Canadian Addiction Survey (CAS)

A national survey of Canadians' use of alcohol and other drugs

Prevalence of Use and Related Harms

March 2005

DETAILED REPORT

Health Canada Santé Canada

Canadian Executive Council on Addictions
Conseil exécutif canadien sur les toxicomanies

CCSA · CCLAT

Errata: CAS Detailed Report

August 2007

The CAS included a brief six-item screener to measure problematic drug use. The screener, the ASSIST, was developed by the World Health Organization.

An error was recently found in one symptom (represented by two items: CNAS5 and ASSIS5) of the ASSIST scale. Properly stated, the question is "Have you ever tried [AND FAILED] to control, cut down or stop using cannabis, marijuana or hashish {or other drugs}. The phrase "and failed" was not asked of respondents. This error, in turn, affects the following derived variables: ASISTCAN, ASISTCN3, ASISTCN2, ASISTIL and ASISTIL3.

NOTE: A small study to assess the impact of the missing "and failed" phrase suggested that estimates with the missing phrase underestimate the standard ASSIST item, but total scores and their cutoffs do not differ significantly between the two versions. This error should not affect estimates of subgroup differences (i.e., sex, age and regional differences). Caution and warning should be used in making direct comparisons with other studies using the ASSIST.

Chapter 5:

Page	For	Should read
P.49, column 1, line 18	"The most common concern is failing to control use (4.8%)..."	"The most common concern is attempts to cut down (4.8%)..."
P.49, column 1, line 24	"Among past-year cannabis users, about one-third report failing to control their use (34.1%) and a strong..."	"Among past-year cannabis users, about one-third report attempts to cut down (34.1%) and a strong ..."
P.49, column 2, line 22	"...(5) whether they ever tried and failed to control, cut down, or stop using cannabis."	"...(5) whether they ever tried to control, cut down, or stop using cannabis."
P.51, column 1, line 4	"The most common concern is failing to control use (4.8%)..."	"The most common concern is attempts to cut down (4.8%)..."
P.51, column 1, line 9	"Among past-year cannabis users, about one-third report failed control (34.1%) and a strong..."	"Among past-year cannabis users, about one-third report attempts to cut down (34.1%) and a strong ..."
P.51, column 2, line 10	"However, a sizeable percentage—about one-third—report failed attempts to reduce..."	"However, a sizeable percentage—about one third—report attempts to reduce..."
P.54, Table 5.4, row 5	"Failed control (lifetime)"	"Attempts to cut down (lifetime)"

Chapter 6:

Page	For	Should read
P.59, column 1, line 26	"The most commonly reported symptoms are failure to control use..."	"The most commonly reported symptoms are attempts to cut down ..."
P.70, Table 6.10, row 5	"Have you ever tried and failed to control, cut down or stop using drugs?"	"Have you ever tried to control, cut down or stop using drugs?"

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A 12-page summary of selected CAS findings is also available in print and on CCSA's website:
Canadian Addiction Survey (CAS): A national survey of Canadians' use of alcohol and other drugs:
Prevalence of use and related harms: Highlights.

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Preface

The Canadian Addiction Survey (CAS) is a collaborative initiative sponsored by Health Canada, the Canadian Executive Council on Addictions (CECA)—which includes the Canadian Centre on Substance Abuse (CCSA), the Alberta Alcohol and Drug Abuse Commission (AADAC), the Addictions Foundation of Manitoba (AFM), the Centre for Addiction and Mental Health (CAMH), the Prince Edward Island Provincial Health Services Authority, and the Kaiser Foundation—the Centre for Addictions Research of BC (CAR-BC), and the provinces of Nova Scotia, New Brunswick and British Columbia.

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1. Introduction

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In 1970, the first national general population survey on drug use was conducted as part of the LeDain Commission (Lanphier & Phillips, 1971; Le Dain, 1973). Until the launch of the Canadian Addiction Survey (CAS) in December 2003, only two national general population surveys had been specifically dedicated to alcohol and other drug use in Canada: the National Alcohol and Other Drugs Survey (NADS) in 1989 (Eliany, Giesbrecht, & Nelson, 1990) and Canada's Alcohol and Other Drugs Survey (CADS) in 1994 (MacNeil & Webster, 1997), although drug use items are occasionally captured in other health surveys such as the National Population Health Survey (NPHS) and the Canadian Community Health Survey (CCHS). The rarity of such surveys is striking given the importance of such data in assessing the ever-changing scope of drug use and the potential of such data in building knowledge regarding the harms of drug use.

The Canadian Addiction Survey is a collaborative initiative sponsored by Health Canada, the Canadian Executive Council on Addictions (CECA)—which includes the Canadian Centre on Substance Abuse (CCSA); Alberta Alcohol and Drug Abuse Commission (AADAC); the Addictions Foundation of Manitoba (AFM); the Centre for Addiction and Mental Health (CAMH), Prince Edward Island Provincial Health Services Authority, the Kaiser Foundation/Centre for Addictions Research of BC (CAR-BC)—and the provinces of Nova Scotia, New Brunswick and British Columbia.

Survey Background and Objectives

Timely and relevant data on alcohol and other drug use are necessary prerequisites for effective health and social policy and programming and for the monitoring of established health and social objectives. During the last decade, national health surveys such as the CCHS and the NPHS have been developed to meet these important needs.

Although these existing national health surveys provide some prevalence indicators for the addiction field, they do not typically capture information on the potential harmful effects of substance use on, for example, friendships, family life, or work and studies, and they do not provide the knowledge base required for ongoing planning. Indeed, where other health behaviours such as tobacco and physical activity are concerned, professionals have found the need for dedicated ongoing surveys (e.g., Canadian Tobacco Use Monitoring Survey, Physical Activity Monitor).

Current information about prevalence rates, trends, and changes from the Canadian Addiction Survey will fill a critical gap in population surveillance on alcohol and other drug use and will assist decision-makers in federal and provincial addictions agencies to allocate financial and human resources to areas where they are most needed (Office of the Auditor General of Canada, 2001; Perron, 2002). Health Canada's participation in the CAS is an important initiative within the renewed Canada's Drug Strategy, announced by the Government of Canada in May, 2003.Current plans are to repeat the CAS in the future.

Objectives

The key objectives of the CAS are as follows:

1. To determine the prevalence, incidence and patterns of alcohol and other drug use in the Canadian population aged 15 years and older. The drugs of interest include alcohol, tobacco, illicit drugs—including cannabis, heroin and other opiates, cocaine and crack, amphetamines, and hallucinogens (including MDMA)—and inhalants.
2. To measure the extent of harms that are associated with those individuals who use drugs. Measures include indicators of hazardous and harmful drinking, dependence and abuse indicators, and adverse effects on personal and social functioning.
3. To assess the context of use and identify the risk and protective factors related to drug use and its consequences in the general population and in specific subgroups.
4. To measure the public's opinions, views and knowledge about existing and potential addiction policies, and to identify emerging policy issues.
5. To provide baseline data for future evaluations of the effectiveness of Canada's Drug Strategy and other efforts to reduce the harm caused by alcohol and other drug use.

Overview of Content

As was the case with the release of the 1989 NADS and the 1994 CADS, results from the Canadian Addiction Survey will be presented through a forthcoming series of reports and research papers. Its scope precludes presenting analyses of all the items in a single report. Indeed, the CAS is one of the most detailed and extensive addiction surveys ever conducted in Canada, with more than 400 unique questionnaire items. This coverage was made possible by randomly assigning respondents to three questionnaire panels (see Table 1.1).

Some of the new or unique content areas in the CAS include the following:

- An extended section on public attitudes, opinions and policy issues;
- Newly developed health-related quality of life indicator (HRQoL);

- Occasion-based drinking characteristics;
- World Health Organization Alcohol Use Disorders Identification Test (WHO AUDIT) to measure high-risk drinking;
- Detailed items related to cannabis use opportunities, reasons and market factors;
- World Health Organization Alcohol, Smoking and Substance Involvement Screening Test (WHO ASSIST) to measure hazardous or harmful illicit drug use;
- Extended detail on personal and contextual factors for illicit drug use;
- An extended section on drug use harms and victimization;
- New national estimate of drug use and driving;
- New material assessing unmet treatment needs; and
- New material allowing researchers to further study economic cost issues.

Report Format

In this report, national data on alcohol and illicit drug use and harms, findings across provinces, and changes over time in alcohol and drug use are set out. These data are presented by demographic characteristics, including age, province, marital status, education, income adequacy and household location. As well, the CAS assesses general harms with eight items reported during one's lifetime and during the 12 months prior to the survey. These eight items reflect whether the respondent felt that their drug use had a harmful effect on their (1) friendships and social life, (2) physical health, (3) home life and marriage, (4) work and studies, (5) financial position, (6) legal problems, (7) housing, and (8) learning. Most of these harm items were used in the 1994 CADS and in other international surveys.

Overview of Chapters

Chapter 2: Survey Design and Methodology

This chapter discusses the main design and methodology features of the CAS.

Chapter 3: Alcohol Use

This chapter reports on five measures of alcohol use, including drinking status, drinking frequency, usual consumption, frequency of heavy drinking and compliance with low-risk drinking guidelines.

Chapter 4: Alcohol Problems

This chapter examines alcohol problems experienced by Canadians. It addresses three areas of problem measures: harm to oneself because of one's own alcohol use; harm because of the alcohol use of others; and the Alcohol Use Identification Test (AUDIT), a measure of high-risk drinking.

Chapter 5: Cannabis Use and Problems

The focus of this chapter is on the use of cannabis, such as marijuana and hashish. It describes the lifetime and past-12-month prevalence of cannabis use and various concerns related to its use.

Chapter 6: Other Drug Use and Problems

The focus of this chapter is on the use of drugs other than cannabis. It sets out the lifetime and past-12-month prevalence of eight drug-use behaviours: cocaine or crack; hallucinogens, PCP or LSD; speed or amphetamines; heroin; ecstasy (MDMA) or other similar drugs; inhalants—glue, gasoline or other solvents; steroids; and intravenous drug use.

Chapter 7: Provincial Comparisons

This chapter presents findings across provinces on prevalence of use of alcohol and illicit drugs and associated harms reported in key life areas, following methods and measures outlined in chapters comprising this report.

Chapter 8: Changes in Alcohol and Other Drug Use

This chapter compares results from the Canadian Addiction Survey (CAS) with the NADS and the CADS. The chapter examines changes over time, but does not present an exhaustive review of data produced on alcohol and other drugs in the past.

Future Research

Further research will be conducted after the completion of the CAS report on prevalence of use and related harms, and may focus on themes such as Health systems, treatment barriers and access; Drinking, drugs and driving; Psychosocial aspects of alcohol use; Attitudes, beliefs, public opinion; Detailed analysis of cannabis findings; Youth aged between 15 and 24 years; and Older adults.

References

Eliany, M., Giesbrecht, N., & Nelson, M. (eds.). (1990). *National Alcohol and Other Drugs Survey: Highlights Report.* Ottawa: Health and Welfare Canada.

Lanphier, C. M., & Phillips, S. (1971). *The non-medical use of drugs and associated attitudes: A national household survey* (Unpublished Commission research project).

LeDain, G. (1973). *Final Report of the Commission of Inquiry into the Non-Medical Use of Drugs.* Ottawa: Information Canada.

MacNeil, P., & Webster, I. (eds.). (1997). *Canada's Alcohol and Other Drugs Survey 1994: A Discussion of the Findings (Vol. Cat: H39-338/1-1994E).* Ottawa: Minister of Public Works and Government Services Canada.

Office of the Auditor General of Canada. (2001). *Report of the Auditor General, Chapter 11: Illicit Drugs: The Federal Goverment's Role.* Ottawa.

Perron, M. (2002). *What do we need in a national drug strategy?* Paper presented on behalf of the Canadian Executive Council on Addictions to the Parliamentary Committee on Non-Medical Use of Drugs, August 29, Ottawa.

Table 1.1: CAS Questionnaire Panels

	Panel A	Panel B	Panel C
Number of respondents	**4,612**	**4,639**	**4,658**
Attitudes, opinions, policy			
Perceived seriousness at national level	✓		
Perceived seriousness at provincial level		✓	
Perceived seriousness at community level			✓
Government programs	✓		
Societal impact		✓	
Policy opinion			✓
Perceived harm of drug use	✓	✓	
Perceived availability	✓		
Health and well-being		✓	
Tobacco use			✓
Alcohol			
Prevalence, patterns of consumption	✓	✓	✓
Occasion-based drinking			✓
Alcohol Use Disorders Identification Test (AUDIT)	✓	✓	✓
Cannabis			
Prevalence, patterns of consumption	✓	✓	✓
Context of cannabis use	✓	✓	✓
Cannabis problems (WHO ASSIST)	✓	✓	✓
Illicit drugs			
Prevalence, patterns of consumption	✓	✓	✓
Context of use	✓	✓	✓
Injection drug use	✓	✓	✓
Illicit drug use problems (WHO ASSIST)	✓	✓	✓
Harms and costs			
Self-reported harms	✓	✓	✓
Victimization and violence	✓	✓	✓
Willingness to pay	✓		
Driving and substance use		✓	
Treatment	✓	✓	✓
Demographics (MSCN-FSA)	✓	✓	✓

2. Survey Design and Methodology

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Introduction

This chapter discusses the main design and methodological features of the 2004 Canadian Addiction Survey (CAS).

Survey Sample Design

The CAS is based on a two-stage (telephone household, respondent) random sample stratified by 21 regional areas. In the first stage, households were sampled at random based on random dialling, and in the second stage, one member of the household was selected at random from all the eligible members (see below). The CAS was administered by the research firm Jolicoeur et associés, which was responsible for sample selection, telephone interviewing, and preparation of the initial micro data file.

The survey used random-digit-dialling (RDD) methods in combination with Computer Assisted Telephone Interviewing (CATI). The sampling frame was based on an electronic inventory (Statplus) of all active telephone area codes and exchanges in Canada. Within each of the 21 strata (defined by Statistics Canada's Census Metropolitan Area versus non-CMA areas within each province) a random sample of telephone numbers was selected with equal probability in the first stage of selection (i.e., households). Within selected households, one respondent aged 15 or older who could complete the interview in English or French was randomly selected according to the most recent birthday of household members. A minimum of 12 call-backs were placed to unanswered numbers and all households that refused to participate on the first contact are re-contacted in order to secure maximum participation. The base sample allocation was for 10,000 completions, 1,000 for each of the 10 provinces. In addition, some provinces purchased additional cases (1,200 in Alberta, 2,000 in British Columbia and 500 in Manitoba) resulting in a final allocation of 13,700. The CAS sample represents some 24,214,815 Canadians aged 15 and older. Detailed descriptions of the CAS methodology are available (Adlaf & Ialomiteanu, 2004) at www.ccsa.ca.

Data Collection

Core substance use measures were typically drawn from pre-existing national surveys, including the 1989 National Alcohol and Other Drugs Survey (NADS) (Eliany, Giesbrecht & Nelson, 1990), the 1994 Canada's Alcohol and Other Drugs Survey (CADS) (MacNeil & Webster, 1997) and the Canadian Community Health Survey (CCHS) (Tjepkema, 2004). Prior to the initiation of fieldwork, all new questions and full interviews were pre-tested. This pre-survey analysis included information from pre-test respondents, and expert evaluation from the Research Advisory Team.

Telephone interviews were conducted in both English and French by Computer Assisted Telephone Interviewing (CATI) methods between December 16 and December 23, 2003, and from January 9 to April 19, 2004. Compared with "paper-pencil" questionnaires, CATI interviews have several advantages, including immediate data capture, automatic control of question sequences, centralized interviewer supervision and the ability to randomize respondents to particular questions, and the capability for interactively clarifying questions (Catlin & Ingram, 1988). For each time zone, interviews were conducted from 8:00 a.m. to 11:00 p.m. Monday to Friday, from 12:00 p.m. to 8:00 p.m. on Saturday and from 1:00 p.m. to 9:00 p.m. on Sunday. Ten percent of interviews were validated by re-contacts. The median interview time was 23 minutes (80% of interviews were completed within 30 minutes).

Participation and Sample Evaluation

Of the 59,795 selected telephone numbers (of which 29,573 were known to be eligible or estimated to be eligible), 13,909 respondents participated (Table 2.1), representing an effective response rate of 47.0%. Response rates varied from 43.6% in British Columbia to 51.1% in Manitoba. Although the response rate is lower than some recent Statistics Canada surveys, it is similar to some comparable U.S. health surveys. For example, the overall response rate for the 2002 Behavioral Risk Factor Surveillance System, one of the U.S. government's key surveillance surveys, was 45% (Centres for Disease Control and Prevention, 2003). Moreover, the CAS sample has good sample properties. First, the weighting adjustment ensures that weighted CAS distribution compares favourably to Census data for sex, age and province (Table 2.2). It is important to note, however, that like other national telephone surveys, the CAS sample tends to under-represent respondents who were never married and had some post-secondary education, and over-represent respondents who were married and had a university degree. These differences are common to telephone surveys generally (Trewin & Lee, 1988). Second, an examination of substance use estimates in the 2002 CCHS cycle 1.2 found that the CAS estimates were comparable.

Data Processing, Analysis and Release

Data Weighting

Because the sample is allocated disproportionately to the provincial representation, weights are required to restore population representation. The weights for the CAS sample are based on 252 population classes, stratified by 21 regional areas, by six age groups and by sex.

Missing Data

Among participants, data quality also appeared to be evident. A majority of CAS respondents (79.5%) answered all questions required of them. In total, 97.4% of respondents had two or fewer item-missing responses (total item-missing responses ranged from 0 to 31, mean=0.33).

Analysis and Statistical Testing

Sample designs employing complex sampling procedures, such as stratification, weighting and multistage selection, tend to underestimate the variance and the confidence intervals of estimates when statistical procedures based on simple random sampling (SRS) assumptions are used. The design effect is essentially the ratio of the variance of an estimate derived from the particular sampling design over the variance of the same estimate of an SRS of the same size.

In the CAS design, the design effects are primarily influenced by the two-stage selection and the disproportionate sampling fractions related to equal provincial allocations. As seen in Table 2.1, the CAS generally has a design effect of about 3.4, which indicates that the sampling design results in national sampling errors being three times higher than a simple random sample, or equivalent to an effective sample size of about 4,000 respondents. This design effect is somewhat larger than in other surveys (e.g., 2.34 for the CCHS cycle 1.1) due to the weights related to the equal provincial allocation and additional buy-ins.

All CAS estimates of variances, confidence intervals and related statistical tests are based on Taylor series methods implemented in Stata (Korn & Graubard, 1999; StataCorp, 2003) in order to account for the sample design and design effects.

Evaluation of trends (i.e., changes from the 1994 CADS) is based on differences between confidence intervals. Significance would be evident by non-overlapping confidence intervals. This method is crude, but conservative.

Sampling Error and Reliability

There are two aspects to the statistical quality of survey data: precision—typically measured by the 95% confidence interval (CI), and stability—typically measured by the ratio of the standard error to its estimate. Confidence intervals indicate the probable error of a given survey estimate; thus, a ±0.8% 95% CI (based on the total CAS sample of 13,909 assuming a design effect of 3.4) with a percentage estimate of 50% indicates that with repeated sampling, 95% of the samples would contain the true population estimate. Confidence intervals, however, do not reflect total errors or accuracy, but reflect errors due to the fact that we are surveying only a sample of the total population. Errors as measured by confidence intervals do not include non-sampling errors such as question non-response, problems of respondent memory and recall, interviewer effects, sensitivity of questions, under-reporting of drug use, and other such issues. Thus, the reader should always bear in mind that the "precision" of an estimate, as indicated by the confidence interval, is not synonymous with "total accuracy" of an estimate.

Small estimates (e.g., small percentages) based on a small number of respondents can produce not only wide confidence intervals, but unstable estimates.

The coefficient of variation (CV), the ratio of the standard error to its estimate, is an especially useful measure when comparing the precision of different estimates based on different sample sizes and different measures. The criteria for the suppression for CAS data are based on the CV as noted below.

This report follows Statistics Canada guidelines for ensuring the presentation of statistically reliable data. Estimates are evaluated as follows:

CV range	Estimate stability
0–16.5	Estimate stable and reportable
16.6–33.3	Estimate has moderate sampling variability and should be interpreted with caution
33.3+	Estimate unstable and is suppressed

Key Independent Variables

The following variables are commonly used throughout the various chapters. Outcome variables are described in the relevant chapters.

Measure	Categories
Sex	Men; women
Age	9 categories: 15-17; 18-19; 20-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75+
	7 categories: 15-19; 20-24; 25-34; 35-44; 45-54; 55-64; 65+
	4 categories: 15-24; 25-44; 45-64; 65+
Province	10 provinces
Marital status	married/partnered; single/never married; widowed/divorced/separated
Education	less than secondary; completed secondary; some post-secondary; university degree
Income adequacy	Income adequacy is based on the combination of household income and number in household. lowest: (<$20K with 1-4 people or <$30K with 5+ people) highest: ($60K+ with 1-2 people or $80K+ with 3+ people) not reported: did not report income middle: all other respondents
Rural residence	Rural vs. non-rural. Rural is defined by the presence of an "0" in the second character of the respondent's postal code.

Data Quality

Although the validity of self-reported drug use is commonly questioned, the research literature suggests that survey responses are generally valid, especially if respondents are (1) confident that their responses will be confidential and anonymous, (2) believe the research is legitimate, and (3) believe that there are no adverse consequences in reporting certain behaviours (Harrison & Hughes, 1997; Single, Kandel & Johnson, 1975; Turner, Lessler & Gfroerer, 1992).

Moreover, there are a number of studies suggesting that the telephone mode produces alcohol and drug use estimates comparable, or sometimes higher, than other methods (de Leeuw & van der Zouwen, 1988; Midanik & Greenfield, 2003; Sykes & Collins, 1988).

