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## **Abuse of controlled prescription drugs**

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**SUBSTANCE ABUSE IN CANADA:**  
Current Challenges and Choices



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*Ned, 33, is single and currently living on social assistance in a men's shelter in the downtown core. He has been using prescription opioids ("pain killers") recreationally about four or five days a week for the past 10 years. Typically, Ned uses prescription drugs such as Percocet, Percodan, MS Contin, and OxyContin, although he also uses Tylenol 3 and methadone depending on what's available on the street and what he can afford. Ned makes a living from small-scale drug dealing, panhandling and occasional thefts. Some of the medication Ned uses was prescribed for his back pain and comes from a doctor in a walk-in clinic. He supplements this supply with drugs from a street dealer who gets them by "doctor shopping"—faking symptoms of chronic pain to obtain multiple prescriptions for pain medication from a number of doctors and various local pharmacies.*

# Abuse of controlled prescription drugs

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## Abuse of controlled prescription drugs in Canada

In Canada, as in many other parts of the world, the problem of prescription drug abuse is not new. Twenty-five years ago, an editorial in the *Canadian Medical Association Journal*<sup>1</sup> pointed out the problem of abuse of narcotic pharmaceuticals and highlighted the need for more knowledge and better control. From an examination of current statistics, it appears the words of the editorialists are more relevant today than they were in 1979.

The Compendium of Pharmaceuticals and Specialties (CPS), published by the Canadian Pharmacists Association, lists hundreds of licit drugs, medications, and pharmaceutical preparations.<sup>2</sup> This chapter will restrict its focus to the non-medical or recreational use of drugs with *psychotropic* properties; that is, substances governed by the United Nations international conventions on narcotics and psychotropic substances. These include opiate-based drugs for pain relief, tranquilizers such as benzodiazepines, stimulants and amphetamines, and sedatives and barbiturates. In Canada, such “controlled” substances are subject to the Controlled Drugs and Substances Act (CDSA), which divides them into various categories or schedules.<sup>3</sup>

## Extent of prescription drug abuse in Canada

There are no accurate statistics on the number of people in Canada who engage in the non-medical use of prescription drugs or who experience dependence on prescription drugs. Currently, there are no national monitoring systems or comprehensive surveillance mechanisms in place to record and track the extent of non-medical use of prescription drugs. As a result, the extent and nature of prescription drug abuse can only be measured indirectly by analyzing distribution and sales statistics, and year-to-year trends in prescription practices for specific classes of drugs.

These sources tell us that Canadians are among the heaviest consumers of psychotropic medications in the world. For example, in 2002, Canada reported the fourth highest per capita use of prescription narcotics in the world, the second highest use of sedative-hypnotics (including benzodiazepines), and was among the top 15 countries in the use of prescription

Despite big mark-ups on the street, it may still be cheaper and easier for individuals with substance abuse problems to get their hands on prescription drugs than to buy an illegal drug such as heroin.

amphetamines.<sup>4,5</sup> These high per capita consumption rates have been reflected in various surveys, but no domestic survey has attempted to determine or estimate the extent of non-medical use or abuse of prescription drugs. National consumption rates of psychotropic medications are relatively poor indicators of abuse. Other indirect indicators of prescription drug abuse include reported thefts and fraud (forgery and fraudulent alteration of prescriptions) from pharmacies, hospitals, clinics, and doctors' offices.

The extent and nature of prescription drug abuse can also be estimated by examining admissions data from detoxification centres, treatment programs and emergency departments, by reviewing coroners' reports on overdose deaths, and by analyzing the type and severity of substance abuse problems within the prison population.<sup>6</sup> Toronto's Centre for Addiction and Mental Health (CAMH) studied admissions to treatment in Ontario in 1999-2000 and found that as many as 11% of individuals reported prescription drugs as part of their substance abuse problem.<sup>7</sup>

Some countries have mounted national surveys and monitoring systems—including the National Household Survey on Drug Abuse,<sup>8</sup> and the Drug Abuse Warning Network (DAWN)<sup>9</sup> in the United States, and the National Drug Household Survey<sup>10</sup> in Australia—that directly measure prescription drug abuse. For example, the 2001 U.S. National Household Survey on Drug Abuse revealed that more than 11 million people (8% of the U.S. population over the age of 12) had engaged in the non-medical use of drugs. The results of these surveys also indicate that non-medical use has been increasing over the past 10 years for all major groups of prescription drugs.<sup>11,12</sup>

