, MS4, Scott A. Teitelbaum, M.D., F.A.A.P., A.S.A.M.,

Abstract
Physicians are at risk for substance abuse disorders at rates comparable to non-physicians. While overall substance abuse is no more common in physicians than in age-matched controls, abuse of prescription drugs and opiates is more common in physicians. Also, certain specialties, such as anesthesiology, are overrepresented among substance abusers. Detection of a physician impaired by substance abuse is a challenge, since a physician’s practice is often the last segment of life to be impacted. While colleagues are ethically obligated to report an impaired physician, they are less likely to do so if the physician’s career and reputation will be immediately destroyed. Physician Health Programs (PHPs) in each state have guidelines for treatment and monitoring, and the prognosis for the physician addict is excellent.

Keywords: Impaired Physician, Physician’s health, Prescription drug abuse

Definition
Physician Impairment, according to the American Medical Association (AMA), is any physical, mental or behavioral disorder that interferes with the physician’s ability to engage safely in professional activities (1). Although the impairment of physicians can also be due to mental illness, neurological problems, and infectious diseases such as HIV or Hepatitis C, we will review specifically the impairment of physicians as a result of substance use, abuse or dependency. This is particularly relevant, since overall, physicians may have more narcotic and other prescription misuse than any other profession or group, and the disease of addiction impairs more physicians than any other disorder or disease (2). Some experts consider the term impaired physician to be archaic, demeaning, and inaccurate given that many physicians with these problems are able to continue working if they are treated and monitored.

Policy and Physician Health Programs
While physicians have long been susceptible to substance abuse disorders (SUDs), national attention was not received until the AMA Council on Mental Health’s 1972 paper promoting state programs for the impaired physician. Still today, though, an AMA consensus statement acknowledges that not enough has been done to address mental health issues among physicians (3).

The public has no tolerance for impaired physicians, with most patients accepting only abstinence for any practicing physician (4). However, physicians are not commonly tested for substance use. Drug testing is performed for other professions where public safety is involved, such as transportation, yet drug testing is rarely a condition for employment for physicians.

While the public advocates for punishment of impaired physicians as the single best method for protecting patients from physician addicts, we argue that punishing physicians for substance abuse is not the best approach. Patient safety is most compromised while the impaired physician is in practice. Thus, encouraging the identification and treatment of impaired physicians is paramount for improving physicians’ and patients’ health. Survey data suggests that colleagues are less likely to report a doctor with an SUD if this doctor will face immediate and severe consequences for his actions. While many states have confidential treatment programs, with an estimated 8,000 practicing doctors enrolled nationwide, some states do not maintain an impaired physician’s anonymity and immediately suspend an impaired physician’s medical license. Exempting impaired physicians from punitive action also encourages them to proactively seek treatment and increases the likelihood that they will receive the comprehensive treatment they require.

Nearly all states have legal requirements that physicians report impaired colleagues to the Board of Medicine or PHP (5). Colleagues must play a role in the identification of impaired physicians. Many states allow for this to be done anonymously. The AMA Code of Medical Ethics informs physicians that they have an ethical obligation to report impaired, incompetent, and unethical colleagues. A 2002 Ethics Survey found that 65% of physicians would report an impaired colleague to the state medical board or chief of staff. However, many experts believe that this number simply reflects physicians’ understanding of what they should do if they encountered an impaired physician, rather than what they actually would do in this situation. Experts argue that many physicians would prefer to speak to their colleagues about their problems rather than turn them in. In reality, most impaired physicians are referred for treatment by their family members or law enforcement (after a DUI, domestic violence report, or buying illegal drugs).
Physicians are particularly astute in their substance use and are overwhelmingly in denial. Most areas of the physician's personal life are affected prior to an apparent impact on clinical performance. In fact, clinical performance is often the last facet of a physician's life to be impacted by substance abuse. The fact that physicians' work is impacted very late in the course of substance-induced impairment actually contributes to the overwhelming denial we see from physicians with SUDs. Thus, by the time work-related impairment is apparent, the illness is severe and warrants prompt action. While it could take as long as fifteen years before an alcohol dependent physician might be impaired to the point that the user or colleagues recognize the need for treatment, the IV fentanyl user may require intervention within months. Indeed, one study found the mean duration of physicians’ substance-related problems before treatment was 6-7 years (6).

Epidemiology
The number of physicians diagnosed and treated for a substance abuse disorder has increased significantly over the past decade (7). Medical students are also increasingly recognized as having substance misuse, abuse, or dependence. This is likely due to increased awareness and detection.