The telephone survey method in particular has become a dominant, cost-efficient means of conducting large-scale surveys of drug use and other health risk behaviours. Indeed, in addition to the 1989 NADS and the 1994 CADS, such methods are currently used by other major surveys (Centres for Disease Control and Prevention, 2004; Midanik & Greenfield, 2003).

Data Limitations

Although sample surveys are the most feasible means to establish and monitor substance use issues in the population, those interpreting CAS data should consider the following:

Telephone households. The CAS is based on a target population of households with telephones. Whether drug use estimates would be significantly biased by projecting to all households depends on the size of non-telephone households and their demographic composition. Fortunately, Canada has high telephone coverage rates exceeding 97% (Trewin & Lee, 1988). As well, conventional household surveys are limited to those residing in conventional households and are not intended as a sample of all possible adults. Thus, those in prisons, hospitals, military establishments, and transient populations such as the homeless, are not included. These excluded groups often contain an especially large number of drug users and heavy drinkers. However, the bias caused by such non-coverage depends on firstly, the difference in drug use between those surveyed and those not surveyed, and secondly, the size of the group missed (Groves & Couper, 1998). Thus, even if rates of drug use are substantially higher in the excluded group than in the sampled group, if the size of the excluded group is small relative to the total population, the bias is usually minimal (Kandel, 1991). Telephone surveys tend to over-represent those with higher education and under-represent those with lower education (Trewin & Lee, 1988).

Interview Barriers. Some interviews could not be completed because respondents could not adequately converse in English or French or were too ill or aged.

Self-reports. Survey estimates are influenced by errors related to individual reporting of behaviours and the conditions under which the survey is conducted. One limitation of the sample survey in this regard is its reliance on self-reported behaviour. Reviews of self-report methods for alcohol and drug use suggest that although surveys tend to underestimate true usage, they are still regarded as the best available means to estimate such behaviours (Harrison & Hughes, 1997; Single, Kandel & Johnson, 1975). Moreover, although these biases influence alcohol and drug use estimates at a single point in time, they should have less impact on estimating trends as long as under-reporting remains constant. If this is the case, estimates of change should remain unbiased and valid.

Survey Differences. As noted below, there are differences in various design and timing factors between the CAS and other national surveys.

Comparison of the CAS to recent National Addiction Surveys

	CAS 2004	CADS 1994	NADS 1989
Fieldwork	Dec. 16–Dec. 23, 2003; Jan. 9–April 21, 2004	Sept. 7–Nov. 5, 1994	March, 1989
Design	Random-digit-dialling sample of telephone households. Stratified two-stage selection.	Random-digit-dialling sample of telephone households. Stratified two-stage selection.	Random-digit-dialling sample of telephone households. Stratified two-stage selection.
Provincial allocation	Equal (+ optional buy-in) 10 provinces	Unequal 10 provinces	Unequal 10 provinces
Interview mode	CATI Telephone	CATI Telephone	CATI Telephone
Target population	Ages 15+	Ages 15+	Ages 15+
Completions	13, 909	12,155	11,634
Response rate	47%	76%	79%
Survey organization	Jolicoeur et associés	Statistics Canada	Statistics Canada

References

Adlaf, E.M., & Ialomiteanu, A. (2004). *Canadian Addiction Survey 2004: Technical eGuide.* Ottawa: Canadian Centre on Substance Abuse. Available at www.ccsa.ca

Catlin, G., & Ingram, S. (1988). The effects of CATI on costs and data quality: A comparison of CATI and paper methods in centralized interviewing. In R. M. Groves, P. P. Biemer, L. Lyberg, J. L. Massey, W. Nicholls II, & J. Waksberg (Eds.), *Telephone Survey Methodology.* New York: John Wiley & Sons.

Centers for Disease Control and Prevention (2003). *2002 Behavioral Risk Factor Surveillance System: Summary Data Quality Report.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Available at http://www.cdc.gov/brfss/technical_infodata/quality.htm

Centers for Disease Control and Prevention (2004). *Behavioral Risk Factor Surveillance System: About the BRFSS.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Available at www.cdc.gov/brfss/about.htm

de Leeuw, E.D., & van der Zouwen, J. (1988). Data quality in telephone and face-to-face surveys: A comparative meta-analysis. In R. M. Groves, P. Biemer, L. Lyberg, J. L. Massey, W. Nicholls II, & J. Waksberg (Eds.), *Telephone Survey Methodology.* New York: John Wiley & Sons.

Eliany, M., Giesbrecht, N., & Nelson, M. (1990). *National Alcohol and Other Drugs Survey: Highlights Report*, Ottawa: Health and Welfare Canada.

Groves, R.M., & Couper, M.P. (1998). *Nonresponse in Household Interview Surveys*. New York: John Wiley & Sons.

Harrison, L., & Hughes, A. (1997). *The Validity of Self-Reported Drug Use: Improving the Accuracy of Survey Estimates*, Rockville, MD: U.S. Department of Health and Human Services.

Kandel, D. (1991). The social demography of drug use. *The Millbank Quarterly*, 69, 356-414.

Korn, E.L., & Graubard, B.I. (1999). *Analysis of Health Surveys*. New York: John Wiley & Sons.

MacNeil, P., & Webster, I. (1997). *Canada's Alcohol and Other Drugs Survey 1994: A Discussion of the Findings*. Ottawa: Minister of Public Works and Government Services Canada.

Midanik, L., & Greenfield, T. (2003). Telephone versus in-person interviews for alcohol use: Results of the 2000 National Alcohol Survey. *Drug and Alcohol Dependence*, 72(3), 209-214.

Single, E., Kandel, D., & Johnson, B. (1975). The reliability and validity of drug use responses in a large scale longitudinal survey. *Journal of Drug Issues*, 4(4), 426-443.

StataCorp (2003). *Stata Statistical Software: Release 8.0*. College Station, TX: Stata Corporation.

Sykes, W., & Collins, M. (1988). Effects of mode of interview: Experiments in the UK. In R. M. Groves, P. Biemer, L. Lyberg, J. L. Massey, W. Nicholls II, & J. Waksberg (Eds.), *Telephone Survey Methodology*. New York: John Wiley & Sons.

Tjepkema, M. (2004). Use of cannabis and other illicit drugs. *Health Reports*, 15(4), 43-47.

Trewin, D., & Lee, G. (1988). International Comparisons of Telephone Coverage. In R. M. Groves, P. P. Biemer, L. E. Lyberg, J. T. Massey, W. L. Nicholls, & J. Waksberg (Eds.), *Telephone Survey Methodology*. New York: John Wiley & Sons.

Turner, C.F., Lessler, J.T., & Gfroerer, J.C. (1992). *Survey Measurement of Drug Use: Methodological Studies*, Washington DC: Department of Health and Human Services.

Table 2.1: Demographic characteristics of the CAS 2004 sample

	No. of Interviews	Unweighted % (N=13,909)	Weighted % (N=25,773)	Design Effect
Gender				
Male	5,721	41.1	48.5	3.4
Female	8,188	58.9	51.5	3.4
Age				
15-17	581	4.2	4.2	3.0
18-19	439	3.2	3.6	3.5
20-24	1,065	7.7	8.5	3.5
25-34	2,342	16.8	16.1	2.9
35-44	2,720	19.6	20.5	3.5
45-54	2,706	19.5	17.8	3.4
55-64	1,853	13.3	11.5	2.9
65-74	1,179	8.5	9.7	3.9
75+	719	5.2	5.9	3.8
Missing	305	2.2	2.3	3.0
Marital Status				
Married	6,778	48.7	45.2	3.3
Partner/Common-law	1,152	8.3	9.9	3.1
Widowed	914	6.6	6.7	3.6
Separated	454	3.3	3.8	3.7
Divorced	885	6.4	6.3	3.3
Never Married	3,632	26.1	27.6	3.3
Missing	94	0.7	0.5	3.2
Province				
Newfoundland & Labrador	1,001	7.2	1.7	1.14
Prince Edward Island	1,000	7.2	0.4	1.10
Nova Scotia	1,002	7.2	3.0	1.19
New Brunswick	1,000	7.2	2.4	1.11
Quebec	1,003	7.2	24.1	1.09
Ontario	1,000	7.2	38.5	1.11
Manitoba	1,502	10.8	3.6	1.07
Saskatchewan	1,000	87.2	3.1	1.06
Alberta	2,401	17.3	9.8	1.15
British Columbia	3,000	21.6	13.4	1.09
Rural FSA				
Rural	3,016	21.7	15.7	2.8
Non-rural	10,893	78.3	84.3	2.8

Continued on next page.

Table 2.1: Demographic characteristics of the CAS 2004 sample (cont'd)

	No. of Interviews	Unweighted % (N=13,909)	Weighted % (N=25,773)	Design Effect
Highest Education				
Less than high school	2,471	17.8	17.2	3.1
Completed high school	3,926	28.2	26.6	3.2
Some college or university	4,267	30.7	30.3	3.3
Graduated university	3,146	22.6	25.1	3.3
Missing	99	0.7	0.8	3.2
Gross Family Income (,000s)				
<$20	1,067	7.7	6.8	3.0
$20-29.9	1,083	7.8	7.2	3.2
$30-39.9	1,139	8.2	7.8	3.2
$40-49.9	1,039	7.5	7.4	3.4
$50-59.9	957	6.9	6.9	3.3
$60-69.9	774	5.6	5.6	3.3
$70-79.9	730	5.2	5.0	3.0
$80-89.9	561	4.0	4.4	3.6
$90-99.9	332	2.4	2.3	3.2
$100+	2,286	16.4	18.0	3.5
Don't Know	1,470	10.6	10.2	3.2
Refused	2,471	17.8	18.4	3.4
Employment Status				
Full-time job	6,018	43.3	45.3	3.3
Part-time job	1,366	9.8	9.0	3.1
Unemployed	674	4.8	4.4	2.9
Homemaker	724	5.2	4.5	2.9
Student	1,236	8.9	9.1	3.3
Retired	2,526	18.2	19.2	3.6
Other	1,304	9.4	8.0	3.2
Missing	61	0.8	1.0	3.1
Language spoken at home				
English	12,014	86.4	70.1	1.8
French	1,338	9.6	23.2	1.2
Other	525	3.8	6.5	4.6
Missing	32	0.4	0.4	1.4

Table 2.2: Selected demographic characteristics: Weighted CAS 2004 versus 2001 Census Data, Canada, aged 15 years and older.

	CAS 2004 (N=13,909)				2001 Canada Census (N=24,214,835)
Gender					
Male	[47.0	**48.5**	50.0]		48.5
Female	[50.0	**51.5**	53.0]		51.5
Age					
15-24	[15.4	**16.5**	17.6]		16.7
25-44	[36.0	**37.4**	38.9]		37.9
45-64	[28.6	**30.0**	31.4]		30.3
65+	[14.8	**16.0**	117.2]		15.2
Marital status					
Never married	[26.4	**27.7**	29.1]	*	33.4
Married/Common Law	[53.9	**55.4**	56.9]	*	50.1
Widowed/Separated/Divorced	[15.7	**16.9**	18.0]		16.5
Province					
Newfoundland & Labrador	[1.64	**1.7**	1.73]		1.7
Prince Edward Island	[0.04	**0.4**	0.04]		0.4
Nova Scotia	[2.93	**3.0**	3.10]		3.1
New Brunswick	[2.36	**2.4**	2.49]		2.5
Quebec	[23.71	**24.1**	24.72]		24.6
Ontario	[37.89	**38.5**	39.03]		37.9
Manitoba	[3.54	**3.6**	3.71]		3.7
Saskatchewan	[3.02	**3.1**	3.22]		3.2
Alberta	[9.65	**9.8**	9.98]		9.7
British Columbia	[13.1	**13.4**	13.5]		13.2
Highest education					
High school or Less	[42.6	**44.1**	45.6]		45.4
Some post-secondary	[29.2	**30.6**	32.0]	*	39.2
University degree	[23.9	**25.3**	26.7]	*	15.4

Notes: CAS data refer to: lower limit of 95% confidence interval, percentage estimate, and upper limit of 95% confidence interval.
*indicates census data are not within the bounds of the CAS CI [CAS data exclude missing data].
Source: Statistics Canada [on-line]. Available: http://www12.statcan.ca/english/census01/release/index.cfm.

3. Alcohol Use

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Highlights

• In the 12 months prior to the survey, 79.3% of Canadians aged 15 years or older consumed alcohol. The lowest rate of past-year drinking is in Prince Edward Island (70.2%) and the highest is in Quebec (82.3%).

• Of Canadians who report having consumed alcohol during the past year, 44.0% drink at least once a week and 9.9% report drinking four or more times a week.

• In this survey, heavy drinking means having five drinks or more at a sitting for men, and four or more drinks at a sitting for women. About 6.2% of past-year drinkers engage in heavy drinking at least once a week and 25.5% report this pattern of drinking at least once a month. About 16.0% say their usual consumption pattern is to have five or more drinks at a sitting.

• According to the Canadian guidelines for low-risk drinking, weekly alcohol intake should not exceed 14 standard drinks for males and 9 drinks for females, and daily consumption should not exceed 2 drinks, among males or females. Overall, 22.6% of past-year drinkers exceeded the low-risk drinking guidelines during the course of the year.

• A greater proportion of males than females:
  - drank alcohol in the past year (82.0% vs. 76.8%)
  - drank alcohol at least once a week (55.2% vs. 32.8%),
  - usually drank five or more drinks at a sitting (23.2% vs. 8.8%)
  - drank five or more drinks at a sitting at least once a week (9.2% vs. 3.3%), and
  - exceeded the low-risk guidelines (30.2% vs. 15.1%).

• Heavy drinking and drinking in excess of the low-risk drinking guidelines is more common among Canadians 18 to 24 years of age than among older persons.

• The rate of exceeding the low-risk drinking guidelines is higher among persons with the highest income adequacy. No difference in the rate of exceeding the low-risk drinking guidelines is observed according to the level of education. No difference in drinking is observed between people living in rural and non-rural areas.

• After controlling for all demographic variables, residents of Newfoundland and Labrador are found to be at increased risk of drinking alcohol in excess of the low-risk drinking guidelines.

Introduction

This chapter reports on five measures of alcohol use, including drinking status, drinking frequency, usual consumption, frequency of heavy drinking and compliance with low-risk drinking guidelines.

Drinking status is derived from two questions: During the past 12 months, have you had a drink of beer, wine, liquor or any alcoholic beverage? Those who answered "No" were then asked if they had ever had a drink. Three types of drinkers were defined: "past-year drinkers" are those who consumed alcohol in the 12 months prior to the survey; "former drinkers" are those who had not consumed alcohol in the 12 months prior to the survey, but who had consumed in their life; "abstainers" are those who never had an alcoholic beverage in their life.

Drinking frequency is derived from the question: How often did you drink alcoholic beverages during the past 12 months? The answers were grouped into four categories: less than once a month, one to three times a month, one to three times a week, and four times or more a week.

Usual consumption reflected the usual number of drinks the respondent had on the days they consumed alcohol: During the past 12 months, on those days when you drank, how many drinks did you usually have? The answers were recorded in three categories: one or two drinks, three or four drinks, five drinks or more.

Heavy drinking is defined as five drinks or more in a single sitting for males and four drinks or more for females. The frequency of such drinking patterns over the past year is assessed in six categories: never, less than once a month, once a month, two to three times a month, once a week, more than once a week. Two variables are derived from the frequency of heavy drinking: monthly heavy drinking and weekly heavy drinking, which respectively correspond to those who drink heavily at least monthly (including weekly) and at least weekly over the past 12 months.

Guidelines referring to "low-risk drinking" were disseminated in 1994 following an international conference on health benefits and risks (Ashley et al., 1994). In 1997, revised guidelines were released by the former Addiction Research Foundation (now CAMH) and the Canadian Centre on Substance Abuse. These guidelines have been endorsed by various provincial governments and non-governmental agencies (Bondy et al., 1999). The low-risk drinking guidelines recommend that men and women limit weekly alcohol intake to no more than 14 and 9 standard drinks, respectively. Also, alcohol intake on any one day should generally be limited to two standard drinks. The guidelines are intended to represent low risk of the most important forms of harm.

The compliance with low-risk drinking guidelines variable is derived from the respondents' self-reported consumption of standard drinks over the past seven days, measured daily. Respondents are considered to have exceeded the guidelines if they report a total weekly consumption of 15 drinks or more for males or 10 drinks or more for females, or for both, a daily consumption exceeding two drinks at least once over the past week.

Results

Proportion of Canadians who drink

Consistent with previous Canadian surveys, the CAS reveals that alcohol is the psychoactive substance most commonly used by Canadians. In the 12 months before the survey, 79.3% of Canadians aged 15 years or older had consumed alcohol, 13.5% were former drinkers, and 7.2% were lifetime abstainers (Table 3.1). Provincially, the lowest rates of past-year drinking are observed in Prince Edward Island (70.2%) and the highest in Quebec (82.3%). No difference in rates is observed in terms of rural versus non-rural residence.

Table 3.1 shows that the rate of past-year drinking is significantly higher among males than females (82.0% vs 76.8%, respectively). Past-year drinking increased according to level of education and income adequacy, with rates of consuming at least one drink in the past year being highest among those with a university degree (84.1%) and those in the highest income adequacy bracket (88.7%). Table 3.1 shows that the rates of past-year drinking peaked among youth 18 to 24 years of age, with about 90% of persons in that age range having consumed alcohol during the course of the year. Conversely, former drinkers tended to be in the older age groups, with 21.6% of those 65 to 74 years of age reporting that they had not consumed alcohol during the course of the year. Finally, Table 3.1 shows the relationship between drinking and each of these demographic characteristics when all these characteristics are taken into account at the same time. Based on the adjusted odds ratios, males, youth, residents of Quebec, divorced/separated/widowed persons, persons with a high level of education, and persons with a high income were all more likely to have consumed alcohol during the past year than were their counterparts.

Frequency of Drinking

CAS provides information about how often and how much Canadians drink (Tables 3.2 and 3.3 respectively), and the extent to which Canadians engage in high-risk drinking patterns (Tables 3.4, 3.5 and 3.6).

For many Canadians, drinking is ingrained in everyday life. Of the 79.3% of Canadians who reported having consumed alcohol during the year, 34.1% report they had drunk alcohol one to three times a week, and 9.9% report they had done so four or more times a week (Table 3.2). The survey reveals that the frequency of drinking varies according to gender, age, province of residence, level of education and income. Larger proportions of males than females report having consumed alcohol one to three times a week (41.3% vs. 26.9%, respectively), or four or more times a week (13.9% vs. 5.9%, respectively). In Canada, the age for legal access to alcohol is 19 years in seven provinces, and 18 years in three provinces. The 2004 survey shows that among past-year drinkers, about 17.4% of youth under 18 years of age, and 34.1% of youth 18 or 19 years of age, consumed alcohol at least once a week. Among past-year drinkers 20 years of age or older, about 40% to 50% consumed alcohol at least once a week, with the proportion who did so four or more times a week increasing steadily with increasing age. Residents of Quebec, Ontario and British Columbia have the highest rates of weekly drinking (48.0%, 45.5% and 44.4%, respectively). Finally, the CAS reveals that drinking frequency increases with higher levels of education and of income. No difference in the frequency of drinking was observed in terms of rural versus non-rural residence.

Drinking Patterns

The survey reveals that most Canadians drink in moderation. About 63.7% of past-year drinkers report their usual consumption was one or two drinks per typical drinking day (Table 3.3). This drinking pattern was more common among females than males (74.2% vs. 53.4%, respectively). This pattern was also found to be increasingly common with increasing age, accounting for over 85% of persons 65 years of age or older. The proportions of persons who report having one or two drinks a day was found to differ according to province, from 49.7% in Newfoundland and Labrador, to 65.8% in Quebec.

Table 3.3 also shows that a considerable proportion of past-year drinkers (16.0%) report that their usual consumption pattern when they drank was five or more drinks. This level of drinking has been associated with an increasing risk of alcohol-related problems. This pattern of drinking is found to be more common among males than females (23.2% vs. 8.8%), and is particularly high among persons 15 to 24 years of age, peaking at 42.5% among persons 18 to 19 years of age. Residents of Newfoundland and Labrador report the highest rate of drinking five or more drinks per drinking day (30.8%), while residents of Quebec report the lowest rate (11.3%) of this drinking pattern.

The CAS reveals that the number of drinks consumed per drinking day decreases with higher levels of education. No difference in the rate is observed in terms of income adequacy, or rural versus non-rural residence.

Heavy Drinking

The risk of alcohol-related problems increases in the case of heavy drinking, which is defined as having five drinks or more on a single occasion for men, and four or more drinks on a single occasion for women (Wechsler et al, 1995; Hetzler & Burnham, 1991). Table 3.4 shows that 6.2% of past-year drinkers report heavy drinking at least once a week and 25.5% report this pattern of drinking at least once a month.

Rates of heavy drinking follow the same relationships to demographic variables as rates of drinking five or more drinks per drinking day, as reported above. Males, youth 18 to 24 years of age, and single persons are more likely to report heavy drinking than their counterparts. Persons with a university degree are less likely than persons with less formal education to have engaged in this drinking behaviour. Heavy drinking is not found to be significantly related to income adequacy.

Table 3.4 shows that provincial rates of weekly heavy drinking range from 5.5% to 7.9% and rates of monthly heavy drinking range from 24.3% to 35.5%. The provinces are not seen to be significantly different in terms of rates of heavy drinking. However, after controlling for all other demographic characteristics, residents of Newfoundland and Labrador have a 1.5-fold increased likelihood of monthly heavy drinking compared with residents of other provinces. No difference in the rate of heavy drinking is observed in terms of income adequacy, or rural versus non-rural residence.

