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Drug Use Among Canadian Professionals: Executive Summary of Final Report

Prepared by:

Joan M. Brewster, Ph.D., Scientist
Addiction Research Foundation of Ontario

Canada

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Joan M. Brewster, Ph.D.
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1. INTRODUCTION

In the past two decades, the professions of medicine, pharmacy and law have developed programs in most Canadian provinces for their members who have problems with alcohol and other drugs[1]. Programs were initially set up to provide services to members of the professions who had developed drug problems, with emphasis on treatment. In recent years, there has been increasing interest in preventive approaches to drug use within these professions, and a desire to aim programs at those professionals who may be at risk.

Research activity has lagged behind program development, and many basic questions remain unanswered. It is not known how many members of the major professions have problems with alcohol or other drugs, or what programs are needed. Professional practice and personal variables that are related to drug use also have not been identified. Further knowledge about the correlates of drug use will help in the planning of prevention and treatment programs. The focus of most past studies has been on physicians, and the majority of studies have originated in the United States. Previous studies suggest that levels of drug use among the members of the three major professions included in the present study are similar to those of the general population. There have been no previous large-scale Canadian studies of drug use among professionals. Similarly, no study has been conducted in which the three professions have been examined together, using the same questions and methods, allowing data to be compared.

1.1 Objectives

The objectives of the national survey were:

1. To determine the prevalence of drug use among the members of three Canadian professions (medicine, pharmacy and law). The study covered a wide range of drugs, including alcohol, tobacco, caffeine, prescription and over-the-counter drugs, and illicit drugs. "Prevalence of use" includes past use, and current regular and occasional use.

2. To determine the prevalence of consequences (personal and professional) and problems related to drug use in the members of the three professions.

3. To examine the relationship between drug use and the consequences of drug use and psychosocial characteristics (especially profession-related) in the three professions.

1.2 Methods

The study was conducted by means of a bilingual questionnaire, to be completed anonymously by each respondent. Slightly different versions were generated for each profession. The drug use questions were the same for all three professions; only the wording of questions relevant to professional practice was different. The questionnaires were pre-tested on several members of each profession in both languages.

Questionnaires were mailed to about 1500 practising members of the professions of medicine, pharmacy and law. The mailing lists comprised random samples, supplied by the licensing bodies in each province or territory, except in two cases for the law profession, where lists were obtained from the Canadian Bar Association or a published list.

[1] Throughout this report, the word "drugs" refers to a wide range of drugs including alcohol, tobacco, caffeine, over-the-counter and prescription medications, and illicit drugs.

Mailing began in January 1992. Members of the sample first received a letter from the president of the relevant national professional organization (Canadian Medical Association, Canadian Pharmaceutical Association, Canadian Bar Association). The questionnaires were mailed one week later. A reminder postcard was mailed to the entire sample one week after the questionnaire, and those who did not respond received two more follow-up mailings.

2. RESULTS[2]

2.1 Response Rates

The overall corrected response rates to the questionnaires were excellent for each profession (75.7% for medicine, 76.6% for law and 87.5% for pharmacy). This high rate of response gives maximal assurance that the data are reliable and valid.

2.2 Characteristics of Respondents

2.2.1 Demographics

Pharmacist respondents were significantly more likely to be female (45.5%) than were physicians (25.5%) and lawyers (24.7%). For all three professions, the modal marital status was a stable partnership relationship (married or otherwise). The ages of all three groups were significantly different from one another: physicians were oldest (mean = 45.5 years), pharmacists were in the middle (mean = 42.4 years), and lawyers were the youngest (mean = 41.1 years).

2.2.2 Professional Education

The 25.2% of physicians who obtained their degrees outside Canada is higher than the other two professions. Almost half of lawyers (44.6%) obtained their degree in Ontario, and very few graduated outside Canada (1.5%).

2.2.3 Practice Characteristics

Of physicians, 55.4% were in primary care specialties (general or family practice, internal medicine, pediatrics, obstetrics and gynecology). The most numerous single other specialty was psychiatry (7.2% of the sample). Of pharmacists, 92% had a baccalaureate degree. The law specialties that represented more than 10% of lawyer respondents were civil litigation, corporate law and real estate law. Physicians were most likely to work more than 65 hours per week (14.9%), while pharmacists were most likely to work part time, defined as less than 35 hours per week (33.5%).

