Impaired healthcare professional

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Objective: **The objective of the article is to present the available data from the literature on substance use disorders in healthcare professionals. Prevalence, risk factors, treatment options, and reentry into clinical practice are discussed.**

Introduction: **Impairment of a healthcare professional is the inability or impending inability to practice according to accepted standards as a result of substance use, abuse, or dependency (addiction). The term *substance use disorder* can be divided into substance abuse and dependence (addiction). Substance abuse results in adverse social and professional consequences. Addiction manifests as physiologic and behavioral symptoms related to a maladaptive pattern of substance use.**

Main Results: **It is estimated that approximately 10% to 15% of all healthcare professionals will misuse drugs or alcohol at some time during their career. Although the rates of substance abuse and dependence are similar to those of the general population, the prevalence is disturbing because healthcare professionals are the caregivers responsible for the general health and well-being of the general population. Healthcare professionals have higher rates of abuse with benzodiazepines and opiates. Specialties such as anesthesia, emergency medicine, and psychiatry have higher rates of drug abuse, probably related to the high-risk environment associated with these specialties, the baseline personalities of these healthcare providers, and easy access to drugs in these areas. Drugs and alcohol are mostly used for "recreational" purposes by medical students. Residents and attending physicians use drugs of abuse for performance enhancement and as self-treatment for various reasons, such as, pain, anxiety, or depression.**

Conclusions: **Institutional, local, and statewide impaired-physician programs are now available for the active treatment and rehabilitation of impaired healthcare professionals. Many of these programs are also designed to assist the clinician with reentry into clinical practice. Rarely is punitive action taken when the healthcare provider undergoes successful treatment and ongoing follow-up management. Overall recovery rates for impaired healthcare professionals seem to be higher compared with other groups, particularly with intensive inpatient management and subsequent follow-up care. (Crit Care Med 2007; 35[Suppl.]:S106–S116)**

KEY WORDS: substance use disorder; substance abuse; substance dependency; healthcare professional

The concepts of addiction and substance abuse are not new, but historically, the medical community has been reluctant to accept and publicly acknowledge addiction, particularly of its own members. As a result, there have been relatively few reports in the medical literature. Most of the literature on substance abuse consisted of anecdotal reports. Historically, addicted physicians either went unnoticed or were treated punitively. As early as 1869, Paget (1) reported on a group of medical students and mentions physicians impaired by "habits of intemperance." Nevertheless, impaired professionals have made major contributions to health care, as we learn from William Osler (2), who in 1892, in the "Inner History of the Johns Hopkins Hospital," described the cocaine addiction of his colleague, William S. Halstead, the father of modern surgery. Halstead's addiction resulted from his self-experimentation using cocaine as a surgical anesthetic. Osler stated, "The proneness to seclusion, the slight peculiarities amounting to eccentricities at times . . . were the only outward traces of the daily battle through which this brave fellow lived for years. He had done so well and so energetically that it did not seem possible that he could take the drug and done so much" (3). His accomplishments highlight the need to provide help to impaired colleagues not only on a personal level but because of their potential for contributions to society.

The prevalence rates of impaired physicians were reported between 10% to 40% in the literature from the early 20th century (4). These reports were mostly anecdotal and descriptive, and estimates of the prevalence of substance use among physicians may have been exaggerated. Few formalized studies of impaired healthcare professionals were conducted that mirrored the lack of treatment programs for substance use disorders among healthcare professionals. It was not until 1958 that the Federation of State Medical Boards first identified alcohol and drug addiction among medical doctors as a disciplinary problem and called for a model probation and rehabilitation program to be adopted by individual state medical boards. In 1973, the American Medical Association (AMA) formally recognized physician impairment as a serious problem and issued its landmark policy paper entitled "The Sick Physician: Impairment by Psychiatric Disorders, Including Alcoholism and Drug Dependence" (5). The report stated: "It is a physician's ethical responsibility to take cognizance of a colleague's inability to practice medicine adequately by reason of physical or mental illness including alcoholism and drug dependence" (5). The AMA report prompted the creation of local, state, and national programs designed to assist healthcare workers with addictions. As a result of the AMA policy and conferences held by the AMA in 1975 and 1977 to discuss the implementation of programs to identify

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and help impaired physicians, all of the state medical societies in the United States presently have impaired-physician programs to treat physicians using alcohol or drugs. Some states have also included the treatment of psychiatric and mental illnesses, and sexual abuse disorders as well.

In 1920, the English Parliament passed the Dangerous Drug Control Act in an attempt to control addiction through the registration of addicts. Nearly 25% of those registered were healthcare professionals, including physicians, nurses, dentists, and veterinarians (6). For several decades, few resources were dedicated to substance abuse. The American Society of Addiction Medicine was formed in the 1980s. The concept of addiction as a disease without boundaries of sex, age, ethnicity, or profession was promoted. The mission of this society is to improve the understanding of the pathophysiology of addiction and to address patients' medical problems related to addictive substances. They promote increased access to and improvement of the quality of addiction treatment; education of physicians, medical students, and the public; and increased research and prevention.

This organization is concerned with all drugs of addiction, including alcohol, and is interested in establishing addiction medicine as part of mainstream medical practice. Primarily as a result of the AMA report and the formation of American Society of Addiction Medicine, physician health committees were formed in all of the 50 states. In addition, state medical societies became involved with regulating and counseling impaired healthcare professionals. The American Academy of Addiction Psychiatry was founded in 1985. Its mission is to promote access to high-quality treatment for all who need it and to inform the public, influence public policy, provide continuing education for addiction professionals, disseminate new information, and encourage new research. The AMA initiatives and other successful state physician-impairment programs led to the creation of the Federation for State Physician Health Programs in 1990, a nonprofit corporation whose purpose is to provide a forum for education and exchange of information among state programs, to develop common objectives and goals, to develop standards, to enhance awareness of issues related to physician health and impairment, and to provide advocacy for physicians and their health issues at local, state, and national levels. Many programs have recently been created not only to educate healthcare professionals about substance abuse but to also treat those healthcare providers who develop abuse and dependency. Organizations such as the National Association of Social Workers, the American Psychological Association, International Nurses Anonymous and Nurses in Recovery, and the American Counseling Association have developed programs specifically designed to treat impaired social workers, psychologists, nurses, and counselors, respectively. In 1990, the AMA recognized addiction medicine as a medical specialty. The International Society of Addiction Medicine was established in 1997. Additional national and international programs continue to be formed to educate and to treat substance abuse and dependency of impaired healthcare professionals.