Exceeding Low-Risk Drinking Guidelines

Table 3.5 reports on the prevalence of Canadian past-year drinkers who exceeded low-risk drinking guidelines. Overall, 22.6% of past-year drinkers exceeded the low-risk drinking guidelines during the course of the year. Males, youth 18 to 24 years of age, and single persons were more likely to have exceeded the low-risk drinking guidelines than were their counterparts. No significant difference was observed by province in the crude rates; however, after controlling for all demographic characteristics simultaneously, residents of Newfoundland and Labrador were more likely to have exceeded the guidelines than were residents of the other provinces. The rate of exceeding the low-risk drinking guidelines is more common among persons in the highest level of income adequacy. No difference in the rate of exceeding the low-risk drinking guidelines is observed in terms of education, or rural versus non-rural residence.

Summary and Discussion

The CAS reveals that the vast majority of Canadians consumed alcohol in the year prior to the survey, and a considerable proportion did so on a daily basis. Drinking five or more drinks a day, and drinking four or five or more drinks at a sitting, are consumption patterns known to be associated with a high risk of alcohol-related problems. Based on this survey, 77.4% of Canadians who consumed alcohol in the course of the year did so within the low-risk drinking guidelines. However, 22.6% of Canadians who consumed alcohol in the course of the year did so in excess of the low-risk drinking guidelines, with males, youth, single persons, residents of Newfoundland and Labrador, and persons in the highest income adequacy bracket reporting higher rates than their counterparts.

References

Ashley, M., Ferrence, R., Room, R., Rankin, J., & Single, E. (1994). Moderate drinking and health: Report of an international symposium. *CMAJ*(151), 809-828.

Bondy, S., Rehm, J., Ashley, M., Walsh, G., Single, E., & Room, R. (1999). Low-risk Drinking Guidelines: The Scientific Evidence. *Canadian Journal of Public Health*, 90(4), 264-270.

Hetzler, J. E., & Burnham, A. (1991). Alcohol Abuse and Dependency. In L.N. Robins & D.A. Regier (Eds.), *Psychiatric Disorders in America*. New York: NY: Free Press.

Wechsler, H., Dowdall, G.W., Davenport, A., & Rimm, E.B. (1995). A Gender-Specific Measure of Binge Drinking among College Students. *American Journal of Public Health*, 85(7), 982-985.

Table 3.1: Type of drinker[1] by demographic characteristics, Canada, aged 15+, 2004

		Lifetime abstainers		Former drinkers		Past-year drinkers		
	N	%	95% CI	%	95% CI	%	95% CI	Adjusted OR
Total	13,909	7.2	[6.4-8.0]	13.5	[12.5-14.5]	79.3	[78.1-80.5]	–
Sex		**		**		***		**
Female (comparison group)	8,188	8.4	[7.3-9.5]	14.8	[13.5-16.3]	76.8	[75.1-78.4]	–
Male	5,721	5.9	[4.8-7.2]	12.1	[10.7-13.6]	82.0	[80.1-83.8]	1.243**
Age Group (comparison group is previous age group)		***		***		***		**
15-17	581	23.2	[17.2-30.5]	14.5	[10.0-20.6]	62.3	[54.9-69.2]	–
18-19	439	3.1	[1.6-5.9]	6.1	[3.3-11.1]	90.8	[85.6-94.2]	4.500***
20-24	1,065	5.0	[3.0-8.2]	5.5	[3.7-8.3]	89.5	[85.7-92.3]	0.747
25-34	2,342	5.4	[3.9-7.4]	9.4	[7.6-11.6]	85.2	[82.5-87.6]	0.581*
35-44	2,720	5.4	[3.8-7.4]	12.8	[10.7-15.2]	81.8	[79.0-84.4]	0.791
45-54	2,706	5.3	[3.8-7.3]	14.0	[11.7-16.5]	80.8	[77.8-83.4]	0.906
55-64	1,853	5.3	[3.8-7.3]	18.1	[15.2-21.3]	76.7	[73.1-79.9]	0.902
65-74	1,179	8.4	[6.2-11.3]	21.6	[17.7-26.1]	70.0	[65.1-74.4]	0.843
75+	719	17.0	[12.8-22.2]	18.6	[14.1-24.1]	64.4	[58.0-70.3]	0.915
Province (comparison group is Canada)		*		*		**		**
Newfoundland & Labrador	1,001	9.3	[7.6-11.4]	16.8	[14.4-19.4]	73.9	[70.9-76.7]	0.879
Prince Edward Island	1,000	8.5	[6.8-10.5]	21.3	[18.8-24.0]	70.2	[67.2-73.1]	0.690***
Nova Scotia	1,002	7.0	[5.6-8.8]	17.0	[14.6-19.6]	76.0	[73.1-78.7]	0.962
New Brunswick	1,000	9.9	[8.1-12.2]	16.3	[14.0-18.8]	73.8	[70.8-76.6]	0.942
Quebec	1,003	6.1	[4.8-7.8]	11.6	[9.7-13.8]	82.3	[79.7-84.6]	1.470***
Ontario	1,000	8.1	[6.5-10.1]	13.1	[11.1-15.4]	78.7	[76.0-81.3]	1.002
Manitoba	1,502	6.9	[5.7-8.3]	16.6	[14.7-18.6]	76.5	[74.3-78.6]	1.006
Saskatchewan	1,000	4.6	[3.5-6.1]	17.2	[15.0-19.7]	78.2	[75.5-80.7]	1.108
Alberta	2,401	6.4	[5.4-7.5]	14.1	[12.7-15.7]	79.5	[77.7-81.2]	1.028
British Columbia	3,000	6.8	[5.9-7.8]	14.0	[12.7-15.3]	79.3	[77.7-80.7]	1.079

[1]Percentages based on this 3 category drinking measure differ slightly from the 6 category measure due to missing values.

Continued on next page.

Table 3.1: Type of drinker by demographic characteristics, Canada, aged 15+, 2004 (cont'd)

		Lifetime abstainers		Former drinkers		Past-year drinkers		
	N	%	95% CI	%	95% CI	%	95% CI	Adjusted OR
Marital Status		NS		**		**		NS
Married/partnered (comparison group)	7,930	6.8	[5.8-8.0]	13.5	[12.2-14.9]	79.7	[78.0-81.3]	–
Divorced/separated/widowed	3,632	7.6	[5.9-9.8]	17.2	[14.6-20.1]	75.2	[71.9-78.2]	1.305*
Single/never married	2,253	7.6	[6.2-9.4]	11.4	[9.7-13.3]	81.0	[78.6-83.2]	1.105
Education		***		***		***		**
Less than secondary (comparison group)	2,471	13.5	[11.2-16.2]	22.1	[19.3-25.1]	64.5	[61.0-67.8]	–
Secondary	3,926	7.0	[5.6-8.8]	13.8	[12.1-15.8]	79.2	[76.7-81.4]	1.588**
Some post-secondary	4,267	4.8	[3.7-6.1]	11.0	[9.5-12.8]	84.2	[82.1-86.1]	2.042**
University degree	3,146	5.9	[4.5-7.7]	10.0	[8.2-12.0]	84.1	[81.6-86.4]	1.966**
Income Adequacy		***		***		***		**
Lowest (comparison group)	1,544	10.5	[7.9-13.9]	23.3	[19.7-27.4]	66.2	[61.7-70.4]	–
Middle	5,450	5.8	[4.8-7.1]	13.3	[11.7-14.9]	80.9	[78.9-82.7]	2.100**
Highest	3,183	3.7	[2.6-5.2]	7.6	[6.2-9.2]	88.7	[86.7-90.5]	3.653**
Not Stated	3,732	11.1	[9.3-13.1]	15.7	[13.7-18.0]	73.2	[70.5-75.7]	1.578**
Location of Household		NS		NS		NS		NS
Rural (comparison group)	3,016	6.4	[5.0-8.1]	14.4	[12.2-16.9]	79.2	[76.4-81.7]	–
Non-rural	10,893	7.3	[6.5-8.3]	13.3	[12.3-14.5]	79.3	[78.0-80.7]	0.860

Notes: CI—Confidence Interval
OR—adjusted for all variables in the table
* p<.05; ** p<.01; *** p<.001; NS—not significant

Table 3.2: Drinking frequency over the past year among past-year drinkers, by demographic characteristics, Canada, aged 15+, 2004

	N	Less than once a month	1-3 times a month	1-3 times a week	4+ times a week
		% [CI]	% [CI]	% [CI]	% [CI]
Total (drinkers)	10,696	22.7 [21.3-24.1]	33.3 [31.7-34.9]	34.1 [32.5-35.8]	9.9 [8.8-11.1]
Sex		***			
Female	6,087	31.4 [29.3-33.5]	35.9 [33.7-38.0]	26.9 [24.9-28.9]	5.9 [4.9-7.2]
Male	4,609	14.1 [12.5-15.8]	30.8 [28.4-33.2]	41.3 [38.8-43.9]	13.9 [12.0-15.9]
Age Group		***			
15-17	377	37.9 [30.2-46.3]	44.7 [36.6-53.1]	15.4 [10.1-22.7]	2.0 [0.6-6.7]
18-19	389	21.9 [15.4-30.1]	44.0 [35.6-52.9]	30.7 [23.2-39.3]	3.4 [1.0-11.2]
20-24	943	14.6 [11.6-18.3]	40.7 [35.3-46.3]	41.3 [35.9-47.0]	3.4 [1.7-6.7]
25-34	1,978	22.1 [19.3-25.3]	37.9 [34.3-41.7]	35.6 [32.0-39.3]	4.4 [3.1-6.3]
35-44	2,218	21.2 [18.5-24.3]	34.6 [31.1-38.4]	36.0 [32.5-39.8]	8.1 [6.1-10.5]
45-54	2,102	23.4 [20.2-26.9]	26.7 [23.4-30.2]	37.3 [33.4-41.3]	12.7 [9.9-16.1]
55-64	1,338	22.0 [18.6-25.9]	28.4 [24.3-32.9]	35.2 [30.8-39.8]	14.4 [11.2-18.2]
65-74	754	25.8 [20.6-31.7]	27.5 [22.2-33.5]	26.2 [20.8-32.4]	20.6 [15.4-26.9]
75+	403	27.9 [21.1-35.9]	24.2 [17.7-32.1]	23.7 [17.3-31.7]	24.2 [16.9-33.3]
Province		***			
Newfoundland & Labrador	744	26.6 [23.5-29.9]	35.9 [32.4-39.6]	32.5 [29.0-36.2]	5.0 [3.4-7.2]
Prince Edward Island	701	30.8 [27.4-34.4]	35.6 [32.0-39.4]	27.9 [24.6-31.5]	5.7 [4.1-7.7]
Nova Scotia	748	29.9 [26.5-33.5]	35.1 [31.4-38.9]	28.0 [24.6-31.7]	7.0 [5.3-9.3]
New Brunswick	734	32.1 [28.7-35.7]	34.5 [31.0-38.2]	27.8 [24.5-31.4]	5.6 [4.0-7.7]
Quebec	821	20.9 [18.2-23.9]	31.1 [27.9-34.4]	39.9 [36.4-43.4]	8.1 [6.3-10.5]
Ontario	781	21.0 [18.3-24.1]	33.4 [30.1-37.0]	32.6 [29.2-36.2]	12.9 [10.5-15.7]
Manitoba	1,141	26.6 [24.1-29.3]	35.4 [32.6-38.3]	30.6 [27.9-33.4]	7.4 [5.9-9.1]
Saskatchewan	776	25.9 [22.9-29.2]	40.1 [36.6-43.7]	29.6 [26.4-33.1]	4.4 [3.1-6.2]
Alberta	1,890	25.2 [23.2-27.3]	35.3 [33.1-37.7]	31.9 [29.6-34.1]	7.6 [6.3-9.1]
British Columbia	2,360	23.2 [21.5-25.0]	32.5 [30.5-34.5]	34.1 [32.1-36.1]	10.3 [9.0-11.6]

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Table 3.2: Drinking frequency over the past year among past-year drinkers, by demographic characteristics, Canada, aged 15+, 2004 (cont'd)

	N	Less than once a month % [CI]	1-3 times a month % [CI]	1-3 times a week % [CI]	4+ times a week % [CI]
Marital Status		***			
Married/partnered	6,142	21.4 [19.7-23.2]	32.1 [30.0-34.2]	36.2 [34.0-38.4]	10.3 [8.9-12.0]
Divorced/separated/widowed	1,578	27.1 [23.4-31.1]	28.9 [25.0-33.1]	27.7 [23.9-31.8]	16.4 [13.0-20.5]
Single/never married	2,912	22.5 [20.1-25.2]	38.2 [35.1-41.3]	33.8 [30.8-36.9]	5.5 [4.1-7.3]
Education		***			
Less than secondary	1,488	32.0 [28.1-36.2]	31.4 [27.5-35.7]	26.8 [22.8-31.2]	9.7 [7.1-13.2]
Secondary	3,002	23.9 [21.3-26.7]	37.4 [34.3-40.6]	30.3 [27.4-33.4]	8.3 [6.6-10.6]
Some post-secondary	3,526	22.0 [19.7-24.4]	33.0 [30.3-35.9]	35.8 [32.9-38.8]	9.2 [7.4-11.3]
University degree	2,623	17.3 [15.0-19.9]	30.5 [27.4-33.7]	39.9 [36.6-43.3]	12.4 [10.0-15.1]
Income Adequacy		***			
Lowest	978	34.5 [29.5-39.9]	31.1 [26.3-36.2]	28.4 [23.4-34.0]	6.0 [4.0-9.1]
Middle	4,311	24.0 [21.8-26.2]	35.2 [32.7-37.9]	30.9 [28.5-33.5]	9.8 [8.1-11.9]
Highest	2,773	15.5 [13.3-18.0]	29.0 [26.2-32.1]	42.3 [39.1-45.7]	13.1 [10.9-15.7]
Not Stated	2,634	24.8 [22.0-27.8]	35.8 [32.6-39.2]	31.7 [28.5-35.1]	7.6 [5.8-9.9]
Location of Household		NS			
Rural	2,210	24.6 [21.6-28.0]	31.9 [28.4-35.7]	33.2 [29.4-37.2]	10.3 [7.8-13.3]
Non-rural	8,486	22.3 [20.8-23.9]	33.6 [31.8-35.4]	34.3 [32.5-36.1]	9.9 [8.8-11.1]

Notes: CI—Confidence Interval

* p<.05; ** p<.01; *** p<.001; NS – not significant

Table 3.3: Usual quantity consumed on a typical drinking day over the past year among past-year drinkers, by demographic characteristics, Canada, aged 15+, 2004

	N	1–2 drinks	3–4 drinks	5+ drinks
		% [CI]	% [CI]	% [CI]
Total (drinkers)	10,696	63.7 [62.1-65.4]	20.2 [18.9-21.7]	16.0 [14.9-17.3]
Sex		***		
Female	6,087	74.2 [72.2-76.0]	17.1 [15.4-18.8]	8.8 [7.7-10.0]
Male	4,609	53.4 [50.8-56.0]	23.4 [21.2-25.7]	23.2 [21.1-25.4]
Age Group		***		
15-17	377	38.3 [30.3-47.1]	32.9 [25.4-41.4]	28.8 [22.1-36.6]
18-19	389	34.0 [26.0-43.0]	23.5 [17.0-31.5]	42.5 [34.0-51.5]
20-24	943	38.4 [33.0-44.1]	30.0 [24.9-35.6]	31.6 [26.8-36.8]
25-34	1,978	54.5 [50.7-58.3]	23.4 [20.2-27.0]	22.0 [19.2-25.2]
35-44	2,218	66.1 [62.4-69.6]	19.9 [17.1-23.1]	14.0 [11.5-16.8]
45-54	2,102	67.6 [63.5-71.4]	19.2 [16.2-22.7]	13.2 [10.5-16.5]
55-64	1,338	76.9 [72.6-80.8]	16.0 [12.7-19.9]	7.1 [4.9-10.0]
65-74	754	85.4 [80.2-89.4]	12.3 [8.5-17.4]	2.3 [1.3-4.1]
75+	403	87.2 [79.2-92.4]	10.6 [5.8-18.4]	2.2 [0.7-6.6]
Province		***		
Newfoundland & Labrador	744	49.7 [45.9-53.5]	19.5 [16.6-22.7]	30.8 [27.4-34.5]
Prince Edward Island	701	55.5 [51.6-59.3]	19.0 [16.1-22.3]	25.5 [22.2-29.2]
Nova Scotia	748	58.8 [54.9-62.6]	18.3 [15.5-21.6]	22.8 [19.7-26.3]
New Brunswick	734	55.8 [52.0-59.6]	20.2 [17.3-23.4]	24.0 [20.8-27.5]
Quebec	821	65.8 [62.4-69.1]	22.8 [20.0-26.0]	11.3 [9.3-13.8]
Ontario	781	64.2 [60.6-67.7]	20.0 [17.2-23.2]	15.8 [13.3-18.7]
Manitoba	1,141	60.8 [57.8-63.8]	19.5 [17.2-22.0]	19.7 [17.3-22.2]
Saskatchewan	776	59.9 [56.3-63.4]	21.3 [18.4-24.4]	18.8 [16.2-21.8]
Alberta	1,890	62.3 [59.9-64.6]	18.3 [16.5-20.2]	19.4 [17.6-21.4]
British Columbia	2,360	65.3 [63.3-67.3]	17.8 [16.3-19.5]	16.8 [15.3-18.5]

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Table 3.3: Usual quantity consumed on a typical drinking day over the past year among past-year drinkers, by demographic characteristics, Canada, aged 15+, 2004 (cont'd)

	N	1–2 drinks	3–4 drinks	5+ drinks
		% [CI]	% [CI]	% [CI]
Marital Status		***		
Married/partnered	6,142	70.2 [68.1-72.3]	17.8 [16.1-19.6]	12.0 [10.6-13.6]
Divorced/separated/widowed	1,578	72.7 [68.5-76.6]	16.3 [13.3-19.8]	11.0 [8.4-14.2]
Single/never married	2,912	45.6 [42.4-48.8]	27.5 [24.6-30.5]	26.9 [24.3-29.7]
Education		***		
Less than secondary	1,488	60.7 [56.2-65.0]	17.6 [14.4-21.2]	21.8 [18.3-25.7]
Secondary	3,002	57.9 [54.6-61.1]	21.6 [19.1-24.4]	20.5 [18.0-23.2]
Some post-secondary	3,526	62.7 [59.7-65.6]	21.0 [18.6-23.7]	16.2 [14.2-18.6]
University degree	2,623	72.2 [69.0-75.2]	19.1 [16.5-22.1]	8.7 [6.9-10.8]
Income Adequacy		NS		
Lowest	978	59.6 [54.1-64.9]	22.2 [27.7-27.4]	18.2 [14.7-22.4]
Middle	4,311	61.3 [58.6-63.9]	21.9 [19.7-24.2]	16.8 [14.9-18.9]
Highest	2,773	64.0 [60.6-72.8]	19.8 [17.2-22.7]	16.1 [13.8-18.7]
Not Stated	2,634	68.7 [65.5-71.8]	17.3 [14.9-20.1]	14.0 [11.8-16.4]
Location of Household		NS		
Rural	2,210	63.3 [59.4-67.1]	18.2 [15.4-21.5]	18.5 [15.6-21.7]
Non-rural	8,486	63.8 [62.0-65.6]	20.6 [19.1-22.2]	15.6 [14.3-17.0]

Notes: CI—Confidence Interval

* p<.05; ** p<.01; *** p<.001; NS – not significant

Table 3.4: Prevalence of weekly and monthly heavy drinking among past-year drinkers, by demographic characteristics, Canada, aged 15+, 2004

		Weekly heavy drinking			Monthly heavy drinking		
	N	%	CI	Adjusted OR	%	CI	Adjusted OR
Total (drinkers)	10,696	6.2	[5.5-7.1]		25.5	[24.0-27.1]	
Sex		***		**	***		**
Female (comparison group)	6,087	3.3	[2.6-4.2]	–	17.0	[15.4-18.8]	–
Male	4,609	9.2	[7.8-10.7]	2.910**	33.9	[31.5-36.4]	2.565**
Age Group (comparison group is previous age group)		***		**	***		**
15-17	377	7.6	[4.4-12.7]	–	35.7	[28.2-43.8]	–
18-19	389	16.1	[10.4-24.2]	2.979*	51.8	[43.0-60.5]	2.188**
20-24	943	14.9	[11.4-19.3]	1.092	47.0	[41.4-52.6]	0.993
25-34	1,978	6.5	[5.0-8.5]	0.498**	30.4	[27.0-33.9]	0.577**
35-44	2,218	5.3	[3.7-7.4]	0.751	24.2	[21.1-27.6]	0.735*
45-54	2,102	6.0	[4.2-8.5]	1.120	22.0	[18.7-25.8]	0.867
55-64	1,338	4.0	[2.5-6.3]	0.599	17.5	[14.0-21.6]	0.724
65-74	754	0.5	[0.3-1.1]	0.133**	9.7	[6.1-15.0]	0.455**
75+	403	1.5	[5.5-7.3]	2.558	9.1	[4.8-16.6]	0.955
Province (comparison group is Canada)		NS		NS	NS		**
Newfoundland & Labrador	744	7.9	[6.0-10.4]	1.157	35.5	[31.9-39.2]	1.533**
Prince Edward Island	701	7.1	[5.3-9.6]	1.008	26.2	[22.8-29.8]	0.954
Nova Scotia	748	7.9	[6.1-10.3]	1.351*	27.5	[24.1-31.1]	1.082
New Brunswick	734	7.3	[5.5-9.5]	1.047	27.9	[24.6-31.5]	1.012
Quebec	821	6.1	[4.5-8.1]	0.899	25.2	[22.2-28.4]	0.910
Ontario	781	6.2	[4.7-8.3]	0.996	25.0	[21.9-28.4]	0.935
Manitoba	1,141	7.1	[5.7-8.8]	1.094	27.4	[24.8-30.2]	1.039
Saskatchewan	776	5.5	[4.1-7.4]	0.798	24.3	[21.4-27.5]	0.852
Alberta	1,890	6.0	[4.9-7.2]	0.819	26.5	[24.5-28.7]	0.919
British Columbia	2,360	6.0	[5.0-7.1]	0.947	24.5	[22.7-26.4]	0.901
Marital Status		***		NS	***		**
Married/partnered (comparison group)	6,142	4.6	[3.7-5.7]	–	20.2	[18.4-22.1]	–
Divorced/separated/widowed	1,578	4.9	[3.7-7.5]	1.582	20.9	[17.3-25.0]	1.611**
Single/never married	2,912	10.2	[8.5-12.3]	1.355	38.8	[35.7-41.9]	1.587**
Education		***		**	***		**
Less than secondary (comparison group)	1,488	7.7	[5.6-10.7]	–	26.1	[22.3-30.2]	–
Secondary	3,002	7.3	[5.7-9.2]	0.625	29.6	[26.7-32.8]	0.906
Some post-secondary	3,526	8.0	[6.5-9.8]	0.681	26.6	[24.0-29.4]	0.756
University degree	2,623	2.4	[1.6-3.6]	0.212**	19.8	[17.2-22.7]	0.570**
Income Adequacy		NS		NS	NS		NS
Lowest (comparison group)	978	8.7	[6.1-10.7]	–	26.6	[22.1-31.7]	–
Middle	4,311	6.0	[4.9-7.5]	0.794	26.4	[24.1-28.9]	1.190
Highest	2,773	6.7	[5.1-8.7]	1.040	25.5	[22.7-28.5]	1.219
Not Stated	2,634	5.2	[4.0-6.8]	0.737	23.7	[20.9-26.8]	1.095
Location of Household		NS		NS	NS		NS
Rural (comparison group)	2,210	6.6	[4.9-8.8]	–	24.6	[21.4-28.2]	–
Non-rural	8,486	6.2	[5.3-7.2]	1.022	25.7	[24.0-27.4]	1.099