In Atlantic Canada, a task force examined the abuse of the semi-synthetic opioid analgesic, OxyContin, and found that a small number of physicians were responsible for writing prescriptions for large quantities of OxyContin and other controlled substances such as benzodiazepines.<sup>13</sup> For example, data generated in Newfoundland and Labrador by the province's pilot prescription monitoring program revealed that while 68% of physicians wrote fewer than 100 prescriptions during a 16-month period, 2% wrote more than 2,500 prescriptions, and 1% wrote more than 5,000 prescriptions for controlled substances.<sup>14</sup>

#### How does diversion of prescription drugs occur?

The diversion of prescription drugs away from their intended use occurs in a variety of ways. The following list summarizes some of the more common ways by which prescription drugs may become available for non-medical use.<sup>15,16,17</sup>

- “Doctor shopping” or “double doctoring”—obtaining multiple prescriptions from different doctors
- Theft from doctors' offices, pharmacies and wholesalers, clinics, and hospitals
- 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
- Theft during break-and-entry robbery of private premises; robbery of individuals leaving a pharmacy
- Diversion at the wholesale or retail level (including theft during transportation and distribution)
- Diversion of drugs from substance abuse treatment programs (for example, methadone)
- Purchase of drugs on the Internet

#### Who abuses prescription drugs?

Overall, research indicates that prescription drug abuse occurs in many segments of society, and adolescents and young adults, older adults, women and the Aboriginal population seem to be particularly at risk. For example, the U.S. National Household Survey on Drug Abuse found the highest rates of non-medical use of prescription drugs among adolescents and young adults. Younger prescription drug abusers often use multiple substances, both legal and illegal.<sup>18</sup>

The OxyContin task force in Atlantic Canada found that a growing number of young people were abusing OxyContin. In a six-month period, about 50 of these young people were admitted to an outpatient mental health counselling service in St. John's, NL.<sup>19</sup> Non-medical use of prescription drugs seems to start in adolescence and may evolve into abuse of multiple substances during adulthood. There are indications that the risk for overdose deaths is higher if prescription drug abuse is involved.<sup>20</sup>

Women were shown to be 50% more likely than men to abuse prescription drugs in an analysis of U.S. data,<sup>21,22</sup> while men were more prone to engage in heavy alcohol use along with their non-medical use of prescription drugs.<sup>23</sup>

Abuse of prescription drugs has long been a problem for Aboriginal peoples in Canada<sup>24</sup> and remains so today,<sup>25</sup> although accurate prevalence data are scarce.

Data suggest that as many as 20% of Canadian adults aged 60 or older may be involved in long-term continuous use of pain relief medications.<sup>26</sup> A sizeable proportion of these engage in prescription misuse, especially in the form of overuse and incorrect use of medications. In general, the elderly tend to use psychotropic prescription drugs more often than younger people and may receive higher doses of benzodiazepines (tranquillizers) for longer periods of time than is medically necessary. Long-term use has a variety of negative consequences, including higher risks for dependence, falls and other accidents, and impaired thinking. In a Quebec study, it was found that among benzodiazepine users, the elderly used the most prescriptions and were the least informed about the effects and potential side effects.<sup>27</sup>

### Why are prescription drugs diverted for non-medical purposes?

A number of factors explain the popularity of prescription drug diversion. First, trafficking in prescription drugs can be highly lucrative. A 1998 study in Vancouver confirmed that there are huge mark-ups (and profit margins) in the street value of various drugs. For example, a 60mg tablet of MS Contin (slow-release morphine) cost \$1.70 in a pharmacy, but on the street sold for an average of \$35 (a 2,059% mark-up). A 4mg Dilaudid tablet cost \$0.32 in the pharmacy and had an average street value of \$32 (a 7,800% mark-up).<sup>28</sup> In fact, trafficking in prescription drugs is a rare case of contraband gaining value at the “retail” level. By contrast, a stolen TV or VCR would rarely sell for more than its retail price. And drugs are much easier to conceal and transport than TVs and VCRs.