Professional colleagues have a responsibility to provide help and support to the impaired coworker, not only because of shared fellowship but also because of the investment in their training and the societal need for qualified healthcare workers.

Definition

There is some confusion and overlap among several terms, such as use, misuse, abuse, dependence, and addiction, which have been used interchangeably in the literature. The term *physician impairment* has changed over time, with the gradual acceptance of the concept of addiction. At one time, impairment simply implied the inability to work if you did not come to work daily and were unable to perform those duties expected of you. If there were no obvious physical and mental signs and symptoms of addiction and there was no gross dereliction of duty, then impaired healthcare professionals were routinely ignored. The definition of impairment has been refined during the last few decades, with the acceptance and knowledge that healthcare professionals may seemingly perform their daily activities adequately but that underlying subtle signs and symptoms of possible addiction and substance abuse need to be investigated. Experts now define impairment as an enduring condition that if left untreated, is not amenable to remission and cure. Substance abuse and addiction are chronic diseases that are amenable to treatment, but relapses and exacerbations can occur, particularly without appropriate therapy and follow-up care. The AMA defines an impaired physician as one unable to fulfill professional or personal responsibilities because of psychiatric illness, alcoholism, or drug dependency. Impairment of a healthcare professional is the inability or impending inability of a health professional to practice his or her health profession that conforms to acceptable standards of practice because of substance abuse, chemical dependency, or mental illness. In terms of functional capacity, impairment renders the healthcare professional unable to provide competent medical services, with serious flaws in professional judgment. The term *substance use disorder* can be divided into substance abuse and substance dependence. Substance abuse and dependence refer to the continued use of "drugs of abuse." Current practice defines abuse of a drug in terms of adverse social consequences, such as failure to meet family, school, or professional obligations, legal difficulties, or conflicts in social and professional relationships. Substance dependence, also known as addiction, manifests as physiologic and behavioral symptoms related to a maladaptive pattern of substance use. These symptoms include the need for increasing amounts of the drug to maintain the desired effects, withdrawal symptoms if the drug is abruptly discontinued, excessive time devoted to activities related to substance abuse, and "cravings" or desire to use the drug, regardless of the consequences. Substance abuse is often an early harbinger of drug dependence, although not all cases of extended substance abuse will deteriorate into a dependent state. The criteria for addiction (substance abuse) from the American Society of Addiction Disease includes impaired control over the use of a drug or alcohol, preoccupation with the use of the drug, continued use of the substance despite known adverse consequences, and distortion of thinking, including denial of the addiction.

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, published by the American Psychiatry Association, defines substance abuse to include one or more of the following symptoms that develop during a 12-month period.

> Repeated failure to fulfill work, school, or home obligations (e.g., days missed

at work, school suspensions, or dismissals or neglect of children).
Substance use in physically dangerous situations, such as driving or operating machinery.
Substance use that results in legal problems, such as drug-related arrests.
Continued drug use despite adverse consequences.

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*, identifies seven symptoms, at least three of which must be present during a 12-month period, for the diagnosis of substance dependence (addiction).

Tolerance, as defined either by the need for increasing amounts of the drug to obtain intoxication or a previous desired effect or by experiencing a markedly diminished effect with repeated use of the same amount of the drug.
Signs of withdrawal manifesting as unpleasant mental, physical, and emotional changes when the drug is not taken or by using the drug to relieve the signs and symptoms of withdrawal.
The drug is taken for a longer duration or in greater amounts than was originally intended.
Persistent desire or repeated unsuccessful attempts to discontinue or attenuate the substance use.
An excessive amount of time devoted to activities, such as securing and using the drug, or in recovering from the effects of the drug.
Important social or professional activities are abandoned or decreased because of the drug use.
Continued drug use despite negative social and personal consequences.

Incidence

The exact prevalence of substance use disorders of healthcare professionals is not known exactly, largely because of the methodologic limitations of many of the published studies to date. Although there are numerous descriptive studies, there are no large systematic studies of substance use disorders of physicians. Smaller studies of medical students and physician trainees have provided some useful information. As many as 10% to 15% of all healthcare professionals will misuse drugs at some time during their career. It is estimated that approximately 6% to 8% of physicians have substance use disorders and that up to 14% have an alcohol use disorder—figures that mirror addiction in the general population. There are >800,000 physicians in the United States (75% men, 25% women), which means that up to 64,000 will develop a substance use disorder from drugs and up to 112,000 physicians will experience an alcohol dependence disorder. The overall prevalence of healthcare professionals who develop a substance use disorder of both drugs and alcohol is approximately equal to that of the general public (7–10). Reports on the prevalence of impaired nurses have also not shown higher rates of abuse of either drugs or alcohol as compared with the general public (11). The number of impaired physicians, although not statistically different from for the general population, is of great concern when considering that healthcare providers are responsible for the general health and well-being of the general population. Nearly one in five Americans will develop problems with alcohol, drugs, or both. But considering the degree of responsibility entrusted in doctors, this significant number of impaired physicians is cause for concern. Talbott and Wright (12) reported that chemical dependence is the most frequent disabling illness among physicians. There are a few earlier studies that reported higher rates of alcohol consumption among physicians (13–15). However, later studies have not confirmed this.