Notes: CI—Confidence Interval

OR—adjusted for all variables in the table

* p<.05; ** p<.01; *** p<.001; NS – not significant

Table 3.5: Percentage exceeding low-risk drinking guidelines among past-year drinkers, by demographic characteristics, Canada, aged 15+, 2004

		Exceeding		
	N	%	CI	Adjusted OR
Total (drinkers)	10,696	22.6	[21.2-24.1]	
Sex		***		**
Female (comparison group)	6,087	15.1	[13.5-16.8]	–
Male	4,609	30.2	[27.8-32.6]	2.327**
Age Group (comparison group is previous age group)		***		**
15-17	377	24.6	[18.0-32.7]	–
18-19	389	32.3	[24.6-41.1]	1.650
20-24	943	38.0	[32.6-43.7]	1.196
25-34	1,978	24.9	[21.8-28.2]	0.617**
35-44	2,218	22.3	[19.3-25.7]	0.935
45-54	2,102	22.4	[18.9-26.3]	1.026
55-64	1,338	18.4	[14.9-22.6]	0.765
65-74	754	10.9	[7.1-16.4]	0.612*
75+	403	13.6	[8.1-21.9]	1.246
Province (comparison group is Canada)		NS		NS
Newfoundland & Labrador	744	27.3	[24.0-30.9]	1.265**
Prince Edward Island	701	21.7	[18.6-25.2]	1.013
Nova Scotia	748	23.3	[20.2-26.8]	1.041
New Brunswick	734	23.7	[20.6-27.2]	1.055
Quebec	821	22.7	[19.8-25.9]	0.965
Ontario	781	22.6	[19.6-25.9]	0.975
Manitoba	1,141	21.4	[19.0-24.0]	0.988
Saskatchewan	776	21.5	[18.6-24.6]	0.885
Alberta	1,890	22.5	[20.6-24.6]	0.902
British Columbia	2,360	22.4	[20.6-24.2]	0.957
Marital Status		***		**
Married/partnered (comparison group)	6,142	19.3	[17.5-21.2]	–
Divorced/separated/widowed	1,578	18.0	[14.7-21.9]	1.373*
Single/never married	2,912	31.9	[29.0-35.0]	1.744**
Education		NS		NS
Less than secondary (comparison group)	1,488	20.7	[17.1-24.8]	–
Secondary	3,002	21.2	[18.7-24.0]	0.755
Some post-secondary	3,526	25.8	[23.2-28.6]	0.982
University degree	2,623	21.2	[18.5-24.2]	0.769
Income Adequacy		NS		NS
Lowest (comparison group)	978	20.5	[16.4-25.4]	–
Middle	4,311	22.3	[20.1-24.7]	1.235
Highest	2,773	27.4	[24.4-30.5]	1.731**
Not Stated	2,634	18.4	[15.8-21.3]	1.088
Location of Household		NS		NS
Rural (comparison group)	2,210	20.5	[17.4-23.9]	–
Non-rural	8,486	23.0	[21.4-24.7]	1.152

Notes: CI—Confidence Interval

OR—adjusted for all variables in the table

* p<.05; ** p<.01; *** p<.001; NS – not significant

4. Alcohol-Related Problems: Prevalence, Incidence and Distribution

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The views expressed in this chapter are those of the authors and do not necessarily reflect those of the funders.

Highlights

• Although most drinking occasions occur without harm, and most people do not have problems with alcohol, adverse personal experiences do occur, especially when they are assessed over the lifetime of the respondents. A quarter of former and current drinkers report that their drinking has caused harm at some time during their lives.

• According to the Alcohol Use Disorders Identification Test (AUDIT), 17% of current drinkers engage in hazardous drinking behaviour. Current drinkers were questioned about drinking problems during the 12 months prior to the survey. Nine percent report that their drinking has harmed them.

• Thirty-three percent of respondents report that they were harmed during the past 12 months because of the drinking behaviour of others. The most frequently-mentioned types of adverse consequences are damage to friendships, social life and physical health. Negative verbal interactions are by far the most frequent type of harm attributed to the drinking of others. Substantial proportions of respondents also report some physical component in alcohol-involved altercations. One in 10 respondents indicate that they have experienced damage to the marriage or to family life because of someone else's drinking.

• The impact of drinking problems varies with demographic characteristics. Men generally report substantially higher problem rates than women. However, when alcohol use patterns are controlled (when men and women drink at the same quantity and frequency) there is no significant difference between the sexes in the likelihood of harm.

• Of all the demographic characteristics, age has the strongest association with drinking problems: the younger the respondent, the more vulnerable they are likely to be to problems involving alcohol.

• Provincial rates of harm to the self and harm from others because of drinking are generally lower in the East and higher in the West. The patterning of rates is the opposite for the AUDIT measure of hazardous drinking: AUDIT scores for the eastern provinces are higher than those for the West. Residents of Quebec report lower than average rates and odds for all three alcohol problems measures, and Quebec rates are significantly lower on the AUDIT and harm-from-others measures.

• Rates of all three measures of alcohol problems for married people are lower than for single people and for those formerly married (divorced, separated or widowed). The association between marital status and incidence and likelihood of harm can be largely accounted for through the link between marriage and drinking patterns: when people are married, they are less likely to drink heavily and/or to drink heavily very often. When married people do drink heavily, they are as likely to experience harm as unmarried people.

• Levels of education and income adequacy, as well as rural/non-rural residence are not significantly associated with alcohol problems.

• People who drink heavily, and especially those who regularly drink heavily, are more likely to report having been harmed by their own drinking and because of the alcohol use of others.

Introduction

Three main measures are used in this chapter:

1. The Alcohol Use Disorders Identification Test (AUDIT). The development of the AUDIT was supported by the World Health Organization to identify hazardous patterns of alcohol use, as well as harmful consequences of that use and indications of dependency (Babor et al. 2001). It consists of a 10-item questionnaire (including lack of control over one's own drinking, failure to meet expectations, drinking in the morning, feelings of guilt, black-outs, injuries resulting from drinking, and having someone express concern about drinking) or interview schedule and a protocol for scoring responses to these items. Primarily used to screen for alcohol problems in clinical settings, the AUDIT can be employed in research to assess the prevalence of high-risk alcohol use in large groups or populations (e.g., Adlaf and Ialomiteanu, 2002).

According to Babor & al. (2001, p. 19), an AUDIT score of 8 or more indicates harmful use or possibly alcohol dependence. As the present analysis is of the scores of a sample of respondents representing the Canadian population—as opposed to a clinical sample or a subsample of people with identified problems—the results should be interpreted with some caution. Scores of 8+ should not be viewed as "alcoholism," but, rather, as an indicator of high-risk drinking.

2. Questions that query the prevalence and incidence of harm associated with respondents' own alcohol use.

3. Questions about harm to respondents because of the drinking behaviour of others. Due to the sensitivity of some items, harm from others' drinking was asked only of those 18 and older.

Prevalence of harm to oneself because of alcohol use was asked for lifetime occurrence, and incidence of harm is queried for the 12 months preceding the survey.

Results

Most drinking occasions occur without negative consequences, and most Canadians do not have problems with alcohol. On the other hand, a substantial minority of respondents to this survey reported experiencing harm from alcohol use as a result of their own drinking or the drinking of others. The prevalence of adverse experiences with alcohol over the lifetime is high enough to conclude that alcohol problems are part of Canadian life. The incidence of harm, or problems attributed to alcohol use during the 12 months prior to the survey, is considerably lower.

The distribution of alcohol problems varies with demographic characteristics—particularly with sex and age. Measures of drinking behaviour and its association with harm reveal some of the linkages between demographic attributes and experiences of harm.

Hazardous alcohol use as indicated by the Alcohol Use Disorders Identification Test (AUDIT)

Table 4.1 displays percentages of current drinkers aged 15 years and older with AUDIT scores of 8 or higher. According to this criterion, the total of high-risk drinkers estimated for Canada is 17%. There is a large difference between the sexes. The proportion of women scoring 8+ is 8.9% and men, 25.1%, with odds for men over three-and-a-half times that of women. Similar to the patterning of percentages for alcohol-related harm to the self and from others, which will be discussed below, rates of problem drinking decrease as age increases. More than 30% of those under 25 score 8+ on the AUDIT, compared with less that 5% for people aged 65 or over. The corresponding odds ratios reflect these results.

The patterning of the provincial rates of 8+ AUDIT scores differs from that of the harm measures. Rates of alcohol-involved harm to the self and from others are somewhat higher in the West than they are in the East (see Tables 4.3 and 4.5). For the 8+ AUDIT scores, rates for the eastern provinces are higher than those for the West. Quebec, however, maintains lower rates of harm for all three measures: harm to the self, harm from others, and the AUDIT 8+. Rates are significantly lower on the AUDIT and harm-from-others measures.

Marriage appears to protect against high-risk drinking, as measured by the AUDIT. Formerly married and never-married people are more than one-and-a-half times more likely to score 8+ on the AUDIT than are married people. Rates and odds of hazardous drinking are inversely and significantly associated with education: the higher the level of education, the less likely a respondent is to score 8+ on the AUDIT. Those who did not finish high school had hazardous drinking rates almost twice as high as those who finished university (21.8% and 11.5%, respectively).

Income adequacy is likewise inversely related to rates of AUDIT 8+ scores: the lower the income adequacy category, the higher the rate of hazardous drinking. Differences in odds of hazardous drinking are not significant, however. As was the case with the other measures of harm, there were no significant differences in rates of harm among rural and non-rural residents.

Harm from one's own use of alcohol

Prevalence and incidence of types of harm

Table 4.2 displays proportions of respondents reporting adverse consequences as a result of their own drinking during their lifetime and during the past 12 months. Nearly a quarter of the sample (24.2%) of former and current drinkers report that their drinking has caused harm to themselves and to others at some time in their lives, and almost 1 in 10 current drinkers (8.8%) stated that harm occurred during the past year.

Some types of harm occur more frequently than others. Adverse effects of drinking on friendships and social life and on physical health (14.2% and 14.8%, respectively) are substantially more prevalent than other types of harm. These same consequences are the most frequent ones reported for the past 12 months, with 3% of current drinkers reporting harm to friendships and social life and 5.4% reporting harm to physical health. The prevalence and incidence of reported harms from drinking on home and marital life, work and finances indicate that alcohol use entails harm in crucial life areas for considerable proportions of respondents (about 7–8% during lifetime and about 2–3% in the past 12 months).

Distribution of alcohol-related harm during the past 12 months by demographic characteristics and drinking behaviour

Table 4.3 shows the percentages of harm in demographic and drinker categories. As well, it displays the odds ratio, or the extent to which a given characteristic makes an independent contribution to the outcome when all other characteristics are controlled.

Aside from demographic attributes, the drinking behaviour of a person would be expected to affect the alcohol-related problems that people report. However, some attributes of individuals are associated with greater or lesser alcohol consumption. For example, men drink greater amounts than women (see Chapter 3 on drinking patterns) and, therefore, a greater proportion of men than women would be expected to report adverse alcohol-related consequences. According to the information in Table 4.3, this is certainly the case: 7.1% of women and 10.5% of men report that they experienced at least one harm during the past year because of their drinking. Column 5 in the table presents the adjusted odds ratio, or the likelihood of people with certain characteristics to state that they have experienced harm, when they are compared with people with other characteristics. The comparison of men to women displayed in Column 5 suggests that men are significantly more likely—more than one-and-a-half times more likely—to report that their drinking caused harm. When the drinking behaviour variables are included in the analysis and controlled for, the situation changes. The information in Column 6 indicates that when men and women drink the same amounts, men are somewhat less (but not significantly less) likely to report harm.

There is an inverse relationship between age categories and proportions of respondents within these categories reporting harm: the younger the age group, the greater the proportion of respondents reporting negative experiences from alcohol use during the past year. More than one in five people aged 24 years or less (21.8%) report adverse drinking consequences, compared with far smaller proportions in the other age groups. This relationship of age to drinking problems still occurs when other demographic characteristics are controlled for. What is perhaps remarkable is that controlling for drinking behaviour does not alter the direction or significance of the likelihood of younger people experiencing trouble from alcohol use. Even with adjustments for drinking behaviour, younger people are far more vulnerable to alcohol-related harm than are older people.

Proportions of current drinkers in the 10 provinces who reported alcohol-related harm range from a low of 7.2% in Newfoundland and Labrador to a high of 9.5% in Alberta. Adjusted odds ratios indicate that the likelihood of harm did not differ significantly among the provinces until controls for drinking behaviour were introduced. With odds adjusted for drinking behaviour, the likelihood of harm in Newfoundland and Labrador is less and in British Columbia is more than odds for Canada as a whole.

Compared with married people, those who were formerly married (divorced, separated or widowed) as well as single people are more likely to have experienced adverse alcohol-involved consequences during the year preceding the survey. With adjustments for alcohol use, odds differences in marital categories are not significant, suggesting that, while being married is associated with less heavy drinking, marital status on its own offers little protection against vulnerability to harm from alcohol use.

The lower the levels of education and income adequacy, the higher the proportion of respondents who report experiencing harm during the past 12 months. The differences in the percentages are small and the odds are not statistically significant.[1] The location of the household (rural, non-rural) was not associated with differences in rates of reported harm.

The drinking status of the respondent—essentially an indication of drinking patterns[2]—is significantly associated with the odds of reporting harm. For each level depicting increased alcohol consumption, odds of experiencing harm from one's own alcohol use more than double, and heavy-frequent drinkers are more than four times as likely to report harm as heavy-infrequent drinkers. Similar results occur with the predictor measure of the frequency of 5+ drinks. Proportions of those reporting harm as well as the odds of reporting harm increase substantially and significantly with increases in the frequency of heavy drinking.

Harm because of others' use of alcohol

Prevalence and incidence of types of harm

Respondents to this survey aged 18 years and older were asked about the occurrence and the types of harm experienced because of alcohol use by others. Table 4.4 displays the total rate of harm and rates for types of harm. Close to a third of the respondents (32.7%) report having been harmed at least once in the past year because of someone else's drinking.

[1] People who did not state (or did not know) their household incomes reported harm from their own alcohol use or harm from the alcohol use of others in significantly lower proportions than their counterparts (see Table 4.3). At some point, a demographic comparison should be made between these respondents and the rest of the sample. These may be younger people and/or women not in the labour force, who may not know the household income, and since they are not getting in trouble with alcohol, they are more likely women.

[2] Drinking patterns are defined as light-infrequent (less than once a week, fewer than five drinks when alcohol is used); light-frequent (once a week or more, fewer than five drinks when alcohol is used); heavy- infrequent (less than once a week, five drinks or more when alcohol is used); heavy-frequent (more than once a week, five drinks or more when alcohol is used).

By far, instances of negative verbal interaction were the most frequently identified problems: 22.1% of the respondents say they were insulted and humiliated, and 15.5% report they had serious arguments or quarrels because of someone's drinking, and 15.8% report verbal abuse. Physical altercations are less frequent, but rates are substantial: 10.8% are pushed or shoved, and 3.2% were physically assaulted.[3] It is also noteworthy that 1 in 10 respondents (10.5%) report that someone's drinking was responsible for family and marriage problems.

Distribution of alcohol-related harm from others during the past 12 months by demographic characteristics and drinking behaviour

Table 4.5 displays distributions of rates of respondents reporting at least one harm from others' alcohol use during the year prior to the survey. As was described for Table 4.3, odds ratios adjusted for demographic factors and odds ratios adjusted for demographic factors in addition to drinking behaviours indicate the unique contributions of particular attributes to the likelihood of experiencing harm from others.

Rates of women and men reporting alcohol-related harm from others are almost equal (32.6% and 32.9%, respectively). The model including alcohol use predictors, however, shows lower, significant odds for men compared with women, indicating that if alcohol consumption were equal, women have a slightly higher chance of being harmed by others who are drinking.

There is a precipitous and steady decline in rates of harm with increases in age. The majority (62.6%) of 18 to 19 year olds report they were harmed, while the rate decreases to less than 15% for those over 65. Most of the odds—the results of comparing an age category with the previous age category—are significant for adjustments excluding and including drinking behaviours. This finding suggests that despite the fact that younger people tend to drink more heavily than older people, age alone is an important factor in vulnerability to harm because of the alcohol use of others.

Differences in provincial rates are small, but the pattern is fairly consistent. Rates are lower in the eastern provinces and higher west of Ontario. While the range of rates is small (29.7%–38.0%), the differences from the Canadian average in the odds of reporting alcohol-related harm are significant for four provinces. Adjusting for demographic factors reveals that residents of Newfoundland and Labrador have significantly lower odds of reporting harm, while Manitoba, Alberta and British Columbia have higher odds. In the model adjusting for alcohol use, this patterning of odds was similar; in addition, people living in Quebec had significantly decreased odds of reporting harm from the alcohol use of others.

[3] Clearly, these categories are not mutually exclusive. Some instances of being insulted or humiliated may also have been reported as instances of verbal abuse. Being pushed or shoved may be reported as being hit.

Marital status categories make substantial and significant independent contributions to odds of reporting harm from others. Close to half of the single people (46.8%) and under a third of married and previously married people (28.2% and 27.9%, respectively) report that they have been harmed because of someone's drinking. Both logistic regression models indicate marriage as a significant protective factor from harm; the odds of reporting harm from the drinking of others are significantly less for married people than for those who were never or previously married.

Those with less than secondary school education have the lowest rates (25.6%) of reporting harm from others, and those with some post-secondary schooling have the highest rates (38.6%). These results are likely confounded by other factors (e.g., age and cohort effects), as the adjusted odds of a particular education level reporting harm—with and without drinking behaviours in the model—do not differ significantly from the less-than-secondary comparison group. Likewise, income adequacy and household location as variables do not make a significant contribution to predicting the likelihood of alcohol-related harm.

Percentages of respondents reporting harm from others rise with indications of frequency of drinking and frequency of heavier drinking. The lowest rates of reporting occur in those categories reporting lifetime abstinence (23.9%) and no heavy drinking (26.2%). Half of the heavier drinkers (52.3% of heavy-frequent drinkers, 48.7% of those drinking 5+ at least monthly) report harm from others during the year preceding the survey.

Summary and Discussion

This chapter concerns alcohol-related harm and focuses on the extent and types of alcohol problems in the Canadian population. While it is important to assess alcohol problems, as well as their considerable cost to the material and social life of Canadians, it is also important not to overstate the case. Most instances of alcohol use have positive or neutral consequences and do not entail pathology of any kind (Gusfield 1996). Indeed, the results presented here suggest that a large majority of Canadians have not experienced adverse consequences from their own alcohol use, or from the alcohol use of others.

That said, the results of the CAS suggest that alcohol problems are not uncommon and are differentially distributed among Canadians. Therefore, if social policy directed at the prevention of alcohol-involved harm is to be evidence-based, it is important to identify target groups that are vulnerable to these problems and that could benefit from prevention and intervention efforts.

The results of this analysis suggest that the primary targets for programs and policies aimed at prevention and intervention should be heavy drinkers and younger people. Heavy drinking is involved in the kinds of drinking problems that are most prevalent according to the results of this survey: problems with social interaction, having arguments, and being insulted. The age groups under 25 are clearly the most vulnerable to alcohol-related harm. It is worth remarking that the relationship between age and drinking problems persists regardless of the harm measures used and regardless of statistical controls for demographic attributes and even for drinking behaviour. For the most part, the drinking behaviour of respondents goes a long way towards explaining differences in rates of alcohol problems. Heavier drinkers—those who drink large amounts in a given time—are more likely to experience problems from their own drinking and problems because of the drinking of others. Younger people, however, are more likely than others to report harm to the self and harm from others, regardless of their drinking behaviour.

Drinking problems are multidimensional, and surveys are limited in terms of the types of problems they identify (Dawson 2000; Midanik et al. 1999; Room 2000). The items in the CAS measure the prevalence of problems that have mainly social aspects; physical problems as a result of alcohol abuse are identified, but in a general way: respondents are asked to state whether their drinking has negatively affected their physical health. Therefore, we cannot differentiate hangovers from cases of delirium tremens and liver cirrhosis. And while problem areas are covered, for the most part we cannot distinguish between serious damage to friendships and family relations that have lifetime consequences from those that are largely forgotten after the incident. In other words, there is little information about the severity of alcohol-related damage.