2.2.4 Professional Activities

Physicians were most likely to have an academic appointment (35.1%); less than 10% of either of the other professions were similarly appointed. Physicians were most likely to be members of their provincial or national medical associations (91.5%). Lawyers were least likely to join their associations (71.5%).

[2] Throughout section 2, "Results", when groups are described as different from one another, the<R> difference is significant at p<<.05, unless otherwise noted.

2.2.5 Practice Regarding Alcohol, Tobacco and Other Drugs

Of physicians, 32% had taken courses in their training dealing specifically with alcohol and other drugs. This is higher than the 19.8% of pharmacists who had taken similar courses.

The mean estimated percentage of the respondents' clients/patients having alcohol problems was between 9 and 11% for all three professions, and between 4 and 7% for problems with illicit drugs. Pharmacists reported the highest mean percentage of clients who had problems with inappropriate use of prescription drugs (17.3%). Physicians and pharmacists reported that an average of 5 or 6% of their practices are focused on dealing with problems related to alcohol or drug use among their patients. Responding lawyers indicated that an average of 1.2% of their practice was in the area of drug offences and 2% of their practice related to drinking and driving offences.

2.3 Drug Use Among the Professions

2.3.1 Common Legal Drugs

Caffeine

Caffeine use is almost universal among the professionals studied; more than 95% of each profession used caffeine in the past year (current use).

Tobacco

Less than 10% of physicians and pharmacists are current daily smokers. Lawyers are significantly more likely to be current smokers, both occasional (defined as not every day) (9.3%) and daily (14.8%). None of the professions reported a level of daily smoking as high as the general population[3] (31%).

Alcohol

Pharmacists are more likely to be occasional (once per month or less) users of alcohol (29.8%) than physicians or lawyers while lawyers are more likely to be regular users (more than once per month) (60.4%) than physicians or pharmacists. Frequent use, (drinking on 20 or more days per month) occurs less often among pharmacists (11.6%) than among the other two professions (18% of physicians;

2.3.2 Psychoactive "Medical" Drugs, (Non-Prescription and Prescription)

Analgesics

The majority of respondents in all three professions reported current occasional (in the past year but once per month or less) or regular (more than once per month) use of analgesics.

[3] Comparisons with the population draw on the Health Canada reports, *Smoking Behaviour of<R> Canadians: A National Alcohol and Other Drugs Survey (1989) Report* (1992), and <R> *National Alcohol and Other Drugs Survey (1989): Highlights Report* (1990).

19.5% of lawyers). Lawyers report drinking on the largest mean number of days in the past month (10.6 days), physicians were next (9.5 days), and pharmacists drank least frequently (7.7 days). Heavy drinking (defined as an average of more than four drinks per occasion, or more than 60 drinks per month) is reported by less than 10% of all professionals. Physicians are least likely (6%), and lawyers are most likely (9.4%), to be heavy drinkers.

Benzodiazepines
Current regular use of tranquilizers (more than once per month) is practised by 7.5% of physicians, 7.2% of pharmacists, and 3.4% of lawyers.

Opioid Drugs (Excluding Codeine)
Respondents were asked to indicate their frequency of use for each of several different narcotic drugs. The numbers reporting current use of any of these drugs was very low. Among physicians and pharmacists, Fiorinal, hydrocodone, and Demerol are most commonly reported as used in the past year (more than 10 respondents in each group). Fiorinal and Demerol were reported used in the past year by lawyers, but hydrocodone was not.

Codeine
Pharmacists are more likely to be current users of prescription and non-prescription codeine (31.5% occasional and 13.6% regular) than are physicians (23.2% occasional and 5.8% regular) or lawyers (17.9% occasional and 6.5% regular). This pattern is consistent for both non-prescription and prescription codeine.

Sedative-Hypnotics
Use of sedative-hypnotics such as barbiturates is very low, and most use is in the past. Nevertheless, lawyers are significantly less likely to have *ever* used these drugs than are physicians and pharmacists.

Amphetamines
In all three professions, 92 to 93% have never used amphetamines, and a total of only four respondents report having used them in the past year.

2.3.3 Illicit Drugs

Cannabis
Among all three professions, most use of cannabis was in the past. Lawyers had the highest proportion reporting *any* use in the past year (8%).

Cocaine
There are a few current occasional (once per month or less) users of cocaine among lawyers (1.2%) versus 0.2% of physicians and 0.2% of pharmacists. No member of any profession reported current *regular* (more than once per month) use of cocaine.