Although the rates of abuse and dependence are similar for healthcare professionals and the general public, the rates of *use* (i.e., not meeting the criteria for abuse or dependence) of drugs, in particular of opiates and benzodiazepines, has been reported as five times higher as compared with the general public (16, 17). Alcohol is most commonly misused, followed by opioids and stimulants, such as cocaine. The risk for men developing substance abuse is significantly higher than for women in both the overall population and in healthcare professionals (18). The highest rate of dependence occurs between the ages of 18 and 24. Female physicians are more likely to abuse alcohol rather than prescription drugs. The literature on substance abuse and dependence is heavily biased toward the United States, although more recent reports from other countries have showed similar rates.

Although healthcare professionals have similar rates of substance abuse as the general public, the choice of drug varies. Healthcare professionals have higher rates of abuse with benzodiazepines and opiates, probably because of availability in the hospital and physician offices and familiarity with these types of drugs. Abuse with recreational drugs such as marijuana and cocaine is reportedly less than in the general public.

Among physicians, certain areas of specialization have higher rates of drug abuse. This statistic may be related to relatively easy availability and access to certain drugs in the work environment and the personalities of physicians practicing in these specialties. Those medical specialties with higher levels of stress and high performance expectations may predispose the physician to impairment with drugs and alcohol. These fields may attract physicians with certain traits, such as those more likely to take risks in their personal lives as well. Most studies have reported a consistently higher rate of drug and alcohol use in emergency room physicians, psychiatrists, and physicians in solo practice. Mansky (19) reported that these physicians are three times more likely to abuse substances than the general population of physicians. There is a higher prevalence of marijuana and cocaine use in emergency room physicians and benzodiazepine use in psychiatrists. The data are less consistent on the use of drugs and alcohol among anesthesiologists, although Lutsky et al. (20) found in a 30-yr survey of anesthesia residents in one training program that 16% admitted to substance abuse during their training (21). Pediatricians, pathologists, radiologists, and obstetricians and gynecologists have the lowest rates of substance abuse among physicians. Other healthcare professionals have showed higher rates of drug use, specifically nurses, dentists, pharmacists, anesthesiologists, and veterinarians (22–25). Rosenberg (22) reported that 20% of pharmacy students surveyed used recreational drugs. McAuliffe et al. (24) reported that 46% of the pharmacy students studied reported using a controlled substance with a prescription and that 62% of the students used a controlled substance without a prescription, with 19% using the substance regularly, primarily for recreational use. Pharmacists may have a higher rate of using oral stimulants but reportedly use less parenteral drugs (23). Trauma and critical care nurses have been reported to have higher rates of parenteral drug use (25). Nace et al. (26) examined the charts of 92 physicians admitted to a private psychiatric hospital between 1986 and 1991; 56% of impaired physicians were admitted for sub-

stance abuse treatment, and 64% were diagnosed as having a substance use disorder, 49% abused alcohol, 20% abused opioids, 18% abused sedatives and hypnotics, and 13% abused stimulants. Of the total number of physicians admitted, 44% were admitted for the treatment of a psychiatric disorder, most commonly for depression, and 59% of the physicians were diagnosed as obsessive–compulsive.

For many physicians, substance abuse begins early during medical school and residency. A study supported by the AMA surveyed >2,000 fourth-year medical students from 23 U.S. medical schools. The use of all drugs except "tranquilizers" began before attending medical school. Substance use rates were measured in the 30 days before completion of the survey. The most commonly used substances were alcohol (87.5%), marijuana (10%), cocaine (2.8%), tranquilizers (2.3%), and opioids (1.1%). Less than 1% of the students believed they were dependent on these substances (27). Several other studies documented similar findings, including the use of specific substances, such as marijuana and alcohol, that were used before medical school admission (27–29). Medical students used recreational drugs less often than age-matched peers (27, 28). When drugs and alcohol are used by medical students, it is done mostly for recreational purposes. Residents and attending physicians use drugs of abuse for performance enhancement and as self-treatment for various reasons, such as, pain, anxiety, or depression. Increased alcohol consumption is seen among medical students, although not statistically different from other student groups (30). Baldwin et al. (27) also reported on alcohol consumption of medical students and found that 87% of students reported using alcohol, but only 3.4% claimed they were dependent on alcohol. Other studies have indicated that "heavy use" of alcohol occurred in 6% of medical students, and 4% reported problems as a result of their alcohol use (31, 32). A year-long study of one midwestern medical school class reported 11% meeting criteria for drinking excessively during a 6-month period, and 18% met criteria for alcohol abuse during the first 2 yrs of medical school. During a 30-day reporting period, 23 medical schools reported incidence rates of 87.5% for alcohol, 10% for marijuana, 2.8% for cocaine, 2.3% for tranquilizers, and 1.1% for opiates. Less than 1% stated they were chemically dependent (27).

Studies have showed that as medical students advance through residency training, the incidence of drug and alcohol consumption may decrease, although an increase is seen specifically with the use of benzodiazepines and opiates (33). The most consistent rates of substance use disorders in residents are between 10% and 14%. Hurwitz et al. (34) assessed the prevalence of substance use disorders in a cohort of 215 residents from British Columbia; 14% used alcohol excessively and 3% met the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition*, criteria for alcohol abuse. An additional 3% exhibited signs and symptoms of either social or occupational impairment. A stratified, randomized national survey of 1,785 third-year residents examining drug use patterns revealed that 1.4% and 7% of the residents had used either cocaine or marijuana, respectively, in the preceding 30 days. These residents were compared with age-matched peers who had graduated high school or college. Of the residents, 3.7% had taken benzodiazepines and 87% had consumed alcohol, the most commonly used substance, within the preceding 30 days. Daily alcohol consumption was reported by 5% of the residents. These rates were lower compared with their age-matched peers except for slightly higher rates with opioids and benzodiazepines in male residents. Female residents had significantly higher rates of alcohol and benzodiazepine use during the preceding year compared with their age-matched peers (35).