Earlier work (Hilton 1991, pp. 194-212) assigned some items a higher score (breaking up a friendship or marriage because of drinking received a score of three) than other items (getting into an argument received a score of one). More recent studies, perhaps in the interest of minimizing decisions made by fiat, assign the same score to each problem area (Rehm, Frick and Bondy 1999; Rehm and Gmel 1999; Rehm and Gmel 2000). Another aspect of problem severity is the frequency of the occurrence of the problem. For recent surveys in Canada, including the NADS, CADS, and the current CAS, problems are indicated through a dichotomous variable: did the problem occur in the past year, or did it not? There is no indication of the frequencies of arguments, assaults, or of how many friendships have been affected.

Similar comments can be made about the AUDIT as a research tool in sample surveys of large populations. The test has proved to be a sensitive predictor of other problems, including road rage (Mann et al. 2004) and domestic violence involving women as perpetrators (Stuart et al. 2004). In this analysis, the cut-off point of 8+ on the AUDIT indicates hazardous drinking. Using this indicator for problem drinking identifies almost twice as many problem drinkers (i.e., those who engage in harmful or hazardous drinking) as the more restricted harm-only problem questions (i.e., to self and by others) on this survey: 17% of current drinkers scored 8+ on the AUDIT, while 8.8% named at least one type of harm. As the patterning of rates of problem drinking according to the AUDIT is similar to that of the harms for sex, age, and marital status, the two criteria are likely tapping similar phenomena.

Further analysis of the results of this survey might distinguish between minor and more severe alcohol problems. A subsequent survey with in-depth interviews that follows up heavy drinkers would provide an indication of the prevalence of serious alcohol problems.

References

Adlaf, E.M. & Ialomiteanu, A. (2002). CAMH Monitor eReport: *Addiction and Mental Health Indicators Among Ontario Adults in 2001, and Changes Since 1977*. (CAMH Research Doc. Series No. 12). Centre for Addiction and Mental Health. Toronto. Electronic document: www.camh.net/research/population_life_course.html

Babor, T.R., Higgins-Biddle, J.C., Saunders, J.B. & Monteiro, M.G. (2001). *The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care* (Second ed.). Geneva: World Health Organization.

Dawson, D.A. (2000). Alternative measures and models of hazardous consumption. *Journal of Substance Abuse 12*: 79 – 91.

Gusfield, J.R. (1996). "No more cakes and ale": The rhetoric and politics of drinking research. In *Contested Meanings: The Construction of Alcohol Problems* by Joseph R. Gusfield, pp 31-54. Madison, Wisconsin: University of Wisconsin Press.

Hilton, M.E. (1991). Demographic characteristics and the frequency of heavy drinking as predictors of self-reported drinking problems. In *Alcohol in America: Drinking Practices and Problems*. W.B. Clark and M.E. Hilton (eds), pp. 194-212. Albany: State University of New York Press.

Mann, R.E., Smart, R.G., Stoduto, G., Adlaf, E. M. & Ialomiteanu, A. (2004). "Alcohol consumption and problems among road rage victims and perpetrators." *Journal of Studies on Alcohol 65*:161-168.

Midanik, L.T. (1999). Drunkenness, feeling the effects and 5 plus measures. *Addiction, 94*, 887-897.

Rehm, J., Frick, U. and Bondy, S. (1999). Reliability and validity analysis of an alcohol-related harm scale for surveys. *Journal of Studies on Alcohol 60*, 203-208.

Rehm, J. & Gmel, G. (1999). Patterns of alcohol consumption and social consequences. Results from an 8-year follow-up study in Switzerland. *Addiction 94*: 899-912.

Rehm, J. & Gmel, G. (2000). Aggregating dimensions of alcohol consumption to predict medical and social consequences. *Journal of Substance Abuse 12*: 155-168.

Room, R. (2000). Concepts and items in measuring social harm from drinking. J*ournal of Substance Abuse 12*: 93-111.

Stuart, G.L., Moore, T.M., Ramsey, S. and Kahler, C.W. (2004). "Hazardous drinking and relationship violence, perpetration, and victimization in women arrested for domestic violence." *Journal of Studies on Alcohol 65*: 46-53.

Table 4.1: Percentage drinking hazardously (AUDIT 8+) during the past year, Canada, current drinkers, aged 15+, 2004

	N	%	95% CI	Adjusted OR
Total (drinkers)	10,696	17.0	[15.8 - 18.4]	
Sex		***		**
Female (comparison group)	6,087	8.9	[7.8 - 10.3]	–
Male	4,609	25.1	[23.0 - 27.5]	3.585**
Age Group (comparison group is previous age group)		***		**
15-17	377	30.9	[23.7 - 31.1]	–
18-19	389	44.6	[35.8 - 53.7]	2.419**
20-24	943	34.2	[29.1 - 39.5]	0.770
25-34	1,978	21.1	[18.2 - 24.4]	0.643**
35-44	2,218	14.2	[11.7 - 17.1]	0.624**
45-54	2,102	14.0	[11.1 - 17.4]	0.961
55-64	1,338	10.8	[7.9 - 14.6]	0.680
65-74	754	3.9	[1.9 - 7.6]	0.270**
75+	403	4.5	[1.7 - 11.5]	1.309
Province (comparison group is Canada)		*		**
Newfoundland & Labrador	744	22.9	[19.8 - 26.4]	1.269*
Prince Edward Island	701	21.1	[17.9 - 24.7]	1.125
Nova Scotia	748	20.8	[17.7 - 24.2]	1.225
New Brunswick	734	18.7	[15.9 - 22.0]	0.991
Quebec	821	14.4	[12.0 - 17.1]	0.704**
Ontario	781	17.4	[14.7 - 20.5]	0.980
Manitoba	1,141	18.9	[16.6 - 21.5]	1.044
Saskatchewan	776	17.3	[14.8 - 20.2]	0.845
Alberta	1,890	19.1	[17.3 - 21.1]	0.996
British Columbia	2,360	17.0	[15.4 - 18.6]	0.953
Marital Status		***		**
Married/partnered (comparison group)	6,142	12.1	[10.6 - 13.7]	–
Divorced/separated/widowed	1,578	12.1	[9.4 - 15.5]	1.660**
Single/never married	2,912	29.6	[26.8 - 32.6]	1.790**
Education		***		**
Less than secondary (comparison group)	1,488	21.8	[18.2 - 25.8]	–
Secondary	3,002	19.2	[16.7 - 21.9]	0.592**
Some post-secondary	3,526	17.8	[15.6 - 20.3]	0.583**
University degree	2,623	11.5	[9.5 - 14.0]	0.360**
Income Adequacy		*		NS
Lowest (comparison group)	978	22.6	[18.3 - 27.5]	–
Middle	4,311	16.8	[14.8 - 19.1]	0.814
Highest	2,773	17.5	[15.1 - 20.2]	0.994
Not Stated	2,634	14.8	[12.5 - 17.5]	0.709
Location of Household		NS		NS
Rural (comparison group)	2,210	18.7	[15.7 - 22.1]	–
Non-rural	8,486	16.7	[15.3 - 18.2]	0.891

Notes: CI—Confidence Interval

OR—adjusted for all variables in the table

* p<.05; ** p<.01; *** p<.001; NS—not significant

Table 4.2: Percentage reporting harms from one's own alcohol use, lifetime and past year, Canada, among lifetime and past-year drinkers, aged 15+, 2004

Types of harm **Alcohol use had a harmful effect on your...**	**Lifetime[1]** **N=12,883** **% yes**	**Past year[2]** **N=10,696** **% yes**
1. Friendships and social life	14.2 [13.2 -15.3]	3.0 [2.5 -3.7]
2. Physical health	14.8 [13.7 -15.9]	5.4 [4.6 -6.2]
3. Home life or marriage	8.1 [7.3 -8.9]	1.8 [1.4 -2.4]
4. Work, studies or employment opportunities	6.8 [6.1 -7.7]	1.7 [1.3 -2.2]
5. Financial position	6.9 [6.2 -7.7]	2.7 [2.1 -3.3]
6. Legal problems	3.8 [3.3 -4.5]	0.7[Q] [0.4 -1.1]
7. Housing problems	1.1 [0.8 -1.5]	S
8. Learning	2.3 [1.8 -2.8]	0.5[Q] [0.3 -0.8]
One or more types of harm	24.2 [22.9 - 25.5]	8.8 [7.9 -9.9]

Note: S—estimate suppressed due to unacceptable high sampling variability; Q—qualified release due to high sampling variability

[1] Lifetime harm: percentages are of current and former drinkers

[2] Past-year harm: percentages are of current drinkers

Table 4.3: Percentage reporting at least one harm during the past year from one's own drinking, by demographic characteristics, type of drinker and frequency of 5+ drinks, Canada, current drinkers, aged 15+, 2004

	N	%	95% CI	Adjusted OR	Adjusted OR with alcohol use predictors
Total (drinkers)	10,696	8.8	[7.9 - 9.9]		
Sex		***		**	NS
Female (comparison group)	6,087	7.1	[6.0 -8.4]	–	–
Male	4,609	10.5	[9.1 -12 -2]	1.542**	0.847
Age Group (comparison group is previous age group)		***		**	**
15-24	1,709	21.8	[18.5 -25.4]	–	–
25-44	4,196	7.8	[6.4 - 9.3]	0.354**	0.425**
45-64	3,440	5.9	[4.5 - 5.7]	0.735	0.847
65+	1,157	2.8	[8.0 - 10.0]	0.423*	0.683
Province (comparison group is Canada)		NS		NS	*
Newfoundland & Labrador	744	7.2	[5.4 -9.5]	0.789	0.603**
Prince Edward Island	701	9.3	[7.1 - 12.0]	1.078	1.041
Nova Scotia	748	8.7	[6.7 - 11.1]	1.045	1.033
New Brunswick	734	7.3	[5.5 - 9.5]	0.819	0.751
Quebec	821	8.4	[6.6 -10.6]	0.989	1.125
Ontario	781	9.1	[7.1 - 11.5]	1.173	1.237
Manitoba	1,141	7.6	[6.2 - 9.4]	0.906	0.889
Saskatchewan	776	8.9	[7.1 - 11.1]	1.026	1.168
Alberta	1,890	9.5	[8.2 - 11.0]	1.122	1.156
British Columbia	2,360	9.1	[7.9 - 10.4]	1.135	1.231*
Marital Status		***		*	NS
Married/partnered (comparison group)	6,142	6.0	[4.9 - 7.3]	–	–
Divorced/separated/widowed	1,578	7.1	[5.1 - 9.8]	1.614*	1.309
Single/never married	2,912	15.4	[13.3 -17.8]	1.392*	1.153
Education		*		NS	NS
Less than secondary (comparison group)	1,488	11.1	[8.6 - 14.3]	–	–
Secondary	3,002	9.7	[7.9 - 11.8]	0.827	0.789
Some post-secondary	3,526	8.7	[7.1 - 10.5]	0.771	0.775
University degree	2,623	7.0	[5.3 - 9.2]	0.760	0.867

Continued on next page.

Table 4.3: Percentage reporting at least one harm during the past year from own drinking, by demographic characteristics, type of drinker and frequency of 5+ drinks, Canada, current drinkers, aged 15+, 2004 (cont'd)

	N	%	95% CI	Adjusted OR	Adjusted OR with alcohol use predictors
Income Adequacy		*		NS	NS
Lowest (comparison group)	978	13.2	[10.0 - 17.2]	–	–
Middle	4,311	9.4	[7.9 - 11.1]	0.869	0.814
Highest	2,773	7.9	[6.2 - 10.1]	0.764	0.652
Not Stated	2,634	7.5	[5.9 - 9.4]	0.619*	0.603*
Location of Household		NS		NS	NS
Rural (comparison group)	2,210	8.4	[6.5 - 10.8]	–	–
Non-rural	8,486	8.9	[7.9 -10.1]	0.993	0.988
Drinking Status		***			**
Light-infrequent (comparison group)	5,522	3.5	[2.8 - 4.5]		–
Light-frequent	3,015	9.1	[7.4 - 11.2]		2.282**
Heavy-infrequent	973	16.0	[12.2 - 20.8]		2.077**
Heavy-frequent	972	31.5	[26.3 - 37.2]		4.046**
Frequency of Heavy Drinking (5+)		***			**
Never 5+ (comparison group)	5,397	2.7	[1.9 - 3.6]		–
Less than Monthly	2,742	7.0	[5.4 - 9.0]		1.817**
Monthly or more	2,493	23.8	[20.9 - 26.9]		4.768**

Notes: CI—Confidence Interval
OR—adjusted for all variables in the table
* p<.05; ** p<.01; *** p<.001; NS—not significant

Table 4.4: Percentage reporting types of harm experienced in the past year resulting from drinking by others, Canada, total population aged 18+, 2004

Types of harm from drinking by others	Past year N=13,328[1] % yes
1. Insulted or humiliated	22.1 [20.9 -23.4]
2. Family or marriage problems	10.5 [9.6 -11.4]
3. Pushed or shoved	10.8 [9.9 -11.7]
4. Serious arguments or quarrels	15.5 [14.4 -16.6]
5. Verbal abuse	15.8 [14.7 -17.0]
6. Hit or physically assaulted	3.2 [2.8 -3.8]
One or more types of harm	32.7 [31.3 -34.2]

Note: [1] respondents aged 15 to 17 years were not asked these harm questions.

Table 4.5: Percentage reporting at least one harm during the past year because of others' drinking, by demographic characteristics, type of drinker, and frequency of 5+ drinks, Canada, total population aged 18+, 2004

	N	%	95% CI	Adjusted OR	Adjusted OR with alcohol use predictors
Total (aged 18+)	13,328	32.7	[31.3 - 34.2]		
Sex		NS		NS	*
Female (comparison group)	7,913	32.6	[30.7 - 34.5]	–	–
Male	5,415	32.9	[30.7 - 35.2]	0.956	0.833*
Age Group (comparison group is previous age group)		***		**	**
15-17 This group was not queried on victimization.					
18-19	439	62.6	[54.3 - 70.2]	–	–
20-24	1,065	58.3	[53.0 - 63.4]	0.828	0.840
25-34	2,342	41.9	[38.5 - 45.4]	0.562**	0.604**
35-44	2,720	32.7	[29.6 - 35.9]	0.678**	0.672**
45-54	2,706	30.4	[27.2 - 33.8]	0.900	0.932
55-64	1,853	24.8	[21.5 - 28.3]	0.751*	0.781*
65-74	1,179	14.9	[11.5 - 19.0]	0.498*	0.521**
75+	719	5.4	[3.4 - 8.5]	0.298**	0.306**
Province (comparison group is Canada)		**		**	**
Newfoundland & Labrador	954	29.7	[26.7 - 32.9]	0.818**	0.773**
Prince Edward Island	962	33.6	[30.6 - 36.9]	1.027	1.013
Nova Scotia	960	32.1	[28.9 - 35.4]	0.985	0.984
New Brunswick	963	31.4	[28.4 - 34.6]	0.928	0.928
Quebec	967	30.2	[27.3 - 33.3]	0.837	0.853*
Ontario	965	31.8	[28.8 - 35.0]	0.916	0.920
Manitoba	1,449	36.2	[33.7 - 38.8]	1.164*	1.170*
Saskatchewan	942	35.7	[32.7 - 38.9]	1.129	1.142
Alberta	2,292	38.0	[35.9 - 40.1]	1.154**	1.180**
British Columbia	2,874	35.4	[33.6 - 37.3]	1.120*	1.133**
Marital Status		***		**	**
Married/partnered (comparison group)	7,920	28.2	[26.5 - 30.0]	–	–
Divorced/separated/widowed	2,252	27.9	[24.6 - 31.5]	1.599**	1.513**
Single/never married	3,065	46.8	[43.7 - 50.0]	1.340**	1.276**
Education		***		*	*
Less than secondary (comparison group)	1,996	25.6	[22.4 - 29.2]	–	–
Secondary	3,832	31.9	[29.2 - 34.6]	0.908	0.937
Some post-secondary	4,257	38.6	[36.0 - 41.4]	1.160	1.192
University degree	3,146	30.8	[28.1 - 33.7]	0.917	0.977

Continued on next page.

Table 4.5: Percentage reporting at least one harm during the past year because of others' drinking, by demographic characteristics, type of drinker, and frequency of 5+ drinks, Canada, total population aged 18+, 2004 (cont'd)

	N	%	95% CI	Adjusted OR	Adjusted OR with alcohol use predictors
Income Adequacy		*		NS	NS
Lowest (comparison group)	1,507	37.9	[33.4 - 42.5]	–	–
Middle	5,319	33.4	[31.1 - 35.7]	0.833	0.841
Highest	3,125	34.1	[31.2 - 37.0]	0.836	0.863
Not Stated	3,377	28.1	[25.3 - 31.1]	0.734*	0.754*
Location of Household		NS		NS	NS
Rural (comparison group)	2,869	32.2	[29.0 - 35.6]	–	–
Non-rural	10,459	32.8	[31.3 - 34.5]	0.921	0.928
Type of Drinker		***			NS
Lifetime abstainer (comparison group)	882	23.9	[18.9 - 29.8]		–
Former drinker	2,106	30.1	[26.5 - 33.9]		1.322
Light-infrequent drinker	5,300	30.8	[28.7 - 33.1]		0.985
Light-frequent drinker	2,999	31.1	[28.3 - 34.0]		1.040
Heavy-infrequent drinker	883	46.8	[40.6 - 53.1]		1.064
Heavy-frequent drinker	940	52.3	[46.3 - 58.2]		1.257
Frequency of Heavy Drinking (5+)		***			**
Never 5+ (comparison group)	8,292	26.2	[24.5 - 27.9]		–
Less than Monthly	2,615	37.3	[34.1 - 40.7]		1.178
Monthly or more	2,360	48.7	[45.0 - 52.4]		1.707**

Notes: CI—Confidence Interval

OR—adjusted for all variables in the table

* p<.05; ** p<.01; *** p<.001

5. Cannabis Use and Problems

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The views expressed in this chapter are those of the authors and do not necessarily reflect those of the funders.

Highlights

• Overall, 44.5% of Canadians report using cannabis at least once in their lifetime, and 14.1% report use during the 12 months before the survey.

• Males are more likely than females to have used cannabis in their lifetime (50.1% vs. 39.2%) and during the past year (18.2% vs. 10.2%)

• Younger people are more likely to have ever used cannabis, with almost 70% of those between 18 and 24 years old having used it at least once. Younger people are also more likely to be past-year users. Almost 30% of 15–17 year olds and just over 47% of 18 and 19 year olds have used cannabis in the past year. Beyond age 45, less than 10% of the population has used cannabis in the past year.

• Compared with the national average of 44.5%, lifetime use is significantly higher in British Columbia (52.1%) and Alberta (48.7%), and lower than average in Ontario (40.4%), Newfoundland and Labrador (38.5%) and Prince Edward Island (36.5%). Also, compared with the national average of 14.1%, past-year use is significantly higher in British Columbia (16.8%) and Quebec (15.8%), and lower in Saskatchewan (11.4%) and New Brunswick (11.1%).

• Those who were never married are more likely to have smoked cannabis. More than half (57.5%) of the never-married have used cannabis in their lifetime, compared with 35.2% of those who had been previously married, and 40.9% of those who are currently married or living with a partner. However, after adjusting for age differences between marital status groups, both lifetime and past-year cannabis use is significantly lower among married respondents compared with never-married and previously married respondents.

• Lifetime cannabis use increases with education (from 34.9% among those without high school completion to 52.4% among those with some post-secondary education) and then declines to 44.2% among those with a university degree.

• Lifetime experiences with cannabis use increases with income adequacy, from 42.9% of those with a low income adequacy to 44.6% of those with a moderate income and 54.8% of those with a high income adequacy. The association between income adequacy and past-year use is not significant.

• The frequency of cannabis use among past-year users shows wide variation: about 20.8% of users do not report use during the past three months, while 24.9% report use just once or twice, 16.0% report use monthly, 20.3% weekly, and 18.1% daily.

• About one in 20 Canadians reports a cannabis-related concern. The most common concern is failing to control use (4.8%), followed by a strong desire to use (4.5%), and friends' concerns about the respondent's cannabis use (2.2%). Problems such as unfulfilled obligations and experiencing health, social and legal problems are reported by 1% or lower. Among past-year cannabis users, about one-third report failing to control their use (34.1%) and a strong desire to use (32.0%). In addition, about 15.7% report that friends or relatives expressed concern about their cannabis use, 6.9% report failed expectations, and 4.9% report experiencing health, social or legal problems due to their use.

Introduction

The focus of this chapter is on the use of cannabis, such as marijuana and hashish. We describe the lifetime and past-year prevalence of cannabis use and various concerns related to its use.

Lifetime prevalence is based on a question asking respondents whether they "ever used or tried marijuana, cannabis or hashish", and past-year prevalence is based on a follow-up question about whether they also used the drug during the past 12 months.

To assess cannabis problems, we used five items of the World Health Organization (WHO) ASSIST screener (WHO ASSIST Working Group, 2002). Respondents who reported having used cannabis during the three months before the survey were asked (1) how often they had a strong desire or urge to use cannabis, (2) how often their use of cannabis led to health, social, legal or financial problems, (3) if they failed to do what was normally expected of them because of their use of cannabis, (4) whether a friend or relative or anyone else ever expressed concern about their use of cannabis, and (5) whether they ever tried and failed to control, cut down or stop using cannabis. Items one through three refer to the past three-month period and items four and five refer to lifetime use.

Results

As seen in Table 5.1, 44.5% of Canadians report using cannabis during their lifetime (7% report that they tried it only once, and 37% tried it more than once). As seen in Table 5.2, the percentage reporting any use during the past 12 months was 14.1% (30% of lifetime users).