Despite big mark-ups on the street, it may still be cheaper and easier for individuals with substance abuse problems to get their hands on prescription drugs—either through double-doctoring or

paying the dealer mark-up—than it is to buy an illegal drug such as heroin.<sup>29</sup> Prescription drugs that wind up being used for non-medical purposes are sometimes paid for by drug plans or social assistance.

Prescription drug diversion may also be popular because non-medical users believe that drugs produced legally by reputable pharmaceutical companies are somehow better and safer than drugs created illegally in dirty underground labs with questionable ingredients by untrained individuals who may have direct links with organized crime. While this may be true in principle, the high rate of problematic use, dependence, and overdose from the abuse of prescription drugs suggests that it is a serious societal problem. Users may also believe they are less likely to be hassled by police if they get caught with prescription drugs than they would be with drugs such as heroin or crack.

Finally, the production, distribution and administration of prescription drugs nationally employs literally tens of thousands of people. 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 in this process, it only takes a handful of corrupt individuals driven by greed to supply large geographical regions of the country with prescription drugs for non-medical use.

### What can be done to address prescription drug abuse?

The typical response to this question has been to call for better education and training—for the prescribing physician, the dispensing pharmacist, and the patient. For example, physicians can be taught to recognize patients’ drug-seeking behaviour and other warning signs, to educate patients about their drug regimens, and to set firm but reasonable prescribing guidelines.<sup>30</sup> Other forms of public education may focus on the effects of various substances.

While the goals of education and training for both medical professionals and patients have merit, research indicates that unless these efforts are accompanied by formal notification to physicians about their prescribing practices, they have *little or no effect* on physician behaviour.<sup>31</sup>

Other possible preventive measures include better regulation of prescribing and dispensing for physicians and pharmacists.

## At a glance: solutions to prescription drug abuse

- In 2002, the House of Commons Special Committee on Non-Medical Use of Drugs called for the development of real-time databases to track prescribing and dispensing of commonly misused prescription drugs.<sup>38</sup> The PharmNet system in British Columbia could provide a sophisticated model for monitoring the use of prescription drugs.
- Cost-effective solutions to prescription drug abuse require a comprehensive, permanent system that accurately captures the nature, extent, and consequences of abuse. Occasional surveys cannot accurately provide the kind of information we need to address the abuse of pharmaceutical drugs in Canada.
- Economic incentives for the diversion and illegal sale of prescription drugs are so overwhelming that a highly effective regulation and enforcement system is required; otherwise, virtually any response will be ineffective.
- Even the smallest break in the production, distribution, and administration chain has the potential to flood large geographical regions of the country with prescription drugs that can be purchased for non-medical consumption.

However, such regulations have only been shown to work if they are enforced and there are consequences for misconduct.<sup>32</sup> Regulations require monitoring by government and diversion control programs similar to the electronic tracking systems in place in several U.S. states<sup>33</sup> and some Canadian provinces.

Electronic monitoring and tracking of prescriptions looks promising as a way to reduce double-doctoring and the risk to patients of problematic use. The PharmNet system in British Columbia was singled out by the House of Commons Special Committee on Non-Medical Use of Drugs as a comprehensive prescription tracking and monitoring system that could serve as a model for the rest of Canada. Further, the OxyContin task force in Atlantic Canada recommended that Health Canada implement a formal reporting system for all prescription narcotic drugs.<sup>34</sup>

To date, five Canadian provinces (British Columbia, Alberta, Saskatchewan, Manitoba, and Nova Scotia) have implemented multiple copy prescription tracking programs in an effort to reduce the diversion of certain drugs that are at high risk for diversion and abuse. Although these programs have not been extensively researched, available studies suggest that the introduction of multiple copy prescription programs results in some physicians substituting drugs that fall outside the program,<sup>35</sup> and may lead to increased prescribing of less appropriate drugs.<sup>36</sup>

Finally, concerns about the abuse of certain medications could prompt the medical community to consider alternative therapeutic practices for pain management, and for other medical conditions that are being routinely treated with drugs. However, this would have to be done in a way that does not deprive patients of pain medication if they need it.