In a related study, Hughes et al. (17) analyzed substance use by medical specialty among resident physicians. Emergency medicine physicians and psychiatry residents showed the highest rates of substance abuse. These residents were more likely to use marijuana. Benzodiazepine use was highest among the psychiatry residents. In this study by Hughes et al. (17), surgical residents had the lowest rate of substance abuse, except for alcohol use—a finding that was also reported by Hyde and Wolf in 1995 (36). Jex et al. (37) confirmed a previous finding that substance use during residency was not directly linked to developing a substance use disorder as a result of the stress associated with residency training. However, benzodiazepine use was the one substance most linked to the pressures and stresses of residency training. Concern about substance use among resident physicians prompted the Association of Program Directors in Internal Medicine to create a position paper that addressed this issue. Residency training programs were advised to establish policies and procedures to address substance use of residents with education and referral treatment plans.

Contributing Factors and Presentation

Healthcare professionals may cope with stress, anxiety, and pain by using drugs and alcohol. Although long, stressful work hours and easy access to drugs may contribute to substance use disorders of healthcare professionals, there is little substantial evidence in the literature to suggest that these are the principal precipitating factors. Easy availability and access to drugs may reflect the types of substances used rather than the prevalence of substance use disorders in healthcare professionals. A substantial number of physicians and medical students with substance use disorders report a family history of substance abuse, stress at work and home, emotional problems, and sensation-seeking behavior. Many physicians have a strong drive to achieve and excel at work. They may deny personal and social problems. These very traits, which may make them successful in medicine (i.e., obsessive–compulsive behaviors), may predispose them to impairment. These behaviors may result from the type of education and training that occurs in medicine (38). Risk factors such as idealistic beliefs, perfectionist behavior, and high academic rank in the class may be risk factors for substance use (39). Each of these factors correlated with drug use in physicians or medical students (40). Healthcare professionals may have underlying personality, mood, or behavioral disorders or mental illnesses that may be unmasked by the stress of their occupational and social and personal obligations.

Substance abuse often begins early and is based on learned behaviors before and during medical training. Vaillant et al. (41) studied a group of practicing physicians in comparison with socioeconomically matched controls to study psychological vulnerability in physicians. He found that those physicians with substance use disorders had more personal and family childhood problems before entering medical school. A family history of substance abuse or mental illness, certain personality traits and stress-related be-

haviors, and health problems may predispose healthcare professionals to developing subsequent substance use disorders (25, 37, 40, 41).

Healthcare professionals seem to be very good at hiding signs and symptoms of substance use. Impaired healthcare professionals can be difficult to identify because they are adept at hiding signs and symptoms of substance abuse. Physicians usually have well-established denial mechanisms. Because of their medical education and training, healthcare professionals may believe they are immune to developing a substance use disorder. Intelligent healthcare providers are used to "controlling" many aspects of their occupation, and it can be difficult to admit that they cannot control their substance use. There is a strong tendency for healthcare professionals to self-diagnose and treat themselves without seeking the help of colleagues. Initial problems usually affect relationships with family members at home and friends in the community. Marital strife is often the first indication of a drug and alcohol dependency. The spouse and children may have to assume responsibility for maintaining normal family functioning. Left unchecked and untreated, there is a progressive deterioration in all aspects of a person's life, affecting family, community, finances, physical health, and professional performance. Physical, emotional, and behavioral alterations often precede the changes in professional work habits. For healthcare professionals, deterioration in clinical performance is usually one of the last signs of a substance use disorder (42, 43). When the healthcare professional's work performance is affected, the problem is usually well advanced and severe. Professional performance of healthcare providers is often protected at the expenses of other personal, social, and family obligations. Changes in work habits listed in Table 1 include missing many days of work, arriving late consistently, missing appointments with patients, and inappropriate behavior or conflicts with colleagues, staff members, and patients. These changes should raise the suspicion of a possible substance use disorder. Table 2 lists some of the typical physical changes associated with substance use disorders, including changes in sleeping and eating patterns, changes in personal hygiene, and signs of physical deterioration. Emotional and behavioral changes may manifest as dramatic mood swings, inappropriate behavior, personality changes, and new negative attitudes, such as anger, cynicism, and social and professional isolation. Behavioral changes associated with substance abuse and dependency are listed in Table 3. Problems at home can manifest as withdrawal from family members and friends, an increase in the number of accidents, an increase in medical problems, financial difficulties, and lack of responsibility for personal, family, and community obligations (44). Signs of abuse and dependence are universal and not usually unique to healthcare professionals. However, Breiner (42) listed some warning signs of substance abuse that may be seen in healthcare professionals: inaccessibility to patients and staff, frequent absences, rounding on patients at odd hours, decreased work and chart performance, large quantities of drugs ordered, inappropriate orders, forgotten verbal orders, slurred speech during off-hours for phone calls for orders, heavy drinking at hospital functions, vague letters of reference, and multiple prescriptions for family members. Other work-related symptoms may include arriving late for appointments, increased absences, unexplained disappearances during regular work hours, increased patient complaints, increased secrecy, incorrect charting or writing of prescriptions, decreased productivity or efficiency, decreased quality of care with careless medical decisions, increased conflicts with colleagues, and an erratic job history, with new jobs in different geographic areas and unexplained time off between different jobs (44). None of these abnormal behaviors are pathognomonic of a substance use disorder in a professional colleague but raise suspicion if the abnormal behavior persists over time. Many of these signs and symptoms seem fairly obvious but are often overlooked and excused by colleagues, family, and friends. Healthcare providers may be fearful of the loss of their license if they admit to a problem and subsequently seek help.