The leading cause of physician impairment is chemical dependency. Estimates suggest that approximately 15% of physicians will be impaired at some point in their careers. While this rate is no different from the rates in the general public, we would expect the rate of substance abuse to be lower than in the public, since all-cause mortality is lower among physicians than the general public, and because physicians smoke less and exercise more than age-matched non-physicians. Also, among professionals, physicians are over-represented in treatment for substance abuse disorders. Further examination of this overall rate reveals a number of troubling patterns. Furthermore, it is unclear how many physicians initiate and/or maintain an SUD through self-prescription, misuse of prescriptions, or use of illegal drugs.

Prescription misuse, opiate abuse and dependence, and suicide appear to be more common among physicians than their matched controls. Is this the same reference as 8? In not, it requires a reference. Although alcohol abuse and dependence are no more common among physicians than similarly matched controls, alcohol is the most commonly abused substance among physicians (8). Physicians have higher rates of abuse of prescription drugs; most notably, rates of physician misuse of benzodiazepines and opioids are up to five times higher than in an age matched population (9). Abuse of these drugs can be considered prescription misuse and are often self-prescribed, perhaps for self-medication. These patterns are particularly troubling because physicians have easy access to these prescriptions and are assumed to be educating their own patients about the appropriate use of medications (i.e. only take medications prescribed for them and only take medication according to the dose and directions prescribed). One possible implication of physicians’ misuse of prescription medications is that physicians’ familiarity with prescription drugs can lead to overconfidence about drug use and a false belief that substance use can be controlled without resulting in dependence or abuse.

2007 data from 109 physicians receiving treatment at a PHP showed a distribution of abused drugs as below (10).

<table>
<thead>
<tr>
<th>Drug of Abuse</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>39.5</td>
</tr>
<tr>
<td>Opioids</td>
<td>33.9</td>
</tr>
<tr>
<td>Cocaine</td>
<td>11.9</td>
</tr>
<tr>
<td>Sedatives</td>
<td>3.7</td>
</tr>
<tr>
<td>Marijuana</td>
<td>2.6</td>
</tr>
<tr>
<td>Inhalants</td>
<td>1.8</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>1.8</td>
</tr>
<tr>
<td>Other</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Drug use often began before medical school and residency (11-13). Although some data suggests drug use increases in medical school, evidence for this conclusion is limited and varied. Surveys of medical students cannot be readily published for fear that the student drug users will be identified or the school will be branded as a drug-using institution. Strikingly, in one study of substance use among medical students, 17% of survey respondents used cocaine in medical school (14). It is imperative to learn more about substance use by medical students because use patterns appear different from the past, with more drug use and less alcohol use. Additionally, medical students may unfortunately choose professional specialties where their drug use as students and experimentation could rapidly lead to addiction and death.

Highest Risk Careers
Several theories exist to explain the prevalence of addiction among physicians, including stress, chronic fatigue, and access. Additionally, the same factors that contribute to non-physicians becoming substance...
abusers could be at play. These factors include a genetic predisposition, particular personality characteristics, and youth experimentation. In support of this, studies have found that three-fourths of physicians with substance use disorders have a family history of addiction (15-16).

In data from PHP programs, impaired physicians are often family practitioners, emergency medicine physicians, and anesthesiologists (17-18). Additional studies found an overrepresentation of anesthesiologists, emergency medicine doctors, and surgeons among opiate abusers (19). Among all surgeons captured in a survey study from 1978-2002, 7% reported alcohol dependence (20). Data suggests that female surgeons have the highest incidence of alcohol abuse of all female physicians (21).

Anesthesiologists have a higher rate of substance abuse than any other specialty. For example, in 2003, while anesthesiologists represented only 5.6% of Florida’s physicians, they accounted for 25% of Florida’s impaired physicians referred for an SUD (10). Anesthesiologists have the highest rate of narcotics and IV drug use of any medical specialty (22). Fentanyl is the controlled substance most often abused by anesthesiologists (23).

Table 2: PHP program participants by medical specialty, Florida 2007 (10).