### Conclusions and implications for Canada

Although exact figures are not yet available, the abuse of prescription drugs constitutes a significant public health problem in Canada. A recent report by the Auditor General of Canada calls for improved analysis and dissemination of information on patterns of drug use in Canada.<sup>37</sup> Clearly, there is an illegal street market for many prescription drugs in Canadian cities and there are real monetary incentives for trafficking in these products.

It also appears that some doctors are too quick to prescribe drugs that have a potential to be abused. We learned that a small number of doctors in Atlantic Canada, for example, write disproportionately large numbers of prescriptions for pain relief medication and other controlled substances. We also understand that even the smallest break at any point in the production, distribution, and administration chain can flood entire regions of the country with prescription drugs for non-medical use.

Prescription drug abuse in Canada is a complex issue that imposes serious costs on society, yet at the moment we have no way to measure how big the problem is. Future research needs to focus

on understanding the extent of the problem and its consequences for the health, social and economic well-being of Canadians. This research is also critical for developing evidence-based interventions to reduce harm from prescription drug abuse.

Addressing prescription drug abuse should be a major focus of future Canadian drug policy. However, policy development in this area needs to carefully and directly target the abuse of prescription drugs while ensuring that there is no threat to the supply and availability of these important medications for the legitimate treatment of pain and illness. ■

## Endnotes

1. Wilson, R. G. & Geekie, D. A. (1979). Canadian narcotic consumption warrants government, pharmaceutical industry and professional study. *Canadian Medical Association Journal*, 120, 1267-1268.
2. Canadian Pharmacists Association (2004). *CPS: Compendium of Pharmaceuticals and Specialties, (39th Edition)*. Ottawa: Canadian Pharmacists Association.
3. Controlled Drugs and Substances Act, Statutes of Canada. (1996), c. 19.
4. International Narcotics Control Board (2004). *Narcotic Drugs: Estimated World Requirements for 2004—Statistics for 2002*. Vienna, Austria: International Narcotics Control Board.
5. International Narcotics Control Board (2004). *Psychotropic Substances: Statistics for 2002, Assessments of Medical and Scientific Requirements for Substances in Schedule II, III, and IV*. Vienna, Austria: International Narcotics Control Board.
6. University of Maryland, Center for Substance Abuse Research (2004). Number of treatment admissions and emergency department mentions for narcotic painkillers continues to increase. *CESAR-FAX*, 13(44).
7. Rush, B. (2002). Client characteristics and patterns of service utilization within Ontario's specialized addictions treatment agencies: A provincial report from DATIS. Toronto: Centre for Addiction and Mental Health.
8. Substance Abuse and Mental Health Services Administration (2003). *National Household Survey on Drug Abuse (NHSDA) report. Nonmedical Use of Prescription-type Drugs Among Youths and Young Adults*. Washington, DC: Substance Abuse and Mental Health Services Administration. U.S. Department of Health and Human Services.
9. Drug Abuse Warning Network. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. [www.dawninfo.samsa.gov](http://www.dawninfo.samsa.gov).