Sex and age are key demographic correlates of cannabis use. As most research has shown, males are more likely than females to have ever used cannabis (50.1% vs. 39.2%), and more likely to have used during the past year (18.2% vs. 10.2%).

For both lifetime and past-year use, cannabis use increases with age from 15–17 years to 18–19 years (from 39.3% to 69.9% for lifetime use, and from 29.2% to 47.2% for past-year use). After this peak rate of use among 18–19 year olds, cannabis use begins a downward movement with lifetime use dropping eventually to 3.1% among those aged 75 and older and past-year use dropping to 1.1% among those aged 65 to 74 years.

Other demographic factors such as marital status, educational level and income adequacy are also related to cannabis use. Those who were never married are more likely to have smoked cannabis. Over half (57.5%) of the never-married have used cannabis in their lifetime, compared with 35.2% of those who were previously married, and 40.9% of those who are currently married or living with a partner. A similar pattern is observed when we examine the percentage of respondents who used cannabis in the past year. However, after adjusting for age differences between marital status groups, both lifetime and past-year cannabis use is significantly lower among married respondents compared with never-married and previously married respondents.

Lifetime cannabis use increases with education (from 34.9% among those without high school completion to 52.4% among those with some post-secondary education) and then declines to 44.2% among those with a university degree. Past-year cannabis use varies, but not significantly, by education, as indicated by the overlapping confidence intervals.

Lifetime experiences with cannabis use increase with income adequacy, from 42.9% of those with a low income adequacy to 44.6% of those with a moderate income and 54.8% of those with a high income adequacy. The association between income adequacy and past-year use is weaker, as indicated by the overlapping confidence intervals.

There are no differences in lifetime cannabis use between respondents who live in rural areas (41.4%), and those living in non-rural centres (45%). However, there are differences in terms of use in the past year. Almost 15% of non-rural residents consumed cannabis in the past year, whereas only 9.8% of rural residents consumed cannabis during this time.

As earlier surveys have shown, rates of use also vary substantially across provinces, from 36.5% to 52.1% for lifetime use and from 10.7% to 16.8% for past-year use. As noted in Tables 5.1 and 5.2, compared with the national average of 44.5%, lifetime use is significantly higher in British Columbia (52.1%) and Alberta (48.7%), and lower than average in Ontario (40.4%), Newfoundland and Labrador (38.5%) and Prince Edward Island (36.5%). Also, compared with the national average of 14.1%, past-year use is significantly higher in British Columbia (16.8%) and Quebec (15.8%), and lower in Saskatchewan (11.4%) and Prince Edward Island (10.7%). See Chapter 7 for more on inter-provincial differences.

Table 5.3 shows the frequency of cannabis use during the three months before the survey. The frequency of cannabis use among past-year users shows wide variation: about 20.8% of users do not report use during the past three months, while 24.9% report use just once or twice, 16.0% report use monthly, 20.3% weekly, and 18.1% daily.

Table 5.4 shows the five problem indicators of the ASSIST scale. About one in 20 Canadians reports a cannabis-related concern. The most common concern is failing to control use (4.8%), followed by a strong desire to use (4.5%), and friends' concerns (2.2%). Problems such as failed expectations and experiencing health, social and legal problems are reported by 1% or lower. Among past-year cannabis users, about one-third report failed control (34.1%) and a strong desire to use (32.0%). In addition, about 15.7% report that friends or relatives expressed concern about their cannabis use, 6.9% report failed expectations, and 4.9% report experiencing health, social or legal problems due to their use.

Summary and Discussion

Chapter 8, which provides an overview of change in cannabis use among Canadians, shows that both lifetime and past-year cannabis use has been moving upward, from 23.2% in 1989 to 44.5% in 2004 for lifetime use, and from 6.5% in 1989 to 14.1% in 2004 for use in the past year. Some research in the U.S. suggests that the aging cohort of cannabis users will place increasing demands on substance use treatment (Gfroerer, Penne, Pemberton, & Folsom, 2003). Although future analyses of the CAS data will address the issue of treatment need, the CAS data do suggest increases in past-year cannabis use among middle- and older-aged adults between 1994 and 2004, from 5.8% to 13.2% among 35 to 44 year olds, from 1.4% to 8.4% among 45 to 54 year olds, and from a low unreliable percentage to 4.4% among 55 to 64 year olds.

The preliminary prevalence data presented in this chapter are solely descriptive in nature, but they do raise issues for further investigation. First, the increase in cannabis use from 15–17 year olds to 18–19 year olds is notable. Unfortunately, with cross-sectional data, it is difficult to determine whether such increases reflect chronological effects (differences due to aging) or cohort effects (differences due to being born in a different time period). Regardless, the 15 to 17 year old group is an obvious target for prevention programming.

Second, cannabis use is generally infrequent, with 45.7% of past-year users reporting use two or fewer times during the past three months. Still, the finding that the percentage of users reporting daily use is 18.1% is worthy of study. For example, has this group increased in size during the past decade, and if so, are certain population segments at greater risk?

Third, most users do not report experiencing serious harms due to their cannabis use. However, a sizeable percentage—about one third—report failed attempts to reduce their use despite low rates of serious harms. This patterning of problems seems similar to cigarette use. Indeed, given some similarities in the harm of cannabis and tobacco smoke (Hall & MacPhee, 2002), cannabis interventions could explore cessation programming developed for cigarette use.

Finally, provincial differences in cannabis use have been enduring, yet little is known about the nature and underlying determinants of these differences.

References

Gfroerer, J., Penne, M., Pemberton, M., & Folsom, R. (2003). Substance abuse treatment need among older adults in 2020: the impact of the aging baby-boom cohort. *Drug Alcohol Depend, 69*(2), 127-135.

Hall, W., & MacPhee, D. (2002). Cannabis use and cancer: Editorial. *Addiction, 97*, 243-247.

WHO ASSIST Working Group. (2002). Alcohol, smoking and substance involvement screening test (ASSIST): Development, reliability and feasibility. *Addiction, 97*(9), 1183-1194.

Table 5.1: Percentage of respondents reporting lifetime cannabis use, by demographic characteristics, Canada, aged 15+, 2004

	N	%	[95% CI]	OR
Total	13,909	44.5	[43.0 - 46.0]	
Sex		***		**
Female (comparison group)	8,188	39.2	[37.3 - 41.1]	–
Male	5,721	50.1	[47.8 - 52.5]	1.496**
Age Group (comparison group is previous age group)		***		**
15-17	581	39.3	[32.7 - 46.2]	–
18-19	439	69.9	[62.2 - 76.6]	4.151**
20-24	1,065	68.5	[63.4 - 73.3]	0.957
25-34	2,342	56.8	[53.3 - 60.3]	0.651**
35-44	2,720	55.3	[51.8 - 58.8]	0.927
45-54	2,706	50.1	[46.5 - 53.8]	0.779*
55-64	1,853	28.2	[24.7 - 32.1]	0.392**
65-74	1,179	12.8	[9.5 - 17.2]	0.350**
75+	719	3.1	[1.4 - 6.9]	0.216**
Province (comparison group is Canada)		***		**
Newfoundland & Labrador	1,001	38.5	[35.4 - 41.7]	0.775**
Prince Edward Island	1,000	36.5	[33.4 - 39.7]	0.762**
Nova Scotia	1,002	43.4	[40.1 - 46.7]	1.100
New Brunswick	1,000	42.1	[38.9 - 45.3]	0.929
Quebec	1,003	46.4	[43.2 - 46.4]	1.129
Ontario	1,000	40.4	[37.3 - 43.7]	0.817**
Manitoba	1,502	44.6	[42.0 - 47.2]	1.113
Saskatchewan	1,000	41.0	[37.9 - 44.1]	0.936
Alberta	2,401	48.7	[46.5 - 50.8]	1.107*
British Columbia	3,000	52.1	[50.2 - 54.0]	1.559**
Marital Status		***		**
Married/partnered (comparison group)	7,930	40.9	[38.9 - 42.9]	–
Divorced/separated/widowed	2,253	35.2	[31.7 - 38.8]	1.704**
Single/never married	3,632	57.5	[54.7 - 60.4]	1.442**
Education		***		**
Less than secondary (comparison group)	2,471	34.9	[31.6 - 38.4]	–
Secondary	3,926	42.3	3[9.5 - 45.1]	0.766*
Some post-secondary	4,267	52.4	[49.7 - 55.2]	1.013
University degree	3,146	44.2	[41.1 - 47.3]	0.723**
Income adequacy		***		**
Lowest (comparison group)	1,554	42.9	[38.5 - 47.5]	–
Middle	5,450	44.6	[42.2 - 47.0]	1.013
Highest	3,183	54.8	[51.7 - 57.9]	1.593**
Don't know/refused	3,732	35.1	[32.3 - 38.0]	0.844
Location of household		NS		NS
Rural (comparison group)	3,008	41.4	[38.0 - 44.9]	–
Non-rural	10,842	45.0	[43.4 - 46.7]	1.068

Notes: CI—Confidence Intervals

OR—adjusted for all variables in the table

S estimate suppressed due to high sampling variability;

Q estimate has high sampling variability; interpret with caution

* p<.05; ** p<.01, *** p<.001

Table 5.2: Percentage of respondents reporting past-year cannabis use, by demographic characteristics, Canada, aged 15+, 2004

	N	%	[95% CI]	OR
Total	13,909	14.1	[13.1 – 15.1]	–
Sex		***		**
Female (comparison group)	8,188	10.2	[9.1 – 11.5]	–
Male	5,721	18.2	[16.6 – 20.0]	1.937**
Age Group (comparison group is previous age group)		***		**
15-17	581	29.2	[23.2 – 35.9]	–
18-19	439	47.2	[39.1 – 55.5]	2.736**
20-24	1,065	36.5	[31.6 – 41.6]	0.706
25-34	2,342	20.4	[17.8 – 23.4]	0.549**
35-44	2,720	13.2	[11.1 – 15.7]	0.601**
45-54	2,706	8.4	[6.7 – 10.5]	0.602**
55-64	1,853	4.4	[2.9 – 6.6]	0.503**
65-74	1,179	1.1	[0.4 – 3.0]	0.238**
75+	719	0.3	[0.1 – 0.8]	0.213**
Province (comparison group is Canada)		**		**
Newfoundland & Labrador	1,001	11.6	[9.6 – 13.9]	0.891
Prince Edward Island	1,000	10.7	[8.7 – 13.0]	0.882
Nova Scotia	1,002	14.4	[12.2 – 17.0]	1.225
New Brunswick	1,000	11.1	[9.1 – 13.3]	0.746**
Quebec	1,003	15.8	[13.6 – 18.2]	1.261*
Ontario	1,000	12.4	[10.4 – 14.6]	0.896
Manitoba	1,502	13.4	[11.7 – 15.3]	1.046
Saskatchewan	1,000	11.4	[9.6 – 13.5]	0.812*
Alberta	2,401	15.4	[13.9 – 17.0]	1.036
British Columbia	3,000	16.8	[15.5 – 18.3]	1.400**
Marital Status		***		**
Married/partnered (comparison group)	7,930	8.9	[7.8 – 10.1]	–
Divorced/separated/widowed	2,253	7.7	[6.1 – 9.6]	1.788**
Single/never married	3,632	28.5	[26.0 – 31.1]	1.955**
Education		***		**
Less than secondary (comparison group)	2,471	14.8	[12.5 – 17.4]	–
Secondary	3,926	14.2	[12.3 – 16.2]	0.662*
Some post-secondary	4,267	16.5	[14.6 – 18.7]	0.787
University degree	3,146	10.9	[9.1 – 12.9]	0.539**
Income adequacy		*		**
Lowest (comparison group)	1,554	17.0	[13.9 – 20.6]	–
Middle	5,450	13.7	[12.2 – 15.4]	0.873
Highest	3,183	15.9	[13.8 – 18.4]	1.209
Don't know/refused	3,732	11.8	[10.0 – 13.7]	0.739
Location of household		***		**
Rural (comparison group)	3,016	9.8	[8.0 – 11.9]	–
Non-rural	10,893	14.9	[13.8 – 16.1]	1.517**

Notes: CI—Confidence Intervals

OR—adjusted for all variables in the table

S estimate suppressed due to high sampling variability;

Q estimate has high sampling variability; interpret with caution

* p<.05; ** p<.01, *** p<.001

Table 5.3: Frequency of cannabis use during the past three months, among total sample and among past-year users, Canada, aged 15+, 2004

	Total sample (n=13,909)		Past-year users (n=1,851)	
	%	95% CI	%	95% CI
Never in past 3 months	88.9	[87.9-89.8]	20.8	[17.8-24.1]
Once or twice	3.5	[3.0-4.1]	24.9	[21.6-28.5]
Monthly	2.2	[1.9-2.7]	16.0	[13.4-19.0]
Weekly	2.8	[2.4-3.4]	20.3	[17.2-23.7]
Daily	2.5	[2.1-3.0]	18.1	[15.3-21.2]

CI—Confidence Intervals

Table 5.4: Percentage reporting cannabis-related symptoms indicative of intervention need, determined by the ASSIST scale, among total sample and among past-year users, Canada, aged 15+, 2004

	Total sample (n=13,909)		Past-year users (n=1,851)	
	%	95% CI	%	95% CI
Strong desire to use (past 3 months)	4.5	[3.9-5.1]	32.0	[28.4-35.7]
Health, social, legal problems (past 3 months)	0.7	[0.5-1.0]	4.9	[3.5-6.8]
Failed expectations (past 3 months)	1.0	[0.7-1.3]	6.9	[5.3-9.0]
Friends concern (lifetime)	2.2	[1.8-2.6]	15.7	[13.2-18.5]
Failed control (lifetime)	4.8	[4.2-5.4]	34.1	[30.5-37.7]

CI—Confidence Intervals

6. Other Drug Use and Problems

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Highlights

• Excluding cannabis, the most commonly reported drugs used during one's lifetime are hallucinogens, used by 11.4%, and cocaine (10.6%), and then speed (6.4%) and ecstasy (4.1%). The lifetime use of inhalants, heroin, steroids and drugs by injection is about 1% or less. The percentage reporting the use of any of the five illicit drugs, excluding cannabis (hallucinogens, cocaine, speed, heroin, ecstasy), is 16.5%, and the percentage reporting the use of any of the eight drugs, including cannabis, is 45.2%.

• Although about one in six Canadians has used an illicit drug other than cannabis, few used these drugs during the past year. More current rates of drug use—those occurring during the past 12 months—are generally 1% or less, with the exception of cocaine use (1.9%). About 3.0% of Canadians (4.3% of males and 1.8% of females) report using at least one of the five illicit drugs other than cannabis (cocaine or crack; hallucinogens, PCP or LSD; speed or amphetamines; heroin; ecstasy, and 14.5% (18.7% of males and 10.6% of females) report using any of the eight drugs, including steroids and inhalants.

• The national rate of lifetime and past-year illicit drug use, other than cannabis (16.5% and 3.0%) is highest among men (21.1% and 4.3%, respectively), 18 to 19 year olds (30.6% and 17.8%) and 20 to 24 year olds (28.1% and 11.5%), residents of Quebec (18.1% and 4.0%), British Columbia (23.0% and 4.0%) and Alberta (18.7% lifetime use only), and single (24.0% and 8.9%) and previously married respondents (13.7% lifetime only).

• For the general population of Canadians, the use of illicit drugs is usually limited to cannabis only. About 29% of Canadians (63.4% of lifetime users) report using only cannabis during their lifetime, and 11.5% (79.1% of past-year users) used only cannabis during the past year.

• The most commonly reported drug-related harm involves physical health, reported by 30.3% of lifetime and 23.9% of past-year users of illicit drugs excluding cannabis, and 15.1% of lifetime and 10% of past-year users of any illicit drug. Following physical health, a cluster of harms, represented somewhat equally, includes harms to one's friendships and social life (22.3% and 16.4% of users excluding cannabis, 10.7% and 6.0% of any illicit users), home and marriage (18.9% and 14.1% excluding cannabis, 8.7% and 5.1% of any illicit users), work (18.9% and 14.2% excluding cannabis, 9.2% and 5.1% of any illicit users) and financial position (19.6% and 18.9% excluding cannabis, 8.4% and 6.5% of any illicit users).

• About 18% of past-year users of illicit drugs, including cannabis, and 36.7% of past-year users, excluding cannabis, report experiencing one or more of eight harms, including those listed above.

• Among past-year users of illicit drugs other than cannabis, 42.1% report symptoms indicative of the need for intervention, as determined by the ASSIST scale.

Introduction

The focus of this chapter is on the use of drugs other than cannabis. We describe the lifetime and past-12-month prevalence of eight drug-use behaviours: cocaine or crack; hallucinogens, PCP or LSD; speed or amphetamines; heroin; ecstasy (MDMA) or other similar drugs; inhalants (glue, gasoline or other solvents); steroids; and injection drug use.

Lifetime prevalence is based on a question asking respondents whether they "ever used or tried" the given drug, and past-year prevalence is based on a follow-up question on whether they also used the drug during the past 12 months.

In addition, we also present six derived variables representing (1) any lifetime and past-year use of six illicit drugs, including cannabis (cannabis; cocaine or crack; hallucinogens, PCP or LSD; speed or amphetamines; heroin; ecstasy, (2) any lifetime and past-year use of five illicit drugs, excluding cannabis, and (3) any lifetime and past-year use of eight drugs (including steroids and inhalants).

The consequences and harms caused by drug use can take several forms, including the general harms to one's physical and social well-being (e.g., negative effects on friendships and social life, work and family) and symptoms that put people at risk for substance use disorders (e.g., uncontrolled use, impaired functioning).

The CAS assessed general harms with eight items reported during one's lifetime and during the 12 months before the survey. These eight items reflect whether the respondent felt that their drug use had a harmful effect on their (1) friendships and social life, (2) physical health, (3) home life and marriage, (4) work and studies, (5) financial position, (6) legal problems, (7) housing, and (8) learning. These harm items have been used in previous national studies (MacNeil & Webster, 1997).

To assess risk of substance use disorders and problems, we used the six items of the WHO ASSIST scale (WHO ASSIST Working Group, 2002). Respondents who reported having used at least one of the following five drugs during the three months before the survey—cocaine or crack; speed or amphetamines; hallucinogens, PCP, LSD; ecstasy or similar drugs; and heroin—were asked (1) how often the drug was used, (2) how often they had a strong desire or urge to use [drug], (3) how often their use of these drugs led to health, social, legal or financial problems, (4) whether they failed to do what was normally expected of them because of their use of these drugs, (5) whether a friend or relative or anyone else ever expressed concern about their use of these drugs, and (6) whether they ever tried to control, cut down or stop using these drugs. Items 1–4 refer to the past three-month period and items 5–6 refer to one's lifetime. The six items are added to produce a total score, with a value of four or more indicating the existence of drug problems that warrant intervention.

Results

Lifetime and Past-Year Prevalence of Use

Lifetime Use

Excluding cannabis, the most commonly reported drugs used during one's lifetime are hallucinogens, used by 11.4%, followed closely by cocaine use (10.6%), and then speed (6.4%) and ecstasy (4.1%) (Table 6.1). The lifetime use of drugs such as inhalants, heroin, steroids and injection drug use is about 1% or less. The percentage reporting the use of any of the five illicit drugs, excluding cannabis (hallucinogens, cocaine, speed, heroin, ecstasy), is 16.5%, and the percentage reporting the use of any of the eights drugs, including cannabis, is 45.2%.

Men are more likely than women to report lifetime use of hallucinogens (16.0% vs. 7.1%), cocaine (14.1% vs. 7.3%), speed (8.7% vs. 4.1%) and ecstasy (5.2% vs. 3.0%), and are more likely to report use of any of these drugs.

As seen in Table 6.1, rates of drug use do not vary greatly until the 55-64 age group, whose rate of use is significantly lower compared with younger groups. The exception to this rule was for the more recent drug ecstasy, use of which was higher among 15 to 19 year olds (10.1%) and 20 to 24 year olds (13.4%) and afterwards declined with age.

Past-Year Use

Although about one in six Canadians has used an illicit drug other than cannabis in their lifetime, few have used these drugs during the past year (Table 6.2). More current rates of drug use—those occurring during the past 12 months—were generally 1% or less, with the exception of cocaine use (1.9%). About 3.0% of Canadians (4.3% of males and 1.8% of females) report using at least one of the five illicit drugs, and 14.5% (18.7% of males and 10.6% of females) report using any of the eight drugs.

Subgroup differences

Tables 6.3–6.6 present subgroup percentages and related multivariable regressions for four outcomes—the percentage reporting any lifetime and past-year use of six illicit drugs, including cannabis, and any lifetime and past-year use of five illicit drugs, excluding cannabis.

For all four outcomes, men are significantly more likely than women to report use of illicit drugs (21.1% vs. 12.2% for lifetime use of any five illicit drugs, 4.3% vs. 1.8% for past-year use of any five illicit drugs, 50.6% vs. 39.9% for any use of six illicit drugs, and 18.7% vs. 10.6% for past-year use of any six illicit drugs.

Age also shows a strong association with the use of illicit drugs. For each of the four outcomes, illicit drug use is significantly higher among 18 to 19 year olds compared with 15 to 17 year olds. After age 18 to 19, illicit drug use begins a rather steady decline. For example, the lifetime and past-year use of any illicit drug excluding cannabis is 30.6% and 17.8% among 18 to 19 year olds, compared with 10.5% and 5.2% among 15 to 17 year olds, and with 28.1% and 11.5% of 20 to 24 year olds.

