

Prescription Drug Abuse FAQs



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This FAQ examining Prescription Drug Abuse was prepared by Dr. John Weekes, Senior Research Associate, Research and Policy Division, Canadian Centre on Substance Abuse (CCSA), Dr. Jürgen Rehm, Centre for Addiction and Mental Health and University of Toronto, and Rebecca Mugford, Research Assistant, Research and Policy Division, CCSA. It is intended to provide current, objective and empirically-based information to guide the discussion on prescription drug abuse in Canada.

What is meant by prescription drug abuse?

- The term prescription drug abuse usually refers to any misuse or non-medical use of a controlled psychotropic pharmaceutical drug—that is, the use of a drug for something other than its intended medical or psychiatric purpose (for example, to get “high”).
- A recent workshop of experts convened by Health Canada to develop consensus around terms and concepts yielded the following definition of abuse of psychotropic pharmaceuticals:

“...use of pharmaceutical drugs with centrally acting reinforcing properties that is associated with increased risk for harm, as characterized by obtaining drugs from illegitimate sources, or risky patterns of use (excluding under-use), that deviate from accepted medical practice and/or scientific knowledge, or taking the drugs for purposes which are not therapeutic.”¹

What kinds of drugs are used for non-medical purposes?

- Virtually any prescription drug can be consumed for reasons other than its medical purpose; however, it is usually drugs with psychotropic properties that are the focus of abuse. Some of the more popular prescription drugs for abuse include opiate-based drugs for pain relief, tranquillizers, stimulants and amphetamines, and sedatives and barbiturates.
- Opioids include pain medications with active ingredients such as morphine, oxycodone and codeine, whereas tranquillizers include benzodiazepines such as diazepam (Valium[®]) and alprazolam (Xanax[®]) that are often prescribed to reduce stress and panic attacks.
- Stimulants include dextroamphetamine (Adderall[®]) as well as methylphenidate (Ritalin[®]), whereas barbiturates include drugs used to treat anxiety, sleep disorders and seizures such as pentobarbital sodium (Nembutal[®]) and mephobarbital (Mebaral[®]).²
- Various international conventions govern how these substances are to be treated by signatory countries.^{3,4,5} Additionally, the Controlled Drugs and Substances Act, administered by Health Canada, organizes these drugs into various schedules with varying degrees of control.⁶
- Other common licit (legal) drugs that can be abused for their psychoactive effects include those obtained without a prescription (referred to as “over-the-counter” drugs). These consist of drugs such as cough medicines, sleep aids and antihistamines.⁷ For example, common over-the-counter medicines that contain the

precursors ephedrine and pseudoephedrine can be combined with other ingredients to produce the synthetic stimulant, methamphetamine. Although these medicines are often abused, they will not be the focus of this document.

- Although not a psychotropic drug, anabolic steroids can be abused by individuals who wish to boost their athletic ability and/or physical appearance. For example, in the 2004 Canadian Addiction Survey it was indicated that approximately 0.6% of Canadians over the age of 15 have used steroids at some point in their lives.⁸
- Although often not mentioned in large-scale drug use surveys, studies have found that students engage in the non-medical use of prescription asthma inhalers. U.S. research examining the abuse of asthma inhalers among students found that approximately 9% had engaged in lifetime non-medical use of inhalers, and such rates increased with grade level (ranging from Grade 5 to Grade 10). It was also found that approximately one of every five boys who possessed a prescribed asthma inhaler had been approached to sell or trade it.⁹

What is the extent of prescription drug abuse in Canada and elsewhere?