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>21</td>
</tr>
<tr>
<td>ER</td>
<td>18</td>
</tr>
<tr>
<td>Surgery</td>
<td>6</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>6</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>6</td>
</tr>
<tr>
<td>Radiology</td>
<td>6</td>
</tr>
<tr>
<td>Pathology</td>
<td>6</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>3</td>
</tr>
<tr>
<td>Neurology</td>
<td>3</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>3</td>
</tr>
</tbody>
</table>

Much research has also been done to understand why physicians in a particular specialty are more prone to SUDs. The apparent increased vulnerability of anesthesiologists has been attributed to everything from boredom, stress, and access, to a theory that certain specialties may preferentially attract physicians who are interested in using mind-altering drugs, to a theory that predilection for developing an SUD is related to work-related exposure to drugs with abuse potential (i.e. anesthesiologists have higher rates of SUDs because they, while in the operating room are continuously being exposed to drugs with abuse potential). (22). Physicians do have much greater access to drugs than does the general population (24). While access can generally explain some of the trends in narcotic usage among physicians, access alone cannot account for some obvious discrepancies in data on substance abuse by physicians. For example, oncologists have access to many pain medications but very uncommonly become addicts. Alternatively, the field might be particularly attractive to those interested in mind-altering medications. Perhaps the same medical students who use drugs might be interested in anesthesia. Additionally, a recent hypothesis explores the operating room as a hazardous work environment that can sensitize the brain to drugs via secondhand exposure. The occupational hazard hypothesis, which found fentanyl and propofol in its bioactive form in the OR, suggests that these exposures can lead to neuronal sensitization and increased risk for developing addiction (25-26). Today, there is a heightened awareness in anesthesia programs, which might be contributing to the high reporting rates of substance abuse disorders in anesthesiology (22). However, despite this awareness in anesthesiology, the use of controlled substances has not significantly declined (23).

Other Impairment and Comorbidities

While we focus on impairment from substance abuse, it is important to recall that impairment can occur from other physical or mental limitations. Additionally, substance abuse disorders often occur concurrently with other mental illness. For example, the two most common comorbid diagnoses for the physician opiate addict are depression and cigarette smoking.

Physician substance abuse is associated with increased risk of suicide (27-29). Suicide rates are 40% higher in male physicians than age-matched peers and 130% higher in female physicians than age-matched peers. Among physicians, anesthesiologists have higher rates of suicide (30-32). This data can be skewed since physicians are more likely to succeed at suicide than are non-physicians. However, suicides by physicians may be underreported or erroneously reported as accidents by the pathologist or medical examiner.
Mental health problems frequently begin before medical school and may worsen during training. A review of 40 studies of medical students found that medical students are more likely to have higher levels of depression and suicide than age-matched cohorts (33-34).

Assessment and Treatment Outcomes

With an accurate assessment and treatment, the prognosis for a physician with chemical dependence is excellent. Evidence suggests they can return to both professional and personal productivity. PHPs report high rates of professionals returning to work. A pooled sample of over 900 physician participants in 16 state PHP programs found an overall return to work rate of 72%. Additionally, for the 50% of physicians who completed the program, the rate of return to work was 91.4% (35). This is commonly attributed not only to the highly structured programs, which we will discuss below, but also the high cost of failure, which includes loss of medical license, income, reputation, and the significant reward of being able to return to practice if sobriety is maintained.

Abstinence is the goal for physicians impaired by substance abuse disorders. Opioid addict physicians, unlike their nonphysician counterparts, are consistently referred to detox and long-term treatment rather than Methadone Maintenance Treatment (MMT). In a 5-year study of 26 physicians in Florida’s Professional Recovery Network for opioid abuse/dependence, no opioid addict physicians were referred or treated with MMT, and all were referred for detoxification and long-term treatment (36).

Physician addicts can have greater than 80% successful 5-year outcomes compared to most addiction treatment outcome studies, which report 6-month success rates ranging from 30-60%. Factors associated with physicians’ high recovery rates include last-onset addiction (MDs using drugs in their 30s or 40s, not in their teens), long-term treatment with inpatient and 5-year outpatient components, having their career in jeopardy, random urine testing, and 12-step recovery groups. Additionally, treatment at a facility that has expertise in treating impaired physicians may result in a more favorable outcome.

Positive prognoses were associated with affiliation with Alcoholics Anonymous/Narcotics Anonymous, acceptance of addiction as a disease, honesty, and acceptance of spiritual principles (37). While AA and other 12-step programs are recommended and proven, this should be in addition to intensive treatment modalities (38) such as therapy for the individual, appropriate pharmacologic treatment of any comorbid psychiatric conditions, and family therapy.