Table 1. Signs and symptoms of substance abuse in the workplace

- Frequently absent from work without reasonable explanations
- Arriving late consistently
- Missing appointments with patients
- Inaccessibility to patients and staff
- Inappropriate behavior with colleagues, staff, and patients
- Conflicts with colleagues, staff, and patients
- Avoiding a supervisor or other colleagues
- Rounding on patients at odd hours
- Large quantities of drugs ordered
- Inappropriate orders and forgotten verbal orders
- A disorganized schedule and missed deadlines
- Heavy drinking at hospital functions
- Vague letters of reference
- Multiple prescriptions for family members
- Long lunches or unnecessary breaks
- Decreased chart and work performance

Table 2. Physical symptoms of substance abuse and dependence

- Changes in sleeping patterns
- Changes in eating habits, weight loss, or weight gain
- Poor physical condition
- Changes in appearance and personal hygiene
- Changes in speech patterns—slurred, faster, or slower speech
- Fatigue
- Consistently dilated pupils
- Bloodshot or watery eyes
- Dizzy spells, stumbling, hand tremors
- Frequent colds, sore throat, chronically inflamed nostrils with runny nose

Table 3. Behavioral symptoms of substance abuse and dependency

- Mood swings
- Personality changes
- Tendency to manipulate
- Strained communication with others
- Withdrawal from family and social activities
- Defensiveness, apathy, anxious behavior, and lack of self-discipline
- Changes in long-standing friendships and relationships

Diagnosis and Reporting

The misuse of drugs and alcohol by healthcare professionals is complicated by their role as caregivers. Although the signs and symptoms of substance abuse and dependency can be suspiciously obvious, many physicians are unwilling to report an impaired colleague. There are significant ethical and legal ramifications in not reporting an impaired healthcare provider (45). There may be several reasons for the underreporting of impaired healthcare professionals and for the delay in reporting. The fields of medicine and surgery have significant independence as compared with many other professions, and there is less controlled supervision of attending-level physicians, particularly for those practicing in private practice and not employed by hospitals or medical schools. Social and financial concerns may prevent family members from re-

porting another family member suspected of having a substance use disorder. Detection of the addicted healthcare professional may be delayed because poor performance at work is often the last symptom to appear because physicians are very good at completing their daily professional tasks even while abusing drugs or alcohol. Colleagues and staff members may be reluctant to report their suspicions for many reasons: intimidation, fear of occupational and financial reprisals, and the need to protect the physician's practice or the hospital's reputation. No one wants to be accused of "overreacting" and thus may deny the problem exists until it becomes more blatantly obvious. There can be a fear of labeling someone as a drug addict or alcoholic without solid evidence. Barriers such as denial and a "conspiracy of silence" may result from a lack of understanding of the nature of addiction. Identification of substance use and dependence in healthcare professionals is often problematic because of the code of silence among professional colleagues who hope the problem will resolve without their direct intervention. Even patients may not want to accept or admit that their caregiver has a potential drug or alcohol problem. The traditional wisdom is that the healthcare professional takes care of the patient and not vice versa. Role reversal between patients and physicians is a difficult concept to accept and implement for many healthcare professionals and their patients. Both physicians and patients may view the physician as being "immune" to developing substance use disorders. The challenge faced is that colleagues and others must respond to the obvious and sometimes more subtle changes in behavior that may suggest an underlying substance use disorder. It is not necessary to make a definitive diagnosis before taking action on a colleague suspected of having a substance use disorder. Most of these physician-impairment programs are not designed to be punitive unless the healthcare provider does not comply with the treatment and rehabilitation guidelines. Some medical schools and hospitals have established urine drug screening, which includes random, preemployment, or preadmission testing. However, the results of this type of testing are quite variable and have not proved very effective in detecting the majority of impaired healthcare professionals and friends.

Michael Myers, MD, Chair of the Section on Physician Health of the Canadian Psychiatric Association and co-editor of *The Handbook of Physician Health: The Essential Guide to Understanding the Health Care Needs of Physicians*, has stated that

> Those of us who work in the field of physician health are increasingly urging physician leaders to have policies and procedures in place to address a physician's disruptive or negligent behaviors. We encourage them to address problem behaviors right away rather than waiting until a patient is harmed or a malpractice lawsuit filed (46).

It can difficult to confront a person directly about possible substance use disorder. Often, he or she has high levels of denial and is not receptive to interventions and accusations from colleagues. According to the AMA, physicians have an ethical obligation to report impaired, incompetent, and unethical colleagues.

Physicians should be familiar with the reporting requirements of their own institution and state and comply accordingly. A healthcare professional suspected of having a substance use disorder should be reported to the hospital's impairment program, if available. If this is not available, then the chief of an appropriate clinical service, the chief of staff of the hospital, or other appropriate supervisor can be alerted. If a report cannot be made through the usual hospital channels, then a report should be made to an external impaired-physician program, such as the Professional Health Committees, sponsored by the local or state medical society. Physicians in office-based practices who do not have clinical privileges at an area hospital should be reported directly to an impaired-physician program.

The legal aspects of reporting impaired healthcare professionals vary from state to state. Requirements for reporting vary by state and by profession (e.g., physicians and nurses). Only 20% of states in the U.S. have laws mandating reporting of a healthcare professional suspected of having a substance use disorder. Most states provide immunity from civil suit for the individual who reports a possible impaired healthcare provider. Although the legal aspects vary, the ethical obligations of reporting an impaired professional colleague should be the same for all. The 1972 AMA House of Delegates encouraged the reporting of impaired healthcare professionals who may potentially endanger the lives of their patients. In 1974, the Disabled Doctors Act urged mandatory reporting of incompetent physicians, evaluation and treatment, returning to practice after successful treatment and rehabilitation, removal from practice if there was no treatment, and immunity for those who reported the healthcare professional. United States federal law requires only that a report must be submitted to the individual state licensing board and the National Practitioner Bank only when disciplinary action is taken against a physician's medical license.