- Available evidence suggests that Canadians are among the heaviest consumers of psychotropic medication in the world.¹⁰ However, there are few Canadian statistics on the number of people who use prescription drugs for non-medical purposes. Indeed, there is minimal research information available regarding the extent of prescription drug diversion and abuse in Canada.
- As a result, indirect inferences about the extent of prescription drug abuse in Canada are usually limited to examining distribution and sales statistics, and year-to-year trends in prescribing practices for specific classes of drugs. For instance, in 2002, Canada reported the fourth highest per-capita use of prescription narcotics in the world and the second highest use of sedative-hypnotics (including benzodiazepines).¹¹ During that year, Canada was also among the top 15 countries in the use of prescription amphetamines.
- Although national and provincial prescription data may reveal a rise in the rate at which some psychotropic substances are prescribed in Canada, such information is not a direct indicator of the extent of abuse; rather, this increase could simply indicate changes in legitimate treatment of pain and other medical disorders.¹²
- Abuse of prescription drugs may be also estimated indirectly through data from admissions to detoxification centres, admissions to treatment programs, and emergency room visits and coroners' reports of overdose deaths. For example, a study by the Centre for Addiction and Mental Health (CAMH) found that 11% of admissions to substance abuse treatment programs in Ontario in 1999–2000 were for abuse of prescription drugs.¹³
- A recent study of prescription opioid abuse in Canada using OPICAN data from seven urban centres across the country found indications that non-medical use of prescription opioids is increasingly replacing heroin. Indeed, whereas about 30% of study participants used heroin, 37% used Dilaudid[®]. Further, other prescription opioids such as morphine, oxycodone, Percocet[®]/Percodan[®], and codeine-based preparations are being actively used.¹⁴
- Government inquiries are another way of examining abuse of prescription drugs. In Atlantic Canada, a series of recent overdose deaths from the opioid oxycodone prompted the formation of a task force to examine the extent and nature of abuse of the drug OxyContin[®].¹⁵
- Looking south of the border, some U.S. surveys have directly examined the extent of prescription drug abuse. Results from the 2004 National Survey on Drug Use and Health indicated that lifetime non-medical use of prescription pain relievers among young adults (aged 18–25) surveyed was 22.1 % in 2002, and increased to 23.7 % and 24.3% in 2003 and 2004, respectively.¹⁶
- Finally, a U.S. study employing a large sample to examine the prevalence of sedative misuse in the population found that approximately 1 in 10 individuals reported the misuse of a sedative at some time in their life.¹⁷
- Overall, although domestic surveys and small-scale studies offer some insight into the extent of prescription drug abuse, not all studies define prescription drug abuse in the same manner; this makes it difficult to make concrete inferences as to the true rate of abuse in the population.¹⁸

How and why does diversion of prescription drugs occur?

- Diversion of prescription drugs away from legitimate use can occur in many ways, including^{19,20}
 - “Double-doctoring” or “doctor shopping”—obtaining multiple prescriptions from different physicians;

- Prescription pad theft and tampering resulting in forged or altered prescriptions;
 - Physician fraud—fraudulent prescriptions written by doctors in return for money;
 - Purchases from friends, relatives, or dealers for whom the drug has been legitimately prescribed;
 - Diversion of drugs from substance abuse treatment programs (for example, methadone);
 - Diversion from supplies intended for patients in health care facilities;
 - Break-ins and theft from homes, doctors’ offices, pharmacies, manufacturers, wholesalers, courier companies, clinics and hospitals;
 - Purchase of drugs on the Internet.
- However, without clear empirical data, it is difficult to determine which one of these approaches contributes most to the diversion of prescription drugs. There are numerous opportunities for diversion at every point in the manufacturer-to-consumer continuum.²¹
- There are strong financial incentives for diverting prescription medication for non-medical uses. Trafficking in prescription drugs can be highly lucrative, and may be the only contraband product that actually gains value when re-sold. By contrast, a stolen camcorder, laptop or stereo equipment would not be sold or “fenced” for more than its retail price. A 1998 study in Vancouver confirmed that there are huge mark-ups (and profit margins) in the street value of various diverted prescription drugs:
- A 60 mg tablet of MS Contin[®] (slow-release morphine) cost \$1.70 in a pharmacy, but had an average street value of \$35 (a 2,059% mark-up).
 - A 4 mg Dilaudid[®] tablet cost \$0.32 in the pharmacy and had a street value of \$32 (a 7,800% mark up).²² In short, a pill bottle with 20 tablets of Dilaudid[®] costs under \$10 from a pharmacy, but is worth over \$600 on the street.
- An additional incentive for diversion is that prescription medications are often cheaper (despite big mark-ups) and easier to obtain than illegal substances.²³ Also, many individuals with drug plans or who receive social assistance may have their prescription medication fully or partially paid for. In turn, this increases the ease with which individuals can obtain medication to abuse or divert.
- Prescription drug abuse may also be popular because non-medical users believe that drugs produced legally by reputable pharmaceutical companies are somehow better and safer than those created illegally in dirty clandestine labs with questionable ingredients by untrained individuals who may have direct links with organized crime.
- Non-medical users may also believe that they will be much less likely to be caught by authorities when carrying a pill bottle with legitimate-looking pills and tablets rather than crack cocaine or heroin.
- Much of the focus around prescription drug abuse has been on “small time” individuals who sell their prescription drugs and obtain medications through double-doctoring. However, literally thousands of people are employed in the manufacture, production, distribution and administration of prescription drugs. There are also thousands of pharmacies, hospitals, clinics and doctors’ offices across the country. Despite the professionalism and ethical conduct of the overwhelming majority of individuals involved, clearly it only takes a handful of corrupt individuals or low-wage or disgruntled employees to supply large geographical regions of the country with drugs for non-medical use.