Hallucinogens
There were no more than two or three respondents in any profession reporting any use of hallucinogens in the past year.

Inhalants
Few members of any profession reported use of inhalant drugs in the past year.

2.3.4 Other Medications

For medications such as antihistamines, cough and cold remedies, antibiotics, heart and blood pressure medications, anti-inflammatory medication and oral contraceptives, the level of use in the past year was greater among physicians and pharmacists than among lawyers.

2.3.5 Problems Related to Drug Use

Treatment

For problems with alcohol or other drugs, 1.5% of pharmacists, 1.8% of physicians and 2.6% of lawyers reported ever having received professional treatment (not significant). A total of 2% of physicians, 1.6% of pharmacists and 2.2% of lawyers had attended Alcoholics Anonymous (AA) other than as a guest or speaker.

Drug Problems in the Immediate Family

About one quarter of physicians (25.3%) and pharmacists (27.6%) reported that they had direct relatives (parents, siblings, children) who had ever had problems with alcohol or other drugs. Lawyers were more likely to respond affirmatively to this question (31.9%). There was no difference among the three professions in the proportion (8 to 10% of each) who reported that their spouse or partner had ever had problems with alcohol or other drugs.

3. CONSEQUENCES OF DRUG USE

3.1 Discipline and Professional Awareness

Only a handful (5 or less) of members of each profession reported that discipline by a licensing body had been related to the use of alcohol or other drugs. More than half of physicians (53.3%) and lawyers (55.7%) reported that they had noticed that alcohol or drug use was affecting the performance of a colleague. Pharmacists (34.7%) were less likely to report having noticed such effects.

3.2 Occupational and Social Consequences

Respondents were asked to report whether they had *ever* experienced any of a number of occupational and social consequences associated with the use of alcohol or other drugs, and to report the specific drug.

Every consequence was more likely to be reported in association with alcohol than with any other drug. The consequences "Use of alcohol or drugs during work hours," "Criticism by family members," "Criticism by colleagues," and "Worry about excessive use of alcohol or drugs," were also commonly associated with the use of caffeine and tobacco.

The consequences that would have the most serious impact on patients or clients were rarely reported. One physician, two pharmacists and one lawyer reported having had "an accident at work" in association with drug use. Three physicians, three pharmacists and nine lawyers reported making "a serious mistake at work" in association with drug use. One physician, no pharmacists and six lawyers reported having "harmed a patient or client" in association with drug use.

3.3 Drug Dependence Symptoms

Respondents were asked to report whether they had *ever* experienced dependence symptoms, and the drug with which the symptons were associated. Experiences of "physical symptoms requiring medical treatment" and "professional help or treatment for alcohol or drug problems" were more likely to be associated with alcohol than any other drug. There were no differences in the frequency of reporting these problems among professions. The remaining symptoms, "feelings of dependence," "trying to cut down," and "withdrawal symptoms" were associated with a wider range of drugs, including caffeine, tobacco, alcohol and benzodiazepines.

In all the questions about consequences of drug use, respondents were asked to indicate whether they had *ever* experienced them. Therefore, it should not be assumed that the number of professionals reporting consequences represents the number of people whose lives are currently adversely affected by the use of drugs.

4. OTHER VARIABLES

4.1 Non-Work Activities

Physicians took an average of 30.9 vacation days in the past year, significantly more than pharmacists (23.1 days) or lawyers (20.2 days). Pharmacists were most likely to attend religious services regularly (29.2%), and least likely to never or rarely attend (40.4%). Lawyers were most likely to never or rarely attend religious services, (52.4%) and least likely to attend regularly (22.5%).

4.2 The Health of Professionals

Physicians were least likely to have a physician who regularly provides them with medical care, and made the lowest mean number of visits to a physician regarding their own health (1.6) in the past year. Both pharmacists and lawyers made 2.6 visits.

4.2.1 Emotional Symptoms

Respondents were asked to report the frequency with which they had experienced each of 14 emotional symptoms in the past year. The list included such items as feeling low in energy, feeling phobic, difficulty in falling or staying asleep, poor appetite, and so on. Physicians reported a significantly lower mean number of symptoms (2.6) than did pharmacists (3.1) or lawyers (4). Less than 5% of any profession reported having suffered serious emotional problems in the past year, and 11 to 14% of each profession had suffered such problems in the past. Pharmacists were least likely to have ever sought counselling for emotional problems (14.85%), physicians were next (20.78%), and lawyers were most likely ever to have sought such counselling (25.25%).