Treatment

The medical profession has developed a greater awareness of the problem of substance use disorders of healthcare professionals. There is a growing realization that healthcare professionals who are not treated and rehabilitated place not only themselves at jeopardy but, even more importantly, place their patients at risk as well. When an impaired physician is identified, necessary steps must be taken to protect the physician and his patients and to initiate intervention and treatment. Hospital personnel and staff members need to be familiar with the hospital's policy on substance use impairment. Additional help can be obtained from the institution's employee assistance program, which is usually part of the institution's employee health system. Contacting an addiction specialist is an option, although most employee assistance programs and physician health committees have members who are addiction specialists. Many programs have been established to confront, assist, and treat impaired healthcare professionals and to avoid the medical negligence associated with impaired healthcare providers. These programs are designed to ensure that healthcare professionals are rehabilitated and can return to work subsequently. Most of these programs are not only designed to help the impaired healthcare provider but to also assist his or her family members during the process of treatment and rehabilitation. They are designed to encourage healthcare professionals to seek treatment and continue with rehabilitation before their drug or alcohol impairment endangers a patient or damages their career through disciplinary or regulatory actions and sanctions. Many international programs to assist impaired healthcare professionals have now been developed as well (47).

In the United States, the individual state medical society is a good reference point for many to ask for help and advice when you suspect that a colleague may have a substance use disorder. The physician-impaired programs sponsored by the state medical societies are almost always independent of the state licensing boards. The programs may be more effective than those administered by the state licensing board or a disciplinary board, primarily because of the lack of punitive self-reporting. If physicians are initially reported to the state medical board without intervention from a physician health committee, the physician may later be disciplined, with possible license suspension and revocation. Although most cases of substance use disorders are reported to professional health committees, substance abuse remains the most common form of impairment of physicians disciplined by state medical boards. There is a trend toward treating impaired healthcare professionals as patients rather than as criminals (i.e., decriminalizing drug and alcohol abuse by healthcare professionals). The 2001 Joint Commission on Accreditation of Healthcare Organizations standards state: "The purpose of the process [of identifying and treating impaired physicians] is assistance and rehabilitation rather than discipline, to aid a physician in retaining optimal professional functioning, consistent with protection of patients." All 50 states now have state impaired-physician programs. In addition to the state medical societies, physician health committees and programs at the level of the hospital, the medical school, and local medical societies have also been created. These committees are formed to treat and rehabilitate the impaired medical student, resident, or physician and to protect the public from impaired physicians. Committee members are usually composed of addiction medicine specialists and psychiatrists and legal council. These programs provide a confidential reporting process and confidential assistance for the impaired healthcare provider. The physician health committees are usually intimately involved with all aspects of care of the impaired physician (i.e., education, treatment, rehabilitation, and posttreatment monitoring). The physician health committees will usually arrange for a comprehensive evaluation and assessment of the individual to establish the diagnosis of a substance use disorder or a possible psychiatric or medical illness. Once the substance use disorder is confirmed, the committee can then facilitate treatment and referrals for specific treatments (i.e., medical or psychiatric illnesses). The goal of these committees is to facilitate intervention and treatment plans and to assume responsibility for posttreatment follow-up and continued monitoring once the active treatment phase is completed. Usually, these committees will have authority to contact training directors and state licensing boards if a physician or student does not adhere to the recommended treatment and rehabilitation policies. Additional tasks of the programs include treatment options or referral for treatment, contracting and monitoring, advocacy, reentry into the workplace, and financial assistance, if necessary. There is anonymity of the physician health committees because they do not report to the National Practitioner Data Bank. State medical boards are obligated to report to the Data Bank.

Most impaired providers have very good skill sets to rehabilitate—they do not lack the skills to succeed. Many impaired professionals are very intelligent, strong-willed, and are high achievers. The healthcare provider is usually quite intelligent and can be "controlling" and compliant in the short-term and may relapse into addiction. Emotional acceptance of the need for recovery is paramount to recovery and enduring compliance. The initial goal should be to have the person evaluated for his or her need for treatment, particularly because of the strong denial response of many healthcare professionals. Denial, self-treatment, occupational success, and a certain disdain toward psychiatric illnesses may prevent impaired healthcare providers from receiving appropriate therapy and continue with ongoing therapy. An intervention approach can consist of a team approach using a trained and experienced leader and other physicians on the team, in particular, psychiatrists and addiction medicine specialists. The team should have consistent and attainable goals, choices, and consequences. The goals of treatment are understanding and acceptance of the concepts of abuse and dependence, identification and recognition of triggers that prompt abuse, development of the necessary emotional and behavioral coping skills, and lastly, continued abstinence. The final goal of therapy is complete abstinence. As with all treatment plans, each treatment should be tailored to the patient's needs. The duration of the initial treatment phase may be less important than learning the appropriate coping skills and mechanisms on how to resist and avoid further substance use. Some addiction treatment programs have also created 24/7 telephone hotlines or on-line assistance where confidential free consultation is given and information about community resources is provided and ongoing support to prevent relapses is available (Table 4).

Table 4. Factors contributing to relapse

- Failure to understand and accept the illness
- Continued denial
- Poor mechanisms to cope with stress
- Poor relationship skills
- Inability to accept feedback
- Social and professional isolation
- Setting unrealistic goals
- Complacency
- Overconfidence
- Self-pity, shame, blame, guilt
- Dysfunctional family dynamics
- Not attending support group meetings

Once an impaired healthcare professional undergoes a comprehensive evaluation, the specific level and types of treatment options can be determined. For some healthcare providers, a psychiatric evaluation is often necessary if an underlying psychiatric illness is suspected. Most treatment programs include detoxification, medical and psychiatric evaluation, then rehabilitation with ongoing group therapy and attendance at 12-step meetings, such as Alcoholics Anonymous or Narcotics Anonymous. For many physicians with substance use disorders who had not voluntarily submitted themselves to the physician health committee, treatment in an inpatient residential setting was advised because most physicians had begun to show the first signs of impairment at work, and by this time, for most, the abuse or dependence is quite severe. Those healthcare providers with less severe addictions may be managed in an outpatient treatment program. The stages of active treatment include the initial phase of detoxification and medical stabilization for physicians in active withdrawal or who have additional medical illnesses complicating the substance use disorder. This stage of active treatment and controlled withdrawal from drugs or alcohol is usually undertaken in an inpatient residential facility. Once the physician is discharged from the hospital, rehabilitation as an outpatient begins. Continuing rehabilitative treatment with weekly outpatient sessions may be necessary for a period of 2 to 3 yrs. Multiple

modalities have been employed as rehabilitation techniques, including group and individual psychotherapy sessions, 12-step programs, and alternative therapies, such as meditation, yoga, and relaxation training (48). Involving the family of an impaired healthcare professional in the treatment is usually essential to successful treatment and rehabilitation and is associated with improved outcomes (49, 50).

A 12-step program is a self-help or support group made up of people who share the same addiction or compulsion. The first and most popular of these programs is Alcoholics Anonymous. There are 12-step programs for many other addictions, such as narcotics, gambling, overeating, or nicotine. The "12 steps" refer to the steps a recovering addict must take to overcome his or her addiction as part of this program. The first step is to admit one has a problem. Although the steps may be different for each addiction or compulsion, the idea is the same: 12-step programs encourage members to regain control of their lives and offer solutions and emotional support so they will avoid future temptation; they are not considered rehabilitation but are "recovery" programs, as in recovering one's life. The goal is to help impaired healthcare professionals return to their optimal professional level of practice. Many addiction specialists now recommend simultaneous involvement in conventional drug treatment and 12-step support programs for active treatment, long-term recovery, and follow-up, which is essential for long-term abstinence (51–56).

Once a physician completes the initial treatment and continues with ongoing outpatient treatment and rehabilitation, the physician can usually return to practice. Usually, a contract is written between the physician and the physician health committee or the physician's supervisor outlining the expectations for the physician to return to work. Follow-up care with continued attendance at group meetings (e.g., Alcoholics Anonymous, Narcotics Anonymous, or Caduceus meetings [support groups for impaired healthcare professionals]) is required. If the state medical board is involved, there is additional close monitoring of recovery, with frequent urine drug screens and periodic reports to the state's physician health committee.

It is not clear whether programs designed to treat substance use disorders of healthcare professionals are better in terms of long-term outcomes than generic treatment programs for the general public. Proponents of treating impaired healthcare professionals believe that improved outcomes will result from identification of the impaired provider with other healthcare providers with similar training and education. Healthcare professionals can also identify with those who will have similar adverse consequences of relapse (e.g., loss of medical license). They also share a better understanding of the occupational stress and demands placed on the healthcare professional. Opponents argue that grouping impaired healthcare professionals together creates an elitism suggesting that the impaired healthcare provider is different from other members of the community. Regardless of the approach, support groups in general have been helpful for all groups. Substance abuse is of increasing interest to credentialing organizations such as hospitals and managed care organizations because of patient safety issues and protecting the rights of the impaired healthcare professional. Accreditation programs such as the Accreditation Council for Graduate Medical Education, responsible for accreditation of institutions with medical training programs, and the Joint Commission on Accreditation of Healthcare Organizations, responsible for accreditation of healthcare programs and organizations throughout the United States, have mandated that training programs and hospitals establish processes and programs designed to detect, intervene, treat, and rehabilitate the impaired physician that is separate from the medical staff disciplinary process.

Prevention

Early education about substance use disorders should begin at home and in the classroom. The U.S Federal Government Higher Education Act of 1965 required medical schools to establish policies and programs that address substance abuse among their students. This was not universally implemented initially, but the majority of U.S. medical schools now have programs designed to treat medical students with substance use disorders. The most effective strategy of pretreatment is prevention. Education in high schools, colleges, medical schools, and hospitals should include information about substance use disorders (57). Classes in coping mechanisms to deal with stress and family and school obligations need to be emphasized as well. Using former impaired healthcare professionals to teach in medical, nursing, and pharmacy schools and in hospitals may be an effective tool. Information from recovering healthcare providers and information from members of addiction programs can be helpful and educational to the students. The effectiveness of medical education to the students in preventing later dependencies has never been studied. The key to recovery and reentry into clinical practice lies in effective relapse prevention with education and close monitoring (58).

Prognosis

Reported recovery rates are quite variable from 27% to 92%, probably because of significant variability in reporting of the groups studied, the methods used, the duration of follow-up, and the outcomes measured. Overall recovery rates for physicians seem to be higher compared with other groups, independent of treatment provider, location, or treatment model (59, 60). The majority of good outcomes are seen in those patients who undergo 2–4 wks of intensive inpatient treatment. Most data show that physicians have better outcomes than the general population, with reported abstinence rates of 70% to 90%. Most recent reports have shown that comprehensive treatment programs including rehabilitation, close monitoring, and follow-up care have been successful in 75% to 85% of physicians returning to work (60, 61). The prognosis for recovery from alcohol and drug dependence is more favorable for physicians (62). The prognosis is usually excellent if the healthcare provider becomes actively involved in the recovery process and accepts that recovery is a lifelong process. Self-vigilance and formal monitoring procedures are often necessary to maintain continued abstinence and compliance. A peer-support group has proved to be an essential component of the recovery process. Random alcohol and drug screening are necessary for continued compliance. Recovery and continued abstinence correlate with post-treatment monitoring and surveillance techniques. Most physicians continue to practice medicine after treatment and rehabilitation. There does not seem to be any specific correlation with the substance of abuse, the specific profession, or the area of specialization within the pro-

fession. Some data suggest that early use of a drug or alcohol rather than the specific type of the substance correlates more with improved outcomes (63). Most physician health committees will continue to monitor the individual for a minimum of 5 yrs. This monitoring includes toxicology drug screening and ongoing treatment if indicated. Many programs have demonstrated recovery rates for physicians up to 90%. This impressive statistic may be a result of the very close monitoring that is performed by the committees and also because of the types of physicians treated. Most of these physicians have much to lose personally, professionally, and financially. They may be highly motivated to succeed in abstaining from using drugs or alcohol because of these factors. Chemically dependent individuals can relapse at anytime throughout their recovery process, but they are especially prone during the early stages of recovery. The relapse process starts when a person falls into previous behavioral patterns and old habits. Although many healthcare providers may feel grateful for the treatment of their substance use disorder, others may feel guilt and shame and may continue to resist treatment for varied reasons. Although many accept their illness on a cognitive level, it may be difficult to accept emotionally. Continued support from family and the treating physicians is necessary during every step of the recovery process. Despite this support, some healthcare professionals will relapse. Talbott and Martin (64) and Gallegos et al. (61) identified factors that contribute to relapse. Some of these factors are a failure to understand and accept the illness, continued denial, a dysfunctional family, poor mechanisms to cope with stress, overconfidence, poor relationship skills, shame, and guilt. Other factors such as complacency, self-pity, blame, inability to accept feedback, isolation, manipulation, setting unrealistic goals, and not attending support group meetings may contribute to relapses. Continued abstinence depends on the duration and frequency of monitoring and contact with the physician health program, family involvement, and rehabilitation support group meetings. Volunteer support groups are an important part of the follow-up care and management of the impaired provider. Monitoring with urine drug screens may be an effective monitoring device. Shore (65) showed that 96% of physicians "improved" when monitored with urinalysis and program involvement as compared with only 64% improvement in physicians who were not monitored. Crowley (66) suggested using the physician's license as a bargaining chip to encourage physicians to seek help by changing behavior and habits and to remain in treatment. Fifteen physicians who were abusing drugs directed their psychiatrists to mail to their state licensing boards a prepared license-surrendering letter if any random urine samples contained drugs while undergoing treatment and during follow-up management. Significant reductions in drug use occurred. Seven patients did not relapse at all during the 2-yr follow-up, and four others experienced only very brief relapses. Four licenses were suspended temporarily by contract, but six were suspended or revoked for other reasons. Many physician health programs mandate that a physician must sign a contract that if treatment or rehabilitation is not completed, the physician health program can then submit the name of the practitioner to the state licensing board for possible license suspension or revocation.

Vaillant (67) performed a 60-yr follow-up of alcoholic men, comparing 456 Boston socially disadvantaged adolescents with 268 Harvard University undergraduates. The incidence of those who continued to abuse alcohol after an average of 60 yrs was similar in both groups, 10.5% and 12%, respectively. Premorbid social stability and continued attendance at Alcoholics Anonymous meetings were good predictors of sustained abstinence. These types of studies suggest that factors other than specific treatments may play more of a role in the longevity of abstinence of drugs and alcohol (43, 68). Physicians may have better outcomes with treatment because of motivational factors that are related to the extent of loss they have experienced as a result of the substance use disorder. It seems that physicians, when prompted or "coerced," have better outcomes than the general public. Comprehensive treatment, rehabilitation, and close posttreatment monitoring have been successful with 75% to 85% of physicians returning to work. Not surprisingly, the rates of recovery for physicians without preexisting psychiatric or physical disorders are usually higher than for those with preexisting underlying problems (68). Similar rates of recovery have been reported for both alcohol and drug use. Outcomes data reveal that up to 75% of healthcare providers abstain for >10 yrs after treatment and approximately 15% to 20% relapse within 1–2 yrs of the initial treatment. Those who used drugs or alcohol before or during medical school may have higher rates of relapse because these individuals may continue to have early and long-standing underlying disorders easily provoked. Most of the healthcare providers who relapse stopped participating in the recovery programs early.

Reentry into practice studies have shown that most practitioners return to practice, although some may change to a less "high-risk" and a less stressful specialty. It is often recommended that the impaired healthcare provider return to work in areas of less stress and where there is less access and availability of drugs of potential abuse. Some practitioners may have imposed limits on prescribing drugs and some may need to alter their work habits (e.g., not working at night and limiting the number of work hours) (69). It may be difficult and complicated for healthcare professionals to return to work and face colleagues and staff who may know of the abuse history. They may face personal and professional obstacles. Healthcare professionals must reenter their profession regardless of the circumstances when they left and may need to overcome additional stresses associated with a prolonged absence from work. However, most practitioners are usually welcomed back into practice when colleagues recognize that the practitioner struggled but completed a successful treatment. Most colleagues are probably willing to help and to empathize rather than criticize and ostracize the individual. Few reentry programs exist for physicians who reenter the workforce, although more programs and initiatives have been recently formed in various states and at the local level in various medical institutions throughout the United States that provide resources to reenter clinical practice. The National Task Force on Reentry into Clinical Practice for Health Professionals in 2000 proposed that databases need to be created to accurately measure the number of healthcare professional reentering clinical practice. Databases should be formed at several levels, including institutional, state, and national levels. The information obtained form these data banks will be invaluable in assisting organizations to educate, facilitate, and improve on reentry for the impaired healthcare professional (70). Lessons can be learned from the literature on impaired nurses return-

ing to the workplace. The percentage of nurses who reenter clinical practice has ranged from 70.2% to 97.4% (71, 72).

Conclusions

Substance abuse and dependence are public health problems with significant economic and social implications. Impairment of a healthcare professional should be of major concern to the medical profession and to society. As healthcare providers, we are expected to protect our patients and our reputation as caregivers. Society expects competent care from those in the medical profession. Patients, family members, friends, and professional colleagues have a moral responsibility and obligation to identify healthcare professionals who are impaired. Once an impaired healthcare provider is identified, resources offering treatment interventions, rehabilitation, and assistance with reentry into clinical practice at the institutional, local, and state level are available. Timely identification, treatment, and follow-up care will allow impaired providers the opportunity to heal and to be successful in their clinical careers and personal lives.

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