In one study from the Washington Physicians Health Program (39), relapse was associated with past potent opioid use, coexisting psychiatric disorders, and a family history of addiction. Multi-substance abuse was also associated with failed treatment (40). Physicians who did not return to work were more likely to be using opioids or IV drugs (41). Thus, anesthesiologists have the greatest battle, with high risk for both relapse and accidental overdose. Relapse rates in anesthesia approach 20% (42). In one survey of 159 anesthesiology training programs, 34% of opioid users and 70% of non opioid abusers were able to return to anesthesia (43). This study found 14 cases of suicide or lethal overdose among those returning to anesthesia, and in 16 percent of these 14 cases, death was the initial indicator or relapse. In another survey, 19% of anesthesiology training programs had at least one fatality (44). With the knowledge that fentanyl and propofol are in the air in the OR, perhaps additional counseling of the impaired anesthesiologist is necessary before a return to the field and toxic OR.

Although there is lore of a “needle barrier,” which implies that IV addicts have the worst outcomes, recent trials and reports suggest otherwise. Data from a 5-year study in the state of Florida’s impaired physician program found that outcomes were independent of type of drug used or route of administration. More than 88% of physicians who used crack, injected drugs, or both, had negative drug tests and positive physician assessment for 5-years and returned to work (45). Additionally, evidence from Florida also suggests that there is not significant outcome disparity between those who turned themselves in for treatment voluntarily and those who entered treatment by coercion.

Following successful completion of treatment, physicians enter into a multiple year contract with the PHP outlining conditions for return to practice. The contract includes:

- Avoidance of all mood altering drugs,
- Randomized drug testing (in urine, and in some states, testing of hair),
- Participation in weekly monitored group sessions with other physicians under contract,
- Attendance in weekly groups such as Caduceus or International Doctors in Alcoholics Anonymous, as well as AA or NA,
- Professional follow-up with an addiction specialist,
- Precise outline of consequences should the physician violate the contract.

This contract between the impaired physician and the PHP seems quite powerful and effective. In a study of 233 physicians under contract with North Carolina Physicians Health Program for the period 1995-2000, 91% had a good outcome (46).

Despite these encouraging statistics, physician impairment remains a serious issue in public health and patient safety. In order to achieve the best outcome for the physician and public, we must get better both at recognizing substance abuse disorders in our colleagues and in referring them early for treatment.
Biography
Kimberly B. Gold, MS4, Yale University School of Medicine
Kimberly Gold is a fourth year medical student at the Yale University School of Medicine. She received her Bachelor of Arts from Columbia University. She is applying for residency in Internal Medicine and is interested in medical errors, patient safety, and the health of physicians.

Scott A. Teitelbaum, M.D., F.A.A.P., A.S.A.M., Associate Professor, University of Florida School of Medicine
Scott Teitelbaum, M.D., F.A.A.P., A.S.A.M. received his undergraduate degree in Psychology at Lehigh University. He attended medical school at Rochester University. Completing his residency in Pediatrics at University of Connecticut, Dr. Teitelbaum served in private practice for ten years at Teitelbaum & Katz Pediatrics in Middletown, Connecticut after which he completed his Postdoctoral Fellowship in Addiction Medicine under the mentorship of Dr. Mark Gold and Dr. Kenneth Thompson at the University of Florida. Additionally, Dr. Teitelbaum completed a fellowship in Child Psychiatry at the University of Florida. Joining the Faculty in 2002, Dr. Teitelbaum serves as the Medical Director for the Florida Recovery Center, Director of Adolescent Recovery Services and Clinical Associate Professor for the Department of Psychiatry as well as the Department of Pediatrics. Additionally, he currently serves as the Clinical Chief of the Addiction Medicine Division within the Department of Psychiatry. His expertise in Addiction Medicine goes beyond chemical dependence and includes an intensive, in depth knowledge of compulsive gambling. He has been involved in the treatment and evaluation of compulsive gamblers on a statewide level. Dr. Teitelbaum currently serves as an Expert Panelist and Speaker for The National Youth Anti-Drug Media Campaign which is sponsored by The White House, Office of National Drug Control Policy. In addition to being board certified as a Pediatrician, Dr. Teitelbaum is certified by the American Society of Addiction Medicine and is a certified medical review officer.

Conflict of Interest Statement:
I declare that I have no proprietary, financial, professional or other personal interest of any nature or kind in any product, service and/or company that could be construed as influencing the position presented in, or the review of, the manuscript entitled Physicians Impaired by Substance Abuse.

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