4.3 Occupational Stress and Satisfaction

4.3.1 Occupational Stress

Respondents were asked to report the level of stress they experience from various situations at work. The occupational stress scale included items such as "Dealing with difficult patients/clients," "Heavy workload," "Concern about malpractice," "Unreasonable demands from colleagues," and so on. The mean reported level of stress fell between "low" and "moderate" for all three professions. However, the professions did differ, with lawyers reporting the highest mean level, and pharmacists reporting the lowest level.

4.3.2 Occupational Satisfaction

Respondents were asked to indicate the level of satisfaction, using a five-point scale, with work-related items such as "Level of autonomy," "Level of intellectual stimulation," "Level of appreciation from patients/clients," "Level of financial remuneration," "Time for personal life," and so on. The reported mean levels of satisfaction all cluster around the value on the response scale corresponding to "satisfied." Nevertheless, the difference among the professions was significant: physicians reported the highest mean occupational satisfaction of the three professions.

4.3.3 Choice of Same Career

About 52% of pharmacists and lawyers indicated that they would choose the same career again. 68.1% of physicians indicated that they would do so.

5. RELATIONSHIP OF DRUG USE TO OTHER VARIABLES[4]

5.1 Demographic Variables

In general, men were more likely to smoke tobacco (physicians and pharmacists) and drink alcohol "frequently" (20 days per month or more) than were women. Women were more likely to be occasional users of analgesics (physicians and pharmacists), past users of benzodiazepines (physicians and lawyers), and current users of codeine (physicians and lawyers) and other narcotics.

Professionals who smoke tobacco, use alcohol "frequently," are current users of benzodiazepines and current regular users of codeine (physicians and pharmacists) are older than those who do not. On the other hand, current users of narcotics other than codeine (physicians and pharmacists) and cannabis are younger than non-current users of these drugs.

Marital status showed little relationship to drug use, but separated and divorced pharmacists are more likely to be current smokers of tobacco and current users of benzodiazepines than pharmacists who are married. Single pharmacists reported the highest level of cannabis use among pharmacists.

5.2 Professional Training Variables

Among physicians and pharmacists, graduates of schools in Canada and the United Kingdom were the most frequent drinkers of alcohol, and graduates of professional schools outside Canada, the United States, or the United Kingdom were *least* likely to have ever used codeine, narcotics other than codeine, and cannabis. Primary care physicians are *least* likely (among physicians) to have ever smoked tobacco, to be frequent drinkers of alcohol, and to have ever used sedative-hypnotics. Psychiatrists are most likely to report current and past use of benzodiazepines.

5.3 Current Practice Variables

Hours of work were related to the pattern of use of a few drugs across the three professions. The general trend is for those who work part time (less than 20 hours per week) to be more frequent drug users and for those who work unusually long hours (more than 65 hours per week) to use drugs the least. Those with the shortest work weeks may include some who have cut back hours of work due to illness, which could be related to the increased use of benzodiazepines and codeine in this group.

[4] In this section, discussion and data presentation is limited to combinations of variables with <R> drug use for which a significant ($p << .05$) relationship was found. When relationships were not<R> significant for all three professions, the professions for which they are significant are indicated.

Work setting did not show a strong relationship with drug use patterns. Among pharmacists, those in community pharmacies are most likely to be current tobacco smokers. Physicians in solo practice were least likely to have used analgesics, while those in "other" work settings (universities, government, etc.) were most likely to be current regular and frequent users of alcohol.

5.4 Professional Activities

Physicians who have university or academic appointments are more likely to be current regular or frequent drinkers of alcohol than other physicians. Involvement in professional associations is unrelated to drug use patterns for physicians. Membership and active involvement in professional associations, and awareness of the programs set up by their professions to help those who develop problems with alcohol and other drugs, were related to the use of various drugs for pharmacists and lawyers. In every case, the trend was for those who are more actively involved in their profession to be more likely to drink alcohol.

5.5 Malpractice

Physicians who had ever been sued for malpractice were more likely to report that they are current regular smokers of tobacco than those who had not been sued. Physicians who had been sued for malpractice are also more likely to report current frequent (20 days per month or more) use of alcohol than other physicians.