10. Australian Institute of Health and Welfare (2001). *2001 National Drug Strategy Household Survey*. Canberra: Australian Institute of Health and Welfare.
11. Substance Abuse and Mental Health Services Administration (2003).
12. National Association of Pharmacy Regulatory Authorities (2004). *Drugs and Schedules*. Ottawa: National Association of Pharmacy Regulatory Authorities.
13. OxyContin Task Force Final Report (June, 2004).
14. OxyContin Task Force Final Report (June, 2004).
15. Commissioner's Drugs Committee (2002). *The diversion of pharmaceutical drugs onto the illicit market*. Marden, South Australia: Australasian Centre for Policing Research.
16. Poulin, C. (2001). Medical and non-medical stimulant use among adolescents: from sanctioned to unsanctioned use. *Canadian Medical Association Journal*, *16*, 1039-1044.
17. Martyres, R. F., Clode, D., & Burns, J. M. (2004). Seeking drugs or seeking help? Escalating "doctor shopping" by young heroin users before fatal overdose. *Medical Journal of Australia*, *180*, 211-214.
18. Fischer, B., Rehm, J., Brissette, S., Brochu, S., Bruneau, J., el-Guebaly, N., Noël, L., Tyndall, M.W., Wild, C., Mun, P., & Baliunas, D. (in press). Illicit opioid use in Canada—Comparing social, health and drug use characteristics of untreated users in five cities (OPICAN Study). *Journal of Urban Health*.
19. OxyContin Task Force Final Report (June, 2004).
20. Fischer, B., Brissette, S., Brochu, S., Bruneau, J., el-Guebaly, N., Noël, L., Rehm, J., Tyndall, M.W., Wild, C., Mun, P., Haydon, E., & Baliunas, D. (in press). Prevalence and determinants of overdose incidents among illicit opioid users in five cities across Canada. *Canadian Medical Association Journal*.
21. Simoni-Wastila, L. (2000). The use of abusable prescription drugs: The role of gender. *Journal of Women's Health and Gender-Based Medicine*, *9*, 289-297.
22. Simoni-Wastila, L., Ritter, G., & Strickler, G. (2004). Gender and other factors associated with the nonmedical use of abusable prescription drugs. *Substance Use and Misuse*, *39*, 1-23.
23. Simoni-Wastila, L., et al. (2004).
24. Kermode-Scott, B. (1994). Alberta tackling epidemic: Prescription drug abuse among Natives. *Canadian Family Physician*, *40*, 2030-2032.
25. Wardman, D., Khan, N., & el-Guebaly, N. (2002). Prescription medication use among an Aboriginal population accessing addiction treatment. *Canadian Journal of Psychiatry*, *47*, 355-360.
26. Egan, M., Moride, Y., Wolfson, C., & Monette, J. (2000). Long-term continuous use of benzodiazepines in older adults in Quebec: Prevalence, incidence and risk factors. *Journal of the American Geriatrics Society*, *48*, 811-816.
27. Larose, D.S., Landry, C., & Colletette, C. (1999). Overuse of psychotropic drugs in seniors. *The Canadian Nurse*, *95*, 45-50.
28. Sajan, A., Corneil, T., Grzybowski, S. (1998). The street value of prescription drugs. *Canadian Medical Association Journal*, *159*, 139-142.
29. Sajan, et al. (1998).
30. Isaacson, J.H. (2000). Preventing prescription drug abuse. *Cleveland Clinic Journal of Medicine*, *67*, 473-475.
31. Anderson, J. F., McEwan, K. L., & Hrudefy, W. P. (1996). Effectiveness of notification and group education in modifying prescribing of regulated analgesics. *Canadian Medical Association Journal*, *154*, 31-39.

32. Frick, U., Lerch, S., Rehm, J., & Crotti, C. (2004). [A pilot study on prescription of benzodiazepines in Switzerland: Does cognitive availability of regulations influence prescription behaviour by physicians?] Pilotstudie zur Rezeptierung von Benzodiazepinen in der Schweiz: Beeinflusst die kognitive Verfügbarkeit von Gesetzesvorschriften das ärztliche Verschreibungsverhalten? *Das Gesundheitswesen*, 66, 499-504.
33. Simoni-Wastila, L., & Tompkins, C. (2001). Balancing diversion control and medical necessity: the case of prescription drugs with abuse potential. *Substance Use and Misuse*, 36, 1275-1296.
34. OxyContin Task Force Final Report (June, 2004).
35. Wastila, L. J., & Bishop, C. (1996). The influence of multiple copy prescription programs on analgesic utilization. *Journal of Pharmacy Care and Pain Symptom Control*, 4, 3-19.
36. Schwartz, H. I. (1991). Negative clinical consequences of triplicate prescription regulation of benzodiazepines. *New York State Journal of Medicine*, 91, 9S-12S.
37. Auditor General of Canada (2004). *Chapter 4: Management of Federal Drug Benefit Programs*. Ottawa: Office of the Auditor General of Canada.
38. Government of Canada (2002). *Policy for the new millennium: Working together to redefine Canada's Drug Strategy: Report of the Special Committee on Non-medical Use of Drugs*. Ottawa: Library of Parliament.