Rates of drug use also show substantial variation according to province, varying from 36.9% to 52.7% for lifetime use of an illicit drug including cannabis, from 10.7% to 17.5% for past-year use of an illicit drug including cannabis, from 8.3% to 23.0% for lifetime use of an illicit drug excluding cannabis, and from 1.4% to 4.0% for past-year use of an illicit drug excluding cannabis. The provinces showing rates above the national average are British Columbia and Quebec (for all four outcomes) and Alberta (for lifetime use of an illicit drug including cannabis and excluding cannabis). The provinces with below average rates are New Brunswick (for lifetime and past-year use of five illicit drugs, and past-year use of six illicit drugs) and Newfoundland and Labrador (for lifetime and past-year use of five illicit drugs, and lifetime use of six illicit drugs). In addition, respondents from Prince Edward Island report below average rates of lifetime use of any illicit drug including cannabis (see also Chapter 7 for more on provincial differences).

Marital status also shows strong associations with drug use. For example, previously married respondents and never-married respondents are 1.7 times and 1.5 times more likely than married respondents to report lifetime illicit drug use excluding cannabis, and 3.5 times and 5.3 times more likely to report past-year drug use.

Compared with factors such as age and sex, socio-economic factors such as education and income are not as strongly associated with illicit drug use. Although drug use differences are not dominant, the percentage reporting any illicit drug use generally shows that those without a high school education are less likely than those with higher education to report illicit drug use. Those who did not report their income to the interviewer are less likely to report illicit drug use.

Differences in illicit drug use between rural and non-rural residents are generally small. The exception occurs for the past-year use of any illicit drug (including cannabis). In this instance, residents living in non-rural areas are more likely than those living in rural areas to report use (15.3% vs. 10.1%).

Combination Use

In understanding drug-taking behaviour it is important to recognize that many users of one illicit drug are also users of another. For example, many of those who use cocaine also use cannabis. Table 6.7 shows the configuration of lifetime and past-year use of cannabis and other drugs.

For the general population of Canadians, the use of illicit drugs is usually restricted to the use of cannabis only. About 28.7% of Canadians (63.4% of lifetime users) report using only cannabis during their lifetime, and 11.5% (79.1% of past-year users) used only cannabis during the past year. Still, for many, drug-taking transcends cannabis use. More than one in six, about 15% (35.1% of lifetime users, used other drugs in addition to cannabis during their lifetime and 2.6% (18.1% of past-year users) used other drugs in addition to cannabis during the past year.

Harms and Problems

Table 6.8 shows the harms reported by lifetime and past-year users of any illicit drug other than cannabis and users of any illicit drug (cannabis included). Among both types of users, the most commonly reported harm involves physical health, reported by 30.3% of lifetime and 23.9% of past-year users excluding cannabis (and 15.1% of lifetime and 10.1% of past-year users of any illicit drug). Following physical health, a cluster of harms—represented somewhat equally—includes harms to one's friendships and social life (22.3% and 16.4% of users excluding cannabis, 10.7% and 6.0% of any illicit users), home and marriage (18.9% and 14.1% excluding cannabis, 8.7% and 5.1% of any illicit users), work (18.9% and 14.2% excluding cannabis, 9.2% and 5.1% of any illicit users) and financial position (19.6% and 18.9% excluding cannabis, 8.4% and 6.5% of any illicit users). Overall, 45.7% and 36.7% of users excluding cannabis, and 23.8% of lifetime and 17.5% of past-year illicit drug users, report experiencing one or more of eight harm items.

Table 6.9 shows the percentage of past-year users of any illicit drug who report drug-related harms during the 12 months before the survey and the percentage of lifetime drug users who report harms during their lifetime. The larger sample size of lifetime drug users also allowed for a multivariable logistic regression. Past-year harms are highest among 15 to 17 year olds (29.9%) and 18 to 19 year olds (30.6%), single respondents (21.7%), and those with lower education. Past-year harms are not significantly associated with sex, province, income adequacy or rural residence. Lifetime harms are highest among males (27.2%), 18 to 19 year olds (43.6%) and 15 to 17 year olds (37.6%), single respondents (31.5%), those with lower education and income adequacy. In addition, the regression analysis shows higher harms among respondents from Alberta (26.2%) and British Columbia (25.7%) and below average harms for residents of Newfoundland and Labrador (18.5%) and New Brunswick (18.3%)).

Table 6.10 shows the percentage of lifetime illicit drug users (excluding cannabis) who report the five ASSIST problem items and the percentage of past-year users who report the ASSIST items. About 7.8% of lifetime drug users and 42.1% of past-year users report symptoms indicative of moderate or high need for intervention. The most commonly reported symptoms are failure to control use (6.1% of lifetime users and 33.1% of past-year users) followed by significant others expressing concern (4.4% and 23.8%) and a strong desire to use (4.0% and 21.5%). Additional analyses (data not tabulated) show that among past-year illicit drug users, the percentage identified as being at risk does not differ between males (38.7% [29.1%–49.2% CI]) and females (49.5% [36.4%–62.7% CI]) or between 15 to 24 year olds (39.3% [29.3%–50.2% CI]) and 25 to 44 year olds (44.5% [31.2%–58.6% CI]).

Summary and Discussion

As noted in Chapter 2, when interpreting the nature and importance of these data we must recognize that self-reported drug use is likely underestimated, and our estimates are thus conservative. Still, it is important to note that our CAS estimates of drug use compared with the earlier CCHS are equal or higher.

Moreover, the trend data presented in Chapter 8 show that the use of illicit drugs other than cannabis has increased during the past decade. For example, between 1994 and 2004, the lifetime use of cocaine and crack increased from 3.8% to 10.6%, use of LSD and hallucinogens increased from 5.2% to 11.4% and the use of speed increased from 2.1% to 6.4%. This increase is not surprising given increases in adolescent drug use witnessed during the mid-1990s (Adlaf & Paglia, 2003; Poulin, et al., 1999).

In this chapter, we found that only one in six Canadians has used an illicit drug other than cannabis, and even fewer—one in 33—has used such drugs during the past year. Given that most who have used an illicit drug in their lifetime no longer continue to use suggests that more emphasis should be placed on recent use and current harms and consequences.

This chapter also emphasizes that the consequences and harms caused by drug use should not be restricted to those solely based on standardized psychiatric criteria such as drug dependence. The CAS found that 45.7% of lifetime users of illicit drugs other than cannabis and 36.7% of past-year users report harms due to their drug use. Moreover, screening questions in the CAS found that 42.1% of those that used an illicit drug other than cannabis during the past year are identified as being in need of intervention.

Although this chapter presents a preliminary descriptive picture of illicit drug use, it also lays the foundation for future research. For example, there is a need to better understand the determinants of provincial and regional differences in alcohol and other drug use, as noted in our data.

References

Adlaf, E.M., & Paglia, A. (2003). *Drug Use Among Ontario Students: Detailed OSDUS Findings, 1977-2003*, CAMH Research Document No. 13. Toronto: Centre for Addiction and Mental Health. Available at http://www.camh.net/research/population_life_course.html

MacNeil, P., & Webster, I. (1997). *Canada's Alcohol and Other Drugs Survey 1994: A Discussion of the Findings*, Ottawa: Minister of Public Works and Government Services Canada.

Poulin, C., Van Til, L., Wilbur, B., Clarke, B., MacDonald, C.A., Barcelo, A., & Lethbridge, L. (1999). Alcohol and other drug use among adolescent students in Atlantic Provinces. *Canadian Journal of Public Health, 90*(1), 27-29.

WHO ASSIST Working Group (2002). Alcohol, smoking and substance involvement screening test (ASSIST): Development, reliability and feasibility. *Addiction*, 97(9), 1183-1194.

Table 6.1: Lifetime other drug use, by sex and age group, Canada, aged 15+, 2004 (N=13,909)

Illicit Drugs	Lifetime Use									
	Total	Sex		Age						
		Male	Female	15-19	20-24	25-34	35-44	45-54	55-64	65+
Hallucinogens	11.4 [10.5-2.4]	16.0 [14.4-17.8]	7.1 [6.2-8.1]	13.2 [9.9-17.5]	19.2 [15.7-23.3]	17.8 [15.3-20.6]	13.4 [11.2-16.0]	14.1 [11.7-16.8]	4.5 [3.0-6.7]	S
Cocaine	10.6 [9.7-11.6]	14.1 [12.6-15.8]	7.3 [6.4-8.3]	9.8 [6.8-14.0]	15.0 [12.0-18.5]	15.0 [12.7-17.5]	16.5 [14.1-19.3]	12.5 [10.3-15.0]	3.7 [2.3-5.7]	S
Speed	6.4 [5.6-7.2]	8.7 [7.4-10.2]	4.1 [3.5-5.0]	8.3 [5.7-11.8]	11.2 [8.4-14.6]	8.0 [6.3-10.2]	6.9 [5.1-9.1]	8.9 [6.9-11.4]	3.2 [2.0-5.2]	S
Ecstasy	4.1 [3.5-4.7]	5.2 [4.3-6.3]	3.0 [2.4-3.7]	10.1 [7.3-13.9]	13.4 [10.4-17.2]	8.7 [6.8-11.0]	2.3 [1.5-3.6]	1.4 [0.8-2.3]	0.1 [0.0-0.2]	S
Inhalants	1.3 [1.0-1.6]	1.9 [1.4-2.5]	0.7 [0.5-1.0]	1.4 [0.6-3.2]	2.1 [1.1-4.0]	1.8 [1.1-2.9]	1.3 [0.8-2.1]	1.8 [1.1-3.1]	0.6 [0.2-2.0]	S
Injection use	1.1 [0.8-1.4]	1.6 [1.1-2.2]	0.6 [0.4-0.8]	S	1.3 [0.7-2.7]	1.2 [0.7-2.1]	1.1 [0.6-2.0]	2.3 [1.4-3.7]	S	S
Heroin	0.9 [0.6- 1.2]	1.3 [0.9-1.9]	0.5 [0.3-0.7]	S	S	1.4 [0.7-2.6]	1.3 [0.7-2.4]	1.3 [0.7-2.2]	S	S
Steroids	0.6 [0.4-0.8]	1.0 [0.7-1.5]	S	S	S	S	1.2 [0.6-2.3]	S	S	S
Any 5 illicit drugs	**16.5** [15.4-17.6]	**21.1** [19.3-23.0]	**12.2** [11.0-13.4]	**19.8** [15.7-24.6]	**28.1** [23.9-32.8]	**24.6** [21.7-27.6]	**21.0** [18.4-24.0]	**18.5** [15.8-21.4]	**6.1** [4.4-8.4]	**1.0** [0.5-2.1]
Any 6 illicit drugs	**45.1** [43.6-46.6]	**50.6** [48.2-52.9]	**39.9** [38.0-41.8]	**54.0** [48.6-59.4]	**69.3** [64.2-74.0]	**57.7** [54.2-61.2]	**55.6** [52.1-59.0]	**51.3** [47.6-54.9]	**28.5** [25.0-32.4]	**9.5** [7.2-12.5]
Any 8 drugs	**45.2** [43.7-46.7]	**50.9** [48.6-53.3]	**39.9** [38.0-41.8]	**54.1** [48.6-59.4]	**69.5** [64.4-74.2]	**57.8** [54.3-61.3]	**56.1** [52.6-59.5]	**51.3** [47.6-55.0]	**28.6** [25.0-32.4]	**9.7** [7.3-12.6]

Note: S—estimate suppressed due to high sampling variability

Any 5 illicit drugs include: cocaine, speed, ecstasy, hallucinogens, and heroin.

Any 6 illicit drugs include: cannabis, cocaine, speed, ecstasy, hallucinogens, and heroin.

Any 8 drugs include: cannabis, cocaine, speed, ecstasy, hallucinogens, inhalants, steroids and heroin.

Table 6.2: Past-year other drug use, by sex and age groups, Canada, aged 15+, 2004 (N=13,909)

Illicit drugs	Past-year use		
	Total	Male	Female
Hallucinogens	0.7 [0.5-0.9]	1.0 [0.7-1.5]	S
Cocaine	1.9 [1.5-2.3]	2.7 [2.1-3.5]	1.1 [0. 8-1.6]
Speed	0.8 [0.6-1.1]	1.0 [0.7-1.6]	0.7 [0.4-1.1]
Ecstasy	1.1 [0.8-1.5]	1.5 [1.1-2.2]	0.7 [0.4-1.1]
Inhalants	S	S	S
Injection use	S	S	S
Heroin	S	S	S
Steroids	S	S	S
Any 5 illicit drugs	**3.0** [2.6-3.6]	**4.3** [3.5-5.3]	**1.8** [1.4-2.4]
Any 6 illicit drugs	**14.5** [13.5-15.6]	**18.7** [17.0-20.4]	**10.6** [9.4-11.8]
Any 8 drugs	**14.5** [13.5-15.6]	**18.7** [17.0-20.5]	**10.6** [9.5-11.8]

Note: S—estimate suppressed due to high sampling variability

Any 5 illicit drugs include: cocaine, speed, ecstasy, hallucinogens, and heroin.

Any 6 illicit drugs include: cannabis, cocaine, speed, ecstasy, hallucinogens, and heroin.

Any 8 drugs include: cannabis, cocaine, speed, ecstasy, hallucinogens, inhalants, steroids and heroin.

Table 6.3: Percentage reporting lifetime use of any of 5 illicit drugs (cocaine, speed, ecstasy, hallucinogens, heroin), by demographic characteristics, Canada, aged 15+, 2004

	N	%	95% CI	Adjusted OR
Total	13,909	16.5	[15.4-17.6]	–
Sex		***		***
Female (comparison group)	8,188	12.2	[11.0-13.4]	–
Male	5,721	21.1	[19.3-23.0]	1.868***
Age Group (comparison group is previous age group)		***		***
15-17	581	10.5	[7.0-15.4]	–
18-19	439	30.6	[23.3-38.9]	5.063**
20-24	1,065	28.1	[23.9-32.8]	0.971
25-34	2,342	24.6	[21.7-27.6]	0.992
35-44	2,720	21.0	[18.4-24.0]	0.802
45-54	2,706	18.5	[15.8-21.4]	0.829
55-64	1,853	6.1	[4.4-8.4]	0.270**
65-74	1,179	1.4Q	[0.6-3.1]	0.211**
75+	719	S	S	S
Province (comparison group is Canada)		***		***
Newfoundland & Labrador	1,001	8.3	[6.6-10.3]	0.512**
Prince Edward Island	1,000	11.9	[10.0-14.3]	0.840
Nova Scotia	1,002	13.4	[11.2-15.8]	0.987
New Brunswick	1,000	10.8	[8.9-13.0]	0.674**
Quebec	1,003	18.1	[15.8-20.8]	1.310**
Ontario	1,000	14.0	[11.8-16.4]	0.967
Manitoba	1,502	14.8	[13.1-16.8]	1.075
Saskatchewan	1,000	14.2	[12.1-16.5]	1.029
Alberta	2,401	18.7	[17.1-20.4]	1.263**
British Columbia	3,000	23.0	[21.4, 24.6]	1.975**
Marital Status		***		***
Married/partnered (comparison group)	7,930	13.7	[12.4-15.2]	–
Divorced/Separated/Widowed	3,632	13.5	[11.1-16.2]	1.753**
Single/never married	2,253	24.0	[21.7-26.4]	1.534**
Education		***		***
Less than secondary (comparison group)	2,471	14.3	[12.0-16.9]	–
Secondary	3,926	15.9	[14.0-18.1]	0.604**
Some post-secondary	4,267	21.1	[18.9-23.5]	0.750
University degree	3,146	13.4	[11.5-15.5]	0.441**
Income adequacy		***		*
Lowest (comparison group)	1,544	17.9	[14.8-21.6]	–
Middle	5,450	17.4	[15.7-19.2]	0.943
Highest	3,183	19.4	[17.1-22.0]	1.142
Not Stated	3,732	11.8	[10.0-13.9]	0.761
Location of Household		NS		NS
Rural (comparison group)	3,016	15.1	[12.7-17.9]	–
Non-rural	10,893	16.7	[15.5-18.0]	1.102

Notes: CI—Confidence Intervals

OR—adjusted for all variables in the table.

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

NS—not significant

* p<.05; ** p<.01, *** p<.001

Table 6.4: Percentage reporting past-year use of any of 5 illicit drugs (cocaine, speed, ecstasy, hallucinogens, heroin), by demographic characteristics, Canada, aged 15+, 2004

	N	%	95% CI	Adjusted OR
Total	13,909	3.0	[2.6-3.6]	–
Sex		***		***
Female (comparison group)	8,188	1.8	[1.4-2.4]	–
Male	5,721	4.3	[3.5-5.3]	2.249**
Age Group (comparison group is previous age group)		***		***
15-17	581	5.2	[2.9-8.9]	–
18-19	439	17.8	[12.0-25.5]	4.801**
20-24	1,065	11.5	[8.8-14.9]	0.753
25-34	2,342	4.8	[3.5-6.6]	0.635
35-44	2,720	1.7	[1.0-2.8]	0.396**
45-54	2,706	0.5Q	[0.2-0.8]	0.239**
55-64	1,853	S	S	S
65-74	1,179	S	S	S
75+	719	S	S	S
Province (comparison group is Canada)		*		***
Newfoundland & Labrador	1,001	1.4Q	[0.7-2.5]	0.551*
Prince Edward Island	1,000	2.2Q	[1.3-3.5]	0.968
Nova Scotia	1,002	2.3Q	[1.5-3.6]	0.947
New Brunswick	1,000	1.5Q	[0.9-2.6]	0.570*
Quebec	1,003	4.0	[2.9-5.4]	1.826**
Ontario	1,000	2.3Q	[1.5-3.5]	0.865
Manitoba	1,502	2.6	[1.9-3.7]	1.063
Saskatchewan	1,000	2.8Q	[2.0-4.0]	1.091
Alberta	2,401	3.3	[2.7-4.2]	1.148
British Columbia	3,000	4.0	[3.3-4.8]	1.651**
Marital Status		***		***
Married/partnered (comparison group)	7,930	0.8	[0.5-1.1]	–
Divorced/Separated/Widowed	3,632	1.0	[0.6-1.8]	3.516**
Single/never married	2,253	8.9	[7.3-10.6]	5.334**
Education		*		NS
Less than secondary (comparison group)	2,471	2.9	[2.0-4.3]	–
Secondary	3,926	3.6	[2.7-4.8]	0.822
Some post-secondary	4,267	3.8	[2.9-5.0]	0.902
University degree	3,146	1.7	[1.0-2.7]	0.478
Income adequacy		NS		NS
Lowest (comparison group)	1,544	4.5	[3.0-6.7]	–
Middle	5,450	2.9	[2.2-3.8]	0.847
Highest	3,183	3.0	[2.1-4.2]	1.096
Not Stated	3,732	2.8	[2.0-3.9]	0.772
Location of Household		*		NS
Rural (comparison group)	3,016	1.9	[1.2-2.9]	–
Non-rural	10,893	3.2	[2.7-3.9]	1.376

Notes: CI—Confidence Intervals

OR—adjusted for all variables in the table.

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

NS—not significant

* p<.05; ** p<.01, *** p<.001

Table 6.5: Percentage reporting lifetime use of any of 6 illicit drugs (cannabis, cocaine, speed, ecstasy, hallucinogens, heroin), by demographic characteristics, Canada, aged 15+, 2004

	N	%	95% CI	Adjusted OR
Total	13,909	45.1	[43.6-46.6]	–
Sex		***		***
Female (comparison group)	8,188	39.9	[38.0-41.8]	–
Male	5,721	50.6	[48.2-52.9]	1.477**
Age Group (comparison group is previous age group)		***		***
15-17	581	39.5	[32.9-46.4]	–
18-19	439	70.9	[63.3-77.5]	4.372**
20-24	1,065	69.3	[64.2-74.0]	0.942
25-34	2,342	57.7	[54.2-61.2]	0.650**
35-44	2,720	55.6	[52.1-59.0]	0.904
45-54	2,706	51.3	[47.6-54.9]	0.809*
55-64	1,853	28.5	[25.0-32.4]	0.377**
65-74	1,179	13.4	[9.9-17.7]	0.360**
75+	719	3.3	[1.5-7.1]	0.218**
Province (comparison group is Canada)		***		***
Newfoundland & Labrador	1,001	38.5	[35.4-41.7]	0.757**
Prince Edward Island	1,000	36.9	[33.8-40.1]	0.756**
Nova Scotia	1,002	43.7	[40.4-47.1]	1.087
New Brunswick	1,000	42.5	[39.3-45.7]	0.927
Quebec	1,003	47.3	[44.1-50.5]	1.151*
Ontario	1,000	40.9	[37.8-44.2]	0.825**
Manitoba	1,502	44.8	[42.3-47.4]	1.107
Saskatchewan	1,000	41.3	[38.3-44.5]	0.935
Alberta	2,401	49.3	[47.1-51.4]	1.117*
British Columbia	3,000	52.7	[50.8-54.5]	1.577**
Marital Status		***		***
Married/partnered (comparison group)	7,930	41.4	[39.4-43.4]	–
Divorced/Separated/Widowed	3,632	36.0	[32.5-39.7]	1.744**
Single/never married	2,253	58.3	[55.4-61.1]	1.453**
Education		***		***
Less than secondary (comparison group)	2,471	35.7	[32.4-39.2]	–
Secondary	3,926	42.9	[40.1-45.7]	0.747**
Some post-secondary	4,267	53.0	[50.3-55.8]	0.984
University degree	3,146	44.7	[41.6-47.8]	0.703**
Income adequacy		***		***
Lowest (comparison group)	1,544	43.7	[39.3-48.3]	–
Middle	5,450	45.6	[43.2-48.0]	1.028
Highest	3,183	55.1	[52.0-58.2]	1.559**
Not Stated	3,732	35.2	[32.5-38.1]	0.820
Location of Household		**		NS
Rural (comparison group)	3,016	42.2	[38.8-45.7]	–
Non-rural	10,893	45.6	[43.9-47.3]	1.064

Notes: CI—Confidence Intervals

OR—adjusted for all variables in the table.