5.6 Drug-Related Professional Education

Physicians and pharmacists who had taken training courses concerning problems with alcohol and other drugs were less likely to be current users of tobacco, alcohol and benzodiazepines, and more likely to be past and current users of cannabis than other members of their professions. However, continuing education courses on these same topics were associated with increased reporting of current use of analgesics (physicians), codeine (pharmacists) and other narcotics (physicians and pharmacists).

5.7 Drug-Related Professional Practice

Physicians focusing their practice on problems with alcohol and other drugs tended to be past drinkers, and current and past users of cannabis. While handling drugs at work was associated with higher levels of benzodiazepine use for physicians, it was also related to higher levels of cannabis use. Pharmacists who handle drugs are more likely than other pharmacists to be current users of alcohol. Among lawyers, heavy drinking is associated with increased professional involvement in drug offences and drinking and driving offences.

5.8 Personal Background and Non-Work Activities

In general, having direct relatives (parents, siblings or children) who have had problems with alcohol or other drugs was associated with increased frequency of reporting use of drugs. Having a spouse or partner who had problems with alcohol or other drugs was also associated with increased use of drugs.

Attendance at religious services was associated with decreased use of tobacco, alcohol and illicit drugs, but had no relation to the use of prescription or "medical" drugs. Among physicians and pharmacists, heavy drinkers take more vacation days, as do current users of sedative-hypnotics. Pharmacists who are current users of benzodiazepines and cannabis take more vacation than those who are not current users.

5.9 Health and Emotional Health Variables

Having a regular physician tends to be related to increased use of prescription drugs, suggesting that physicians supply, or advise the use of, these drugs. Having had a serious emotional problem was associated with increased reporting of the current use of several drugs for all three professions, as was having sought counselling for emotional problems. Similarly, current users of many drugs reported increased numbers of symptoms of anxiety and depression, relative to those who are not current drug users.

5.10 Occupational Stress and Satisfaction

Occupational stress was not strongly related to drug use. When it was, however, reported stress tended to increase with reported drug use. Occupational satisfaction is unrelated to drug use patterns for physicians, and shows few significant relationships for pharmacists and lawyers. For all three professions, choosing to re-enter the same profession again is related to fewer reports of drinking problems.

6. OVERVIEW AND CONCLUSIONS

6.1 Prevalence of Drug Use

The prevalence of drug use among Canadian physicians, pharmacists and lawyers was found to be consistent with that reported by previous investigators in the United States and, where comparable data are available, drug use by professionals is comparable to, or lower than, that in the Canadian population (National Alcohol and Other Drugs Survey. Health and Welfare Canada, 1990).

Members of all three professions use tobacco and alcohol less frequently than do comparable members of the Canadian population. However, among the three professions studied, lawyers use these drugs more frequently than do physicians and pharmacists.

Physicians and pharmacists use benzodiazepines more frequently than do lawyers, and pharmacists use codeine (both prescription and non-prescription) and non-narcotic analgesics more frequently than do members of the other two professions. Reported levels of use of narcotics other than codeine were low. Lawyers who use benzodiazepines and prescription codeine were most likely to receive these drugs by prescription from a physician; physicians were least likely to do so. Most respondents reported that these drugs were used to treat a physical or emotional condition.

Physicians and pharmacists were also more likely than lawyers to use other medications such as antibiotics, anti-inflammatory medication and oral contraceptives. Where these drugs require prescription, physicians were most likely (among the professions studied) to use them on their own initiative.

When the results for the benzodiazepines, analgesics and codeine are viewed together with those for the "other medications," it appears that members of the health professions do indeed treat themselves, and when drugs can be obtained without the necessity of visiting a physician, other sources of supply will be used. However, the conclusion that physical access to drugs at work leads to excessive use of drugs must be approached cautiously. Direct handling of drugs at work was related to the pattern of use of only a few drugs. While physicians who handle drugs directly in their work were more likely to use benzodiazepines, they were also more likely to use cannabis. Pharmacists who handle drugs directly in their work were more likely to report current alcohol use than other pharmacists. Thus, the hypothesis that drug use by physicians and pharmacists is consistent with a belief in a medical approach to disease and discomfort and the use of drugs to treat these conditions, is at least as appealing as the hypothesis that drug use is related to physical access to drugs.

6.2 Consequences of Drug Use

A major concern is whether physicians, pharmacists and lawyers are harming patients or clients as a result of drug use. The findings of the current study are somewhat reassuring, in that there was very little reporting of major consequences such as harm to patients or clients, or accidents or serious mistakes at work. There were reports of other consequences such as calling in sick or being late for work, criticism by family members, worry about excessive drug use, or use of drugs during work hours (mostly associated with caffeine, tobacco and alcohol). By far the most common drug associated with work and social consequences among the professionals studied is alcohol.