What do we know about those at risk for abusing prescription drugs?

- A broad range of individuals abuse prescription drugs and their reasons vary widely. However, the available evidence suggests that, in general, adolescents, older adults, women, and Aboriginal people are at elevated risk to abuse prescription drugs.²⁴
- Some individuals may abuse prescription substances because they believe that they are less harmful than other substances of abuse, or because they may cost less on the streets than illicit substances.
- Research has shown that up to 20% of Canadians over the age of 60 obtain long-term prescriptions for pain medications.²⁵ Indeed, the elderly tend to receive multiple prescriptions, and this, combined with long-term use, ultimately increases the potential for misuse and problematic use (including dependence).²⁶

- Research examining prescription drug use among seniors in British Columbia indicated that for 2000 and 2001, approximately 8,223,200 prescriptions were filled for 523,824 seniors. This is consistent with approximately 15.7 prescriptions for every senior.²⁷
- In Canada, gender differences in psychotropic drug use and prescription patterns have been identified in studies that date back to the 1970s. A study using Ontario data found that women were twice as likely as men to receive a prescription for psychotropic drugs and were also more likely to receive multiple prescriptions, thus consuming larger amounts of these medications.²⁸
- Prescription drug use and abuse has been identified throughout Aboriginal communities in Canada, although solid evidence is rare. A survey of a high-risk group of Aboriginal people entering addiction treatment in Calgary found that approximately half (48%) of respondents indicated that they used prescription drugs improperly (for reasons other than the drug's intended purpose).²⁹
- In 2003, the Drug Abuse Warning Network (DAWN) indicated that the majority of U.S. emergency room visits involving the misuse of prescription drugs included drugs classified as antidepressants, benzodiazepines, and opioid pain relief medications. Further, patients were more likely to be female. In about 50% of cases, patients had consumed more than one drug.³⁰
- Other recent U.S. studies have found similar prescribing patterns for women. Research estimated that, overall, women were 55% more likely than men to receive a prescription for any psychotropic medication when visiting a physician.³¹
- A 2004 study examining characteristics of individuals in treatment for dependence on oxycodone found that 77% of patients had also abused non-opioid drugs (both licit and illicit).³²
- Highlights from the U.S. 2005 Monitoring the Future Survey revealed an overall decrease in illicit drug use among youth; however, the non-medical use of prescription drugs remained high. For example, between 2002 and 2005 OxyContin[®] use among Grade 12 students rose slightly from 4% to 5.5% and remained constant between 2004 and 2005 (5% vs. 5.5%).³³
- Also, a recent U.S. study of university undergraduates found that those most likely to misuse prescription opioids were more likely to have received prescriptions for opioids in the past, and were also more likely to obtain a lower grade point average than those who did not misuse prescription opioids.³⁴
- Other studies examining the correlates of prescription opioid misuse among adolescents found that the strongest predictor of prescription drug misuse among 12 to 17 year olds was their use of illicit substances. It was also discovered that those at risk of misusing prescription opioids were of lower socioeconomic status, females, those who had “detached” parents, as well as those who held attitudes favourable to the notion of using illicit substances.³⁵
- Taken together, the results of Canadian and U.S. research described above clearly indicate that those who abuse prescription drugs are not a homogeneous group: many different individuals may be at risk of abusing prescription drugs. Indeed, such individual differences must be taken into account when developing appropriate prevention or treatment plans.

What is being done to monitor, minimize and prevent prescription drug abuse in Canada?