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

NS—not significant

* p<.05; ** p<.01, *** p<.001

Table 6.6: Percentage reporting past-year use of any of 6 illicit drugs (cannabis, cocaine, speed, ecstasy, hallucinogens, heroin), by demographic characteristics, Canada, aged 15+, 2004

	N	%	95% CI	Adjusted OR
Total	13,909	14.5	[13.5-15.6]	–
Sex		***		***
Female (comparison group)	8,188	10.6	[9.4-11.8]	–
Male	5,721	18.7	[17.0-20.4]	1.933**
Age Group (comparison group is previous age group)		***		***
15-17	581	29.5	[23.5-36.2]	–
18-19	439	48.6	[40.4-56.9]	2.908**
20-24	1,065	37.6	[32.7-42.7]	0.706
25-34	2,342	21.3	[18.5-24.3]	0.555**
35-44	2,720	13.6	[11.5-16.1]	0.590**
45-54	2,706	8.6	[6.8-10.7]	0.594**
55-64	1,853	4.4	[2.9-6.6]	0.489**
65-74	1,179	1.1	[0.4-3.0]	0.236**
75+	719	S	S	S
Province (comparison group is Canada)		***		***
Newfoundland & Labrador	1,001	11.7	[9.7-14.0]	0.874
Prince Edward Island	1,000	10.7	[8.7-13.0]	0.855
Nova Scotia	1,002	14.5	[12.3-17.1]	1.205
New Brunswick	1,000	11.1	[9.2-13.4]	0.732**
Quebec	1,003	16.4	[14.2-18.9]	1.299**
Ontario	1,000	12.6	[10.6-14.9]	0.890
Manitoba	1,502	13.7	[12.0-15.6]	1.045
Saskatchewan	1,000	11.8	[9.9-13.9]	0.824
Alberta	2,401	15.9	[14.4-17.5]	1.053
British Columbia	3,000	17.5	[16.1-19.0]	1.446**
Marital Status		***		***
Married/partnered (comparison group)	7,930	9.0	[7.9-10.3]	–
Divorced/Separated/Widowed	3,632	8.0	[6.4-10.0]	1.847**
Single/never married	2,253	29.4	[26.9-32.0]	2.014**
Education		***		**
Less than secondary (comparison group)	2,471	15.3	[13.0-17.9]	–
Secondary	3,926	14.6	[12.7-16.7]	0.647**
Some post-secondary	4,267	17.0	[15.0-19.2]	0.768
University degree	3,146	11.1	[9.4-13.1]	0.521**
Income adequacy		**		**
Lowest (comparison group)	1,544	17.8	[14.6-21.4]	–
Middle	5,450	14.2	[12.7-15.8]	0.863
Highest	3,183	16.3	[14.1-18.8]	1.175
Not Stated	3,732	12.0	[10.3-14.0]	0.711
Location of Household		***		**
Rural (comparison group)	3,016	10.1	[8.3-12.3]	–
Non-rural	10,893	15.3	[14.2-16.5]	1.504**

Notes: CI—Confidence Intervals

OR—adjusted for all variables in the table.

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

NS—not significant

* p<.05; ** p<.01, *** p<.001

Table 6.7: Illicit drug use, lifetime and past-year, Canadians, aged 15+, 2004

Drug used	Lifetime		Past year	
	Total sample N=13,909	Lifetime users N=6,224	Total sample N=13,909	Past-year users N=1,902
None	54.8	–	85.5	–
Cannabis only	28.7	63.4	11.5	79.1
Other illicit drug and cannabis	15.8	35.1	2.6	18.1
Other illicit drug only	0.7	1.5	0.4	2.8

Note: Other illicit drug includes: cocaine, speed, hallucinogens, ecstasy, and heroin.

Table 6.8: Percentage reporting harms from one's own drug use, lifetime and past-year, Canada, aged 15+, 2004

Types of harm Drug use had a harmful effect on your ...	Lifetime[1] drug users (including cannabis) N=6,250 % yes	Past-year[2] drug users (including cannabis) N=1,909 % yes	Lifetime[3] illicit drug users (excluding cannabis) N=2,181 % yes	Past-year[4] illicit drug users (excluding cannabis) N=375 % yes
1. Friendships and social life	10.7 [9.4-12.1]	6.0 [4.4-8.0]	22.3 [19.4-25.5]	16.4 [11.0-23.7]
2. Physical health	15.1 [13.6-16.7]	10.1 [8.1-12.6]	30.3 [27.1-33.8]	23.9 [17.6-31.6]
3. Home life or marriage	8.7 [7.6-10.1]	5.1 [3.7-6.9]	18.9 [16.2-22.0]	14.1 [9.4-20.7]
4. Work, studies or employment opportunities	9.2 [8.0-10.6]	5.1 [3.6-7.1]	18.9 [16.2-22.0]	14.2 [9.2-21.2]
5. Financial position	8.4 [7.3-9.7]	6.5 [4.9-8.6]	19.6 [16.9-22.6]	18.9 [13.3-26.2]
6. Legal problems	4.2 [3.4-5.2]	1.3[Q] [0.7-2.5]	10.0 [7.9-12.5]	S
7. Housing	1.9 [1.4-2.6]	S	4.4 [3.0-6.3]	3.3[Q] [1.0-10.7]
8. Learning	6.1 [5.1-7.2]	3.5 [2.3-5.2]	12.0 [9.8-14.6]	8.3 [4.5-14.8]
One or more types of harm	**23.8** [22.0-25.8]	**17.5** [14.8-20.5]	**45.7** [42.1-49.4]	**36.7** [29.2-45.0]

Note: S—estimate suppressed due to high sampling variability;
Q—qualified release due to high sampling variability

[1]Lifetime harm: percentages are of current and former drug users (respondents reporting lifetime use of any of the following 8 drugs: cannabis, cocaine, speed, hallucinogens, ecstasy, inhalants, heroin, and steroids)

[2] Past-year harm: percentages are of current drug users (respondents reporting past-12-months use of any of the following 8 drugs: cannabis, cocaine, speed, hallucinogens, ecstasy, inhalants, heroin, and steroids)

[3]Lifetime harm: percentages are of current and former illicit drug users (respondents reporting lifetime use of any of the following 5 illicit drugs: cocaine, speed, hallucinogens, ecstasy and heroin)

[4] Past-year harm: percentages are of current illicit drug users (respondents reporting past-12-months use of any of the following 5 illicit drugs: cocaine, speed, hallucinogens, ecstasy and heroin)

Table 6.9: Percentage reporting one or more harms from one's own drug use: lifetime and past-year, Canada, aged 15+, 2004

	Past-year users (including cannabis)	Past-year harm		Lifetime users (including cannabis)	Lifetime harm		
	N	%	95% CI	N	%	95%	Adjusted OR
Total	1,909	17.5	[14.8-20.5]	6,250	23.8	[22.0-25.8]	–
Sex		NS			***		***
Female (comparison group)	796	16.0	[12.1-20.8]	3,232	19.8	[17.6-22.3]	–
Male	1,113	18.4	[15.0-22.3]	3,018	27.2	[24.5-30.1]	1.623**
Age Group (comparison group is previous age group)		***			***		***
15-17	159	29.9	[19.9-42.2]	237	37.6	[28.1-48.1]	–
18-19	203	30.6	[20.9-42.3]	274	43.6	[33.6-54.1]	1.681
20-24	393	18.2	[13.3-24.5]	699	29.9	[24.7-35.7]	0.641
25-34	464	13.1	[8.8-19.0]	1,334	25.4	[21.7-29.5]	0.925
35-44	362	15.8	[10.2-23.7]	1,608	22.5	[18.9-26.4]	0.864
45-54	243	10.6	[5.6-19.0]	1,374	18.8	[15.2-23.1]	0.824
55-64	65	3.1	[1.1-8.4]	497	16.7	[11.5-23.6]	0.743
65+	15	S	S	157	5.2	[2.3-11.5]	0.269**
Province (comparison group is Canada)		NS			NS		**
Newfoundland & Labrador	106	20.3	[13.4-29.6]	375	18.5	[14.7-23.0]	0.725*
Prince Edward Island	90	15.9	[9.3-25.9]	352	24.4	[19.9-29.5]	1.114
Nova Scotia	134	19.9	[13.7-27.9]	428	20.3	[16.5-24.7]	0.879
New Brunswick	105	14.7	[8.9-23.2]	414	18.3	[14.7-22.5]	0.695**
Quebec	164	21.6	[15.8-28.7]	464	24.5	[20.7-28.8]	1.010
Ontario	124	12.9	[7.9-20.2]	409	22.4	[18.4-26.9]	1.039
Manitoba	194	19.2	[14.1-25.6]	668	24.5	[21.3-28.0]	1.047
Saskatchewan	123	24.4	[17.6-33.0]	424	27.6	[23.4-32.1]	1.234
Alberta	358	18.4	[14.7-22.9]	1,157	26.2	[23.6-28.9]	1.205*
British Columbia	511	17.6	[14.4-21.3]	1,559	25.7	[23.5-28.0]	1.240**
Marital Status		**			***		*
Married/partnered (comparison group)	661	11.0	[7.5-15.9]	3,286	18.8	[16.5-21.3]	–
Divorced/Separated/Widowed	203	16.2	[9.5-26.0]	850	22.9	[18.2-28.4]	1.451*
Single/never married	1,035	21.7	[17.9-26.0]	2,089	31.5	[28.1-35.1]	1.362*

Continued on next page.

Table 6.9: Percentage reporting one or more harms from one's own drug use: lifetime and past-year, Canada, aged 15+, 2004 (cont'd)

	Past-year users (including cannabis)	Past-year harm		Lifetime users (including cannabis)	Lifetime harm		
	N	%	95% CI	N	%	95%	Adjusted OR
Education		***			***		**
Less than secondary (comparison group)	350	28.5	[21.1-37.2]	836	35.5	[30.1-41.3]	–
Secondary	551	24.3	[18.7-31.0]	1,686	26.8	[23.1-30.9]	0.676*
Some post-secondary	670	11.2	[8.1-15.2]	2,204	22.3	[19.4-25.5]	0.576**
University degree	331	9.4	[5.4-15.9]	1,501	17.1	[13.9-20.8]	0.494**
Income adequacy		NS			***		**
Lowest (comparison group)	256	18.9	[12.2-28.1]	651	36.3	[30.0-43.0]	–
Middle	778	17.7	[13.5-22.8]	2,566	25.0	[22.1-28.1]	0.682*
Highest	464	13.1	[8.9-18.7]	1,783	17.8	[14.9-21.1]	0.494**
Not Stated	411	22.0	[16.3-29.0]	1,250	24.9	[20.8-29.5]	0.613*
Location of Household		NS			NS		NS
Rural (comparison group)	301	21.3	[14.1-31.0]	1,139	22.1	[17.9-26.9]	–
Non-rural	1,608	17.0	[14.2-20.2]	5,111	24.2	[22.1-26.3]	1.237

Notes: For lifetime harm, percentages are of current and former drug users; for past-year harm, percentages are of current drug users; drugs used include any of the following 8: cannabis, cocaine, speed, hallucinogens, ecstasy, inhalants, heroin, and steroids.

CI—Confidence Intervals

OR—adjusted for all variables in the table.

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

NS—not significant

* p<.05; ** p<.01, *** p<.001

Table 6.10: Percentage reporting symptoms indicative of intervention need determined by the ASSIST scale, among lifetime and past-year users of illicit drugs other than cannabis, Canada, aged 15+, 2004

ASSIST Risk Indicators	Lifetime illicit drug users[1] (excluding cannabis) N=2,181 %	Past-year illicit drug users[2] (excluding cannabis) N=375 %
During the past 3 months, have you had a strong desire or urge to use drugs?	4.0 [2.8-5.7]	21.5 [15.3-29.4]
During the past 3 months, has your use of drugs led to health, social, legal or financial problems?	2.2 [1.4-3.6]	12.1 [7.5-18.9]
During the past 3 months, have you failed to do what was normally expected of you because of your use of drugs?	2.3 [1.5-3.5]	12.5 [8.4-18.2]
Has a friend or relative or anyone else ever expressed concern about your use of drugs?	4.4 [3.1-6.1]	23.8 [17.4-31.6]
Have you ever tried and failed to control, cut down or stop using drugs?	6.1 [4.6-8.0]	33.1 [25.8-41.4]
ASSIST (4+)	**7.8** [6.1-9.9]	**42.1** [34.1-50.5]

Note: ASSIST score range (0-39); ASSIST (4+)—moderate/high risk of developing problems.

[1] Lifetime illicit drug users: respondents reporting lifetime use of any of the following 5 illicit drugs: cocaine, speed, hallucinogens, ecstasy, and heroin

[2] Past-year illicit drug users: respondents reporting past-12-months use of any of the following 5 illicit drugs: cocaine, speed, hallucinogens, ecstasy, and heroin.

S—estimate suppressed due to high sampling variability

7. Provincial Comparisons

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The views expressed in this chapter are those of the authors and do not necessarily reflect those of the funders.

Highlights

• Across provinces, past-year alcohol use is fairly close to the national average of 79.3%, although notably lower rates were recorded for the Atlantic provinces of Prince Edward Island (70.2%), New Brunswick (73.8%), Newfoundland and Labrador (73.9%), and a higher rate for Quebec (82.3%).

• Nationally, abstainers and former drinkers comprise 21% of the population and about two-thirds may be classified as light drinkers. There also is a minority who are either heavy-infrequent drinkers, ranging from 3.7% in Quebec to 11.5% in Newfoundland and Labrador, or heavy-frequent drinkers, ranging from 5.7% in Quebec to 11.1% in Newfoundland and Labrador. About 1 in 10 Canadians has these styles of heavier drinking, with significantly higher rates in the four Atlantic Provinces and in Alberta.

• A key finding is the pattern among past-year and former drinkers of consistently higher lifetime rates of alcohol-related harms for five provinces: Prince Edward Island, Manitoba, Saskatchewan, Alberta, and British Columbia. Harm related to friendships ranges from 9.6% in Quebec to 20.6% in Prince Edward Island, and harm to physical health ranges from 10.5% in Newfoundland and Labrador to 18% in British Columbia.

• In terms of harms experienced over the past year because of others' drinking, significantly higher rates tend to be reported in the four western provinces.

• Non-commercial production of beer and wine is a relatively modest activity at present, ranging from a low of 2.8% in Quebec to a high of 12.4% in British Columbia. However, it yields substantial volumes of beverage alcohol, with producers averaging 24 bottles of beer and 68 bottles of wine for Canada over the past 12 months.

• Compared with the national average of 44.5%, lifetime use of cannabis is significantly higher in British Columbia (52.1%) and Alberta (48.7%), and is lower than average in Ontario (40.4%), Newfoundland and Labrador (38.5%) and Prince Edward Island (36.5%). Also, compared with the national average of 14.1%, past-year use is significantly higher in British Columbia (16.8%) and Quebec (15.8%), and lower in Saskatchewan (11.4%), New Brunswick (11.1%) and Prince Edward Island (10.7%).

• Other than cannabis, all other drug use across provinces remains relatively low with past-year use levels lower than 3%. There are significantly lower rates of use of most other drug categories in Prince Edward Island, New Brunswick and Newfoundland and Labrador, and rates above the national average in Quebec, Alberta, and, most notably, in British Columbia.

• Living in Newfoundland and Labrador and New Brunswick is significantly associated with lower rates of lifetime harms for drug users while living in Alberta and British Columbia is associated with higher rates.

• The major life area affected by drug use is physical health while the smallest percentage of effect across provinces is on legal matters. There are differences among provinces in the lifetime effects on physical health with a lower percentage in Newfoundland and Labrador (8.7%) and higher percentages in Quebec (17.4%), Alberta (16%) and British Columbia (17.5%).

• Irrespective of province, a substantial number of individuals across the provinces are heavy drinkers or other drug users and therefore risk harming their health or experiencing a range of harms. Other people besides drinkers/users are also often affected. Continuing efforts are warranted that focus on alcohol- and drug-using populations with harm reduction and prevention measures to address evolving treatment needs and reduce the social and economic costs of substance use.

• Results presented in this chapter represent a first step toward an overview of results and variations by province on key variables regarding the prevalence of alcohol and other drug use and related impacts. Additional analysis would yield useful results for policy and program decision-makers and would contribute to the knowledge base of addictions in Canada.

Introduction

A descriptive approach was taken in the preparation of this chapter, which presents findings across provinces on the base rates for variables of interest following methods and measures outlined in Chapter 2 and other chapters comprising this report. This approach supports further synthesis of findings from preceding, more analytical chapters on specific types of substances. Together, these approaches provide more details of the bigger picture of similarities and differences across provinces regarding prevalence of alcohol and other drug use and related harms.

Differences in findings were evaluated by visual inspection of confidence intervals of provincial results for those that lay outside the limits of the confidence intervals of the finding for Canada. Statements of significance are based on non-overlapping confidence intervals.

Results

Prevalence and patterns—alcohol and other drug use

Tables 7.1 and 7.2 present prevalence rates of past-year (past 12 months) and lifetime use, respectively, of alcohol and other drug use by the population 15 years and older for Canada and provinces.

Most (79.3%) Canadians can be classified as current drinkers, as they report consuming alcohol over the past 12 months. Rates for provinces range from 70.2% for Prince Edward Island to 82.3% for Quebec. Significantly lower rates are recorded for Prince Edward Island (70.2%), New Brunswick (73.8%) and Newfoundland and Labrador (73.9%). Multivariate analysis of the relationship between demographic and other factors and past-year drinking, as reported in Chapter 3, also indicates that a lower prevalence rate is significantly related to living in Prince Edward Island while living in Quebec is significantly related to a higher prevalence rate of past-year use of alcohol.

Cannabis continues to be the most commonly used illicit drug, with 14.1% of Canadians reporting use over the past 12 months. Across the provinces, percentages range from a low of 10.7% in Prince Edward Island to a high of 16.8% in British Columbia, both results significantly different from the average for Canada. Multivariate analysis reported in Chapter 5 also found lower rates of past-year cannabis use to be associated with residency in New Brunswick (11.1%) and Saskatchewan (11.4%) while higher rates are associated with residency in Quebec (15.8%) and British Columbia (16.8%).

Use of other drugs tends to be very low in the population overall, with provincial rates of past-year use lower than 3%. Provincial results generally cluster closely around the national average for the various drugs of interest: cocaine (1.9%), speed (0.8%), ecstasy (1.1%) and hallucinogens (0.7%). However, the 2.3 % of the population reporting use of speed in Quebec is significantly higher, relative to the national rate. As evident from Table 7.1, there are several instances when rates could not be reliably reported as the small number of cases leads to unacceptably high sampling variability, including all provincial estimates for past-year use of heroin, inhalants, and steroids.

As can be expected, rates of lifetime substance use consistently exceed current rates of use. A large majority of Canadians have used alcohol at some time in their lives (92.8%), with rates significantly lower in New Brunswick (90.1%) and higher in Saskatchewan (95.4%).

Lifetime use of other drugs is more variable. The percentage of lifetime use of cannabis is much higher than use in the past year, with 44.5% of Canadians reporting such use. Significantly lower rates are evident for Prince Edward Island (36.5%) and Newfoundland and Labrador (38.5%) and Ontario (40.4%) while the provinces of British Columbia (52.1%) and Alberta (48.7%) have significantly higher rates (see also Chapter 5).

Regarding lifetime use of drugs other than cannabis, more variation can be seen in provincial results than is the case with past-year use. Hallucinogens and cocaine are the next two most frequently used types of drugs, yielding national results of 11.4% and 10.6%, respectively. Across provinces, reported rates of use of hallucinogens are significantly lower for Newfoundland and Labrador (6.2%) and New Brunswick (7.3%) and higher in British Columbia (16.5%). Similarly for cocaine, the four Atlantic Provinces record significantly lower rates of use (3.7%-7.1%)—less than half the rate for British Columbia (16.3%). Reported rates for use of speed are also significantly lower in the Atlantic Provinces—Newfoundland and Labrador (1.2%), Nova Scotia (3.2%) and Prince Edward Island (3.3%)—relative to the national result of 6.4%. While the national result for use of ecstasy is 4.1%, rates are significantly lower in Newfoundland and Labrador (1.5%) and higher in British Columbia (6.5%). Heroin and inhalants are used by a very small percentage of Canadians with no noticeable differences among provinces, except for significantly greater use of heroin in British Columbia (1.8%), relative to the rate for Canada (0.9%). Estimates for steroid use could not be reliably reported as the small number of cases led to unacceptably high sampling variability.

Similar geographical patterns are noted in the results of a more comprehensive, multivariate analysis exploring extent of use involving any use of several types of drugs, as reported in Chapter 6. In that more detailed analysis, which considered the influence of demographic and other factors on reported use, the provinces showing rates of drug use above the national average are British Columbia, Quebec and Alberta, while the provinces with below average rates were New Brunswick and Newfoundland and Labrador.

Table 7.3 presents provincial prevalence rates for a classification of drinking patterns based on quantity and frequency of alcohol use, including abstinence and five categories of alcohol use. Comparative national results for the CAS, CADS and NADS using this classification are presented and discussed in Chapter 8

A minority of Canadians abstain from consuming alcohol, ranging from 4.7% in Saskatchewan to 10.1% in New Brunswick, both significantly different from the rate for Canada (7.3%). Similarly, 13.7% nationally are former drinkers, ranging from 13.3% in Ontario to significantly higher rates of 21.5% in Prince Edward Island and 17.2% in Nova Scotia.

Overall, about one-fifth (21%) of Canadians are either abstainers or former drinkers. About two-thirds (66.4%) can be classified in the two "light" drinking categories, combined, with a significantly higher rate of "light-frequent" drinking occurring in Quebec (33.8%), relative to the national average of (27.7%). Significantly lower rates of "light-frequent" drinking, ranging between 15.2% and 23.4%, can be seen for the four Atlantic Provinces as well as for Saskatchewan and Alberta.

The "heavy" drinking