Professional treatment for drug-related problems was most commonly associated with alcohol for all three professions, while feelings of dependence and withdrawal symptoms were associated with alcohol, caffeine, tobacco and benzodiazepines. Feelings of dependence were also occasionally reported by physicians and pharmacists in association with narcotics, and by lawyers in association with cocaine and cannabis. Any reporting of these symptoms is cause for concern. However, this question was phrased, "Have you ever experienced..." Therefore, in view of the absolute numbers responding affirmatively to this question, we do not have evidence that large numbers of these three professions are currently drug dependent.

The results of the study show that the numbers of physicians, pharmacists and lawyers whose practice is seriously affected by drug use is small. Nevertheless, there are members of each of the professions studied who would benefit from a reduction in the use of alcohol and other drugs. There is room for carefully designed prevention programs to show improvement.

7. RELATIONSHIP OF DRUG USE TO OTHER CHARACTERISTICS

In this study, drug use measures were analysed for their relationship with a large number of demographic, professional and personal variables. With the number of analyses performed and the large number of respondents, it was inevitable that many statistically significant relationships would emerge. Multivariate analyses were not performed. Therefore, the summary presented below is presented in general terms, and variables are mentioned where consistent relationships were found. For some of the variables mentioned below in the overall summary, significant relationships were not present for all three professions.

7.1 Summary

In general, men are more likely to smoke tobacco and drink alcohol. Women, on the other hand, make more use of analgesic (narcotic and non-narcotic) drugs. Older professionals are more likely to use tobacco, alcohol, benzodiazepines and codeine; younger respondents are more likely to use cannabis.

While professionals who work the longest hours are least likely to use drugs, active involvement in professional activities, including academic appointment, seems to be related to increased use of alcohol and some other drugs. Undergraduate courses on problems with alcohol and other drugs are related to lower levels of alcohol, tobacco and benzodiazepine use, but having taken continuing education courses in the area is associated with increased levels of use of analgesics, codeine and other narcotics. As the offering of training courses on drug-related problems to physicians and pharmacists has increased in recent years, it is likely that these variables are related to age. Graduates of professional schools outside Canada, the United States, or the United Kingdom are least likely to be drug users.

Heavy drinking among lawyers is associated with increased professional involvement in drug offences and drinking and driving offences.

Having a direct relative who has had a problem with alcohol or another drug is associated with increased drug use, as is having a spouse with similar problems. Attendance at religious services is generally associated with decreased levels of use of alcohol, tobacco and illicit drugs. Having had a serious emotional problem, and having been hospitalized for emotional problems, was associated with higher levels of drug use, as were symptoms of anxiety and depression. Occupational stress and satisfaction were not strongly related to drug use.

7.2 Implications

Serious consequences were reported too infrequently to be analysed in relation to other variables and characteristics. The reduction of consequences of drug use must be accomplished through the reduction of the use of drugs. The drug associated with most social and work-related consequences was alcohol, followed by tobacco, caffeine and benzodiazepines. Opiate narcotics and illicit drugs were infrequently associated with professional consequences. Reduction of alcohol use would appear to be a major priority.

A number of findings suggest that an effective preventive approach might broadly address several aspects of professional life. The health professions use codeine, benzodiazepines and other prescription drugs more frequently than do lawyers. Knowledge of the effectiveness of these drugs, combined with access to them, may lead to self-medication. Lawyers report higher levels of alcohol use than the other two professions, including use during working hours. This finding could be related to the conduct of business over meals. Pharmacists and lawyers who are active in their professional association's activities are more likely to have had a drinking problem; physicians who have academic appointments are more frequent drinkers.

These findings suggest that the professions might address drinking in the context of professional activities. In addition to courses on problems with alcohol and other drugs, prevention could be approached by promoting healthy lifestyles within the professions. In other words, the "professional culture" could be made inconsistent with drug use. A clear first step would be the reduction or elimination of alcohol use at professional and educational gatherings for all three professions. In contrast, it is not practical to eliminate benzodiazepines and codeine from the medical approach to anxiety and pain. Therefore, it will be challenging to apply a health promotion approach to the use of these drugs within medicine and pharmacy. However, changes might involve a re-examination of prescribing practices, and a more cautious approach to the medical use of drugs.