- The Canadian Centre on Substance Abuse, in partnership with Health Canada's Drug Strategy and Controlled Substances Program, have developed a National Framework for Action to Reduce the Harms Associated with Alcohol and Other Drugs and Substances. One of the Framework priorities focuses on preventing the abuse of prescription drugs.³⁶ Further, in recent years, Health Canada has convened a number of workshops involving both Canadian and international experts to examine the problem of prescription drug abuse in Canada.
- Currently in Canada, there is no national monitoring or comprehensive surveillance systems in place to identify, monitor, record and track the diversion and non-medical use of prescription drugs. However, Health Canada has recently convened a number of workshops with Canadian experts to identify and develop solutions for the problem of diversion and abuse of prescription drugs.
- In general, although 9 of 10 provinces currently have some form of system for tracking prescription-related information, the most advanced systems are found in Alberta (WellNet), British Columbia (PharmaNet), Manitoba (DPIN), and Prince Edward Island (Pharmacy Network). These systems monitor prescription duplication and double-doctoring.³⁷

- Although there is currently no national initiative for reducing the abuse of prescription drugs, many individual provinces and regions have developed action plans to address the issue:
 - Nova Scotia's Prescription Monitoring Act, which came into effect in 2005, attempts to increase accountability among practitioners who prescribe drugs and patients who use them. The goal is to provide advice to government authorities about which drugs need closer monitoring, and to mount educational initiatives aimed at preventing the abuse of prescription drugs.³⁸
 - The Newfoundland and Labrador Medical Act established a tamper-resistant prescription drug pad program in 2005. Use of the security-laden pads is mandatory for all physicians (including dentists), and is limited to specific drugs. Benzodiazepines are excluded from the list of drugs.
 - Alberta, Saskatchewan, Manitoba, British Columbia and Nova Scotia all have implemented multiple-copy prescription programs to monitor the use of medications deemed high-risk for abuse and to prevent prescription forgeries and double-doctoring.^{39,40}
 - Cape Breton has established a collaborative response to prescription drug abuse in the area through a partnership involving the Cape Breton District Health Authority, regional police services, the RCMP, the Nova Scotia Department of Community Services, the Nova Scotia Department of Justice, and members of the Cape Breton medical community. The partnership is supported by three working groups, each concerned with a particular aspect of the issue (treatment, education and prevention, and enforcement).⁴¹
- A number of manufacturers of commonly abused drugs are reportedly attempting to alter the medicinal composition of their products to reduce the likelihood that the drug will be misused and to reduce the likelihood that misuse will result in serious health risks, including overdose.
- In the U.S., Purdue Pharma has implemented the Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS[®]) system to obtain information concerning the prevalence of abuse and diversion of prescription drugs. Specifically, this system is meant to monitor drugs containing morphine, hydrocodone, oxycodone, buprenorphine and fentanyl.⁴²
- According to regulations under the Controlled Drugs and Substances Act, manufacturers, distributors and administrators—including pharmacies and clinics—are required to report theft and loss of pharmaceutical products. Health Canada is currently finalizing a guidance document for the reporting of loss or theft of controlled substances and precursor chemicals to improve the consistency of reporting. Health Canada reports loss and theft statistics annually to the United Nations and generates ad hoc reports for domestic use on request.
- In 2006, Health Canada published *Abuse and Diversion of Controlled Substances: A Guide to Health Professionals*. This guide is targeted at health professionals who are authorized to prescribe, dispense or administer drug products regulated under the Controlled Drugs and Substances Act and its regulations. It is designed to raise awareness and to provide practical guidance for recognizing and minimizing problematic use and diversion, without compromising the care of patients who require controlled substances for medical reasons.

How effective are measures aimed at reducing prescription drug abuse?

- Currently in Canada, there are no known evaluations of the effectiveness of the provincial initiatives outlined above in reducing the abuse of prescription drugs; however, some U.S. studies attempt to measure the effectiveness of some prescription monitoring programs.
- After implementation of New York State's prescription monitoring regulations for benzodiazepines, prescriptions for the drug decreased by 30% to 60% (depending on the data source employed). However, there was a concomitant increase in the rate at which other, non-monitored drugs were prescribed. Clearly, the program had unanticipated results and did not reduce the extent to which prescription drugs were issued.⁴³

What are some of the treatment strategies used with those who abuse prescription drugs?

- Any treatment strategy used with those abusing prescription drugs must take into account the specific needs of the individual, as well as the particular substance being abused. This principle is the same for treatment of those who abuse both licit and illicit substances.

