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Title	Substance misuse among health care workers.
Author(s)	O'Donovan, Diarmuid
Publication Date	2001-05
Publication Information	Bennett J, O'Donovan D. (2001) Substance misuse among health care workers. <i>Current Opinion in Psychiatry</i> , 14:195-199
Publisher	Kluwer
Link to publisher's version	<a href="http://ovidsp.uk.ovid.com/sp-3.5.1a/ovidweb.cgi?&amp;S=ICDCPDKGFHHFPJJEAFNALJABG BKDLAA00&amp;Link+Set=S.sh.15.16.20.24.30%7c6%7csl_10">http://ovidsp.uk.ovid.com/sp-3.5.1a/ovidweb.cgi?&amp;S=ICDCPDKGFHHFPJJEAFNALJABG BKDLAA00&amp;Link+Set=S.sh.15.16.20.24.30%7c6%7csl_10</a>
Item record	<a href="http://hdl.handle.net/10379/2607">http://hdl.handle.net/10379/2607</a>

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# Substance misuse by doctors, nurses and other healthcare workers

Jennifer Bennett and Diarmuid O'Donovan

Substance misuse by healthcare professionals raises many concerns, including the threat to patient care. This review summarizes the recent literature concerning misuse by doctors (physicians), nurses, dentists, undergraduates and other healthcare workers. Self-medication is common among doctors. Specific specialities are noted to be at higher risk, including emergency medicine, psychiatry, anaesthetics, and nurses in high stress specialities. Most studies are descriptive cross-sectional prevalence studies of self-reported substance use. Dedicated treatment programmes are reviewed, including specific treatment services for addicted professionals created at national, regional and local levels. A recognition of the risk of substance misuse should be explicitly included early in the training of healthcare workers. Specialist treatment programmes should be holistic in approach, and should not concentrate solely on substance misuse issues but include the treatment of depression, anxiety, sexual disorders and adjustment disorders. *Curr Opin Psychiatry* 14:195–199. © 2001 Lippincott Williams & Wilkins.

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**Current Opinion in Psychiatry** 2001, 14:195–199

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0951-7367

## Introduction

A surprising number of articles have been written about addicted professionals over the past 2 years. Healthcare professionals are said to be at risk of substance misuse [1]. They have relatively easy access to psychoactive substances, and many have high levels of work-related stress, frequent contact with illness and death, and disrupted sleep and social life. In addition to negative effects on the individual's physical and mental health, and on their families, substance misuse may threaten the ability to provide adequate patient care [2–3,4•], and it may undermine the individual's role as a teacher and role model for healthy lifestyles.

Self-medication is common. In an Australian study [5], 42.1% of male doctors and 52.9% of female doctors had written prescriptions for themselves in the past year. A recent conference stressed that all medical practitioners are at risk of substance misuse problems, and that stigma and colleagues' uncertainty about how to address these problems contributed to the secrecy surrounding the problem [6], and its possible under-detection.

## Comparison of studies

There are recognized difficulties in investigating the prevalence of substance use among healthcare workers. Stuart and Price [7] described the limitations of making comparisons across studies: different definitions of substance misuse are used, as are different methodologies of data collection and analysis. The validity of self-reported substance use may be questioned, as may the representativeness of the respondents. Variable response rates are seen in several of the papers reviewed here. The differing demographic compositions of the specialities (such as the proportion of women in a speciality and age distribution) have been noted [8••].

In some countries it has been possible to make comparisons between the prevalence of alcohol use in the general population and populations of healthcare workers, for example the United Kingdom [9], the United States [10], and Sweden [11]. In 1988 the British Medical Association estimated that one doctor in 15 could suffer from some form of dependence [12].

The papers reviewed mainly cover lifestyle surveys and most are cross-sectional studies [8••,13]. One case-control study [14••] and further descriptive studies of healthcare workers who were attending programmes for addicted professionals are described [15•].

Tobacco and caffeine have been excluded from the discussion (although they are included in several of the studies described). Other excluded papers investigated the association between alcohol use/abuse and disease in physicians, e.g. stroke [16], sudden cardiac death [17], and diabetes [18].

### Physicians

In the USA, 10–15% of physicians will develop a chemical dependence during their lifetimes [19,20]. In the UK, the British Medical Association estimated that one doctor in 15 could suffer from some form of dependence [12].

McGovern *et al.* [15•] described 108 assessments of physicians (predominantly white, male, early 40s) attending a treatment programme at a university-based hospital in a large mid-western US city, using well-validated scales to measure substance misuse (which had generally been present for more than 5 years). Family practitioners and internists were the largest categories (28.75 and 12%). Next were psychiatry, obstetrics/gynaecology, and emergency medicine. Medical societies referred the most clients, and the drugs of choice included alcohol (61.4%) and prescription opiates (26.3%). Co-morbid conditions were common, such as depression, anxiety, sexual disorders, and adjustment disorders. The authors emphasized the need for a revision and expansion of views about the health of physicians.

The paper by Hughes *et al.* [8••] is of special note, the self-reported use by 5426 physicians from 12 specialities, of alcohol, tobacco, marijuana, cocaine, opiates and benzodiazepines, was analysed. The paper addressed the questions: (i) do physicians in different specialities have different rates of substance misuse?; and (ii) might the observed differences be attributable to across-speciality variation in sociodemographic characteristics and substance use histories of the physicians who have entered these specialities? The prevalence of past year self-reported use (use or abuse) was highest for psychiatrists, 14.3% (alcohol or other drugs) and emergency medicine physicians, 12.4%. The overall rate in anaesthesiology was 7.8%. Surgeons appeared to have low rates of substance use (5.5%) and were least likely to use major opiates.

Several specialities were found to have preferences for specific substances: emergency physicians were twice as likely to use marijuana as all physicians (10.5 versus 4.6%); a strong association was found between psychiatrists and benzodiazepine use (26.3%, well above the rate of 11.4% for all physicians); for minor opiates family practitioners (24%) and obstetricians/gynaecologists (20.5%) had a significantly higher prevalence than all

physicians (17.6%). Small numbers reported major opiate use and cocaine (1.1% each for all physicians); this precluded detailed statistical analysis. However, the trend was for higher major opiate use among emergency medicine physicians, anaesthesiology and chronic pain specialists. It should be noted that the data for the study were collected in 1989–1990.

### Anaesthetists

Hughes *et al.* [8••] noted that studies published in the 1980s found high prevalences of substance misuse among anaesthetists, but more recent studies that compared the prevalence across studies found that other specialities have relatively higher rates. A possible explanation is the efforts by the speciality itself to reduce substance abuse. A higher incidence may occur in the early training years; when these people are identified they may be counselled into other specialities. The authors found the prevalence of specific substance use rates among anaesthetists to be: cocaine 0.9%, marijuana 5.8%, benzodiazepines 11%, and minor opiates 10.2%.

Paris and Canavan [14••] conducted a retrospective case-control study comparing relapse and recovery rates between addicted anaesthetists and other physicians in the USA. The subjects were followed for an average of 7.5 years over 12 years. The relapse rate for anaesthetists was 40% and for controls 44%. Anaesthetists showed a statistically significant higher opiate abuse rate than other specialists: 78 versus 42%. It was concluded that recovery and relapse rates for anaesthetists were as good as for other physicians if assertive follow-up and monitoring was undertaken. The authors noted that in previous studies anaesthetists had been over-represented [21] in addicted physician programmes. This was attributed to availability, experimentation and even the 'Rodney Dangerfield – I ain't got no respect syndrome' [22]. The use of opiates may lead to an early recognition of the illness, with secondary early medical, legal or professional complications. Fentanyl was the unsurprising drug of choice.

In a recent study of emergency admissions resulting from drug misuse to the Drug Abuse Warning Network [5], a huge increase in the medical use of fentanyl (1168% increase) between 1990 and 1996 was noted. The use of morphine increased by 59%. There was a decrease in the medical use of meperidine. In the same period, the total number of drug abuse mentions for fentanyl increased by 59%, for meperidine by 39%, and for morphine by 3%. The authors concluded that the increasing medical use of opioids to treat pain did not contribute to increases in the health consequences of opioid analgesic abuse (in the US general population).

### Medical students

Data on alcohol and drug use in 169 second-year medical students at a university in the UK were obtained from 136 second-year students (self-reports, response rate 80.5%) [23]. A high proportion drank alcohol 86% (51% exceeded recommended weekly limits). Illicit drug use was reported by 33.1% of students. The proportions with a Hospital Anxiety and Depression scale within the clinical range for anxiety and depression were 41.2 and 9.5%, respectively. These levels did not correlate with the high levels of alcohol intake. Cannabis was the most commonly used drug (28.3% of men and 35.6% of women). The rates for other substances were: amphetamines (4.3% men, 6.7% women); LSD (2.2% men, 3.3% women); ecstasy (2.2% men, 3.3% women); magic mushrooms (4.3% men, 4.3% women), amylbutyl nitrate (reported for men only: 2.2%).

The authors considered that the high rate of alcohol consumption in the students may reflect a general increase in consumption by the medical profession and in the population in general. Within the UK an increase in alcohol consumption was noted between 1984 and 1996 [9].

Cannabis use was no higher and in many cases was lower than use reported in other studies. This could reflect a shift in social behaviour away from drug use towards alcohol [24]. Possible reasons for use included heavy workload, competition, and pressure to succeed, as well as having to deal with the usual considerable financial pressure and poor living conditions experienced by many students today.

Alcohol consumption in cohorts of dentists who recently qualified in Scotland [25] was comparable with that reported in age-matched junior doctors [26].

### Nurses

In 1987, the American Nurses Association estimated that 10–20% of nurses had substance abuse problems, and that 6–8% of nurses were impaired because of their abuse of alcohol and other substances.

Lifetime and current use of four classes of substances were examined in the context of work-related and demographic factors in a random sample of Western New York nurses ( $n=1951$ , response rate 49%) [27••]. The findings are consistent with past research in finding variations in substance use based on work-related and demographic characteristics. Of the nurses who reported that they felt dependent on a substance, 29 (5.7%) named alcohol. There was very little reported dependence on illicit substances or prescribed drugs.

Storr *et al.* [28•] conducted a cross-sectional study among nurses registered to practice in the USA ( $n=2375$ , 78% response rate). The study aimed to be representative. Nurses who had a high-strain job compared with low-strain jobs, defined by both psychological and physical demands and control (using the Karasek demand/control formulation of job strain [29]), were significantly more likely to use drugs non-medically.

Piko [30] conducted a cross-sectional study among 218 female nurses in Hungary. She found significant associations between the use of alcohol, tranquillizers and sleeping pills by stress level, as defined by a nine-point scale. Non-significant associations were found with illicit drug abuse and using stimulants.

A study conducted in 1996 [31] investigated the health risk information on 99 doctors and nurses (unclear how many of each) in the newly independent state of Georgia. Eighteen per cent of respondents reported driving after drinking (the only reported response related to substance misuse).

### Ancillary staff

A cross-sectional study of ancillary staff (including cleaners and nurses' aides) in a French hospital ( $n=186$ , response rate 79%) [32] confirmed a high prevalence (33.9%) of psychiatric disorders in this population. A significant association between depression and alcohol dependence was found: 14% of depressive subjects were alcohol dependent versus 3.5% of non-depressive subjects,  $P<0.02$ .

### Management programmes for addicted healthcare professionals

Programmes were organized either at local [33], regional [2,15•], or national [12,34] levels.

In the study by Fowlie [2] the Grampian Health Board reviewed local current practices against the report of the working group on the misuse of alcohol and other drugs by doctors at several levels: local trusts; general practice; medical schools. The author concluded that generally the need for dedicated services was justified in order to protect patients, and confirmed that doctors are a scarce resource with a high morbidity rate. A local support network was established. The author also pointed out that at a local level information about national services was not well publicized. In the UK these would include the National Counselling Service for Sick Doctors, the Medical Council on Alcoholism, the BMA Counselling Service for Sick Doctors Trust, the British Doctors and Dentists Group, and the Association of Anaesthetists Sick Doctors Scheme.

In the paper by Paris and Canavan [14\*\*], detoxification was either an inpatient 28 day or 3 month programme. Followed by daily 12-step programme meetings, urine monitoring twice a week, a face-to-face appointment monthly, and after-care groups for one year. These after-care groups included a professional group known as a caduceus group [19]. Physicians returned to practice if feasible within 30 days to one year. Some were encouraged to change speciality. The relapse rate was 40.6% for anaesthetists and 44.6% for controls ( $P=0.749$ ). This contrasts with results reported by the Sick Doctors Trust, a UK-based support service for addicted doctors, in which a relapse rate of 4.4% for 5 year follow-up was found [35].

In a paper discussing the recovery of physicians from addictive illnesses, Mansky [36] noted that physicians live under high stress; they receive less routine preventive care, and are less likely to seek routine medical care than other groups. Substitute addictions (such as smoking or alcohol) and unresolved family issues are described as important in recovery.

Griffith [37] provided an overview of the issues from a nurse perspective, concentrating on diagnosis and treatment. Early identification and treatment are important for the safety of the public and the well-being of the individual [4\*].

## Conclusion

The studies referred to in this review highlight the need for future research to focus on high-risk groups. In order to understand the impact of substance misuse in the population of healthcare workers and to make comparisons within population groups, standard questions about substance misuse should be included in health and lifestyle studies. Investigations should move beyond asking about alcohol and 'other substances' only. Substances should be named where possible. Pooled data from comparable studies may reveal more about the risks attached to different specialities. Longer term follow-up studies would provide more information about co-morbidity, relapse rates and the determinants of relapse, thus contributing to the planning of effective treatment programmes and overall physical health; not simply addressing substance misuse issues [4\*,15\*].

The need for special services for addicted doctors has been highlighted [3]. The history of society's perceptions of substance misuse and the changes in doctors' attitudes to misuse influence the choices individuals make in using different substances [21]. Reporting trends in the misuse of substances by healthcare workers need to reflect current prescribing patterns, current fashions in the misuse of drugs, changes within the specialities, and gender differences [38,39]. The gender

balance in medical specialities is changing in many countries: this is likely to impact on substance misuse patterns.

Healthcare workers should be alerted to the risks of substance misuse from early on in their training. The importance of the workplace in health promotion is well recognized [40]. Although healthcare settings offer more opportunities for access to substances for potential abuse and also for treatment, the latter may be much more difficult to access.

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