- A growing pool of research has identified characteristics associated with effective, evidence-based approaches.⁴⁴ In general, this research suggests that cognitive-behavioural approaches are effective in treating individuals who abuse both licit and illicit substances. This broad approach extends from theory and supporting evidence and focuses on changing clients' behaviours, expectations and attitudes by actively teaching them skills they can use to cope with high-risk situations and to avoid or minimize slips, lapses and relapse.
- Some of those who abuse substances are offered medications to assist with detoxification in combination with other therapeutic interventions. For example, methadone and buprenorphine are used in some treatment regimes for opioid abuse (buprenorphine is used in other countries, including the United Kingdom, but is not currently sold in Canada).⁴⁵ In Canada, methadone maintenance has increased five-fold since the mid-1990s, thereby raising concerns about the challenges and costs associated with more people receiving methadone regularly.⁴⁶

What are some of the issues and challenges associated with the abuse of prescription drugs?

- Some believe that use of monitoring systems (and the potential for associated sanctioning for improper conduct) has created a “chilling effect” or a “substitution effect” among some physicians who may become reluctant to prescribe closely-monitored drugs, and may reduce or alter their prescribing behaviours. For example, it has been suggested that physicians may opt to prescribe less appropriate medications to avoid raising attention and potential auditing and scrutiny by colleges of medicine and other governing bodies.^{47,48}
- Clearly, in order for such monitoring initiatives to provide optimal efficacy, there must be a balance between the treatment of legitimate pain and the reduction of prescription drug abuse. Adverse effects of monitoring pharmaceuticals on those who genuinely require them needs to be kept to a minimum.⁴⁹
- Data collected in Newfoundland and Labrador indicated that a relatively small number of physicians accounted for a rather large amount of prescriptions written for OxyContin[®] in a short period of time. Although the majority (68%) of physicians wrote a small number of prescriptions (less than 100) during a 16-month period, 2% wrote more than 2,500 prescriptions and 1% wrote more than 5,000 prescriptions for specific controlled substances.⁵⁰ Clearly, more effective measures are needed to monitor physician prescribing practices, while keeping adverse consequences for patients at a minimum.
- The current state of prescription advertising legislation in Canada may also be contributing to the existing challenge. Although direct-to-consumer advertising of prescription drugs is forbidden in Canada, the current interpretation of Canada's Food and Drug Act allows advertising in two general forms. First, “reminder ads” used to remind individuals of the brand name without stating health benefits and method of use are permitted, as are “help-seeking ads” that target a specific health condition and advise individuals with particular symptoms to ask their doctor for a medication whose name is not disclosed.⁵¹
- After reviewing available international information in early 2006, the Health Council of Canada concluded that due to the lack of evidence explicitly evaluating the effects of direct-to-consumer prescription advertising on health, and due to the potential harms that could arise, such advertising in Canada should not be encouraged. Recommendations were offered, some of which were to⁵².
 - Incorporate publicly-funded education campaigns on prescription drugs into the health care system, offering *complete* and *accurate* information related to the use and side effects of prescription medications;
 - Enhance the enforcement of laws surrounding direct-to-consumer advertising through improved monitoring, and by establishing sufficient penalties to deter continuous violations of the law.
 - Prohibit reminder advertising, due to the lack of evidence to support its use;
 - Review the state of television broadcasting in Canada, as direct-to-consumer advertising is permitted in the U.S. and Canadians have wide access to such television networks.
- An international study examining Internet-based pharmacies found a large number of Internet sites selling prescription drugs. The researchers concluded that increased availability of computers around the world may lead to an increase in abuse of prescription drugs acquired via the Internet.⁵³

What's the bottom line when it comes to diversion and abuse of prescription drugs in Canada?

- Clearly, there are significant monetary incentives for people to divert and use drugs made for legitimate medical purposes.
- Priority should be given to research that more fully and systematically examines the extent and nature of prescription drug abuse in Canada.
- A comprehensive electronic prescription monitoring system(s) is needed in Canada in order to minimize or eliminate double-doctoring.
- To date, it appears that emphasis has been placed on developing ways of minimizing *minor* diversion of prescription drugs (for example, double-doctoring, prescription tampering, etc.) rather than focusing on major sources of mass diversion of pharmaceutical products (for example, in the manufacturing and supply chain).
- A sizable and effective national monitoring and auditing system is needed to address the potential for large-scale diversion of prescription drugs at all points in the manufacturing, distribution and administration chain. The absence of an adequate infrastructure to monitor compliance with government regulation is a significant shortcoming and leaves the door open to mass diversion and theft.

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The Canadian Centre on Substance Abuse (CCSA), Canada's national addictions agency, was established in 1988 by an Act of Parliament. CCSA provides a national focus for efforts to reduce health, social and economic harm associated with substance abuse and addictions.

For further information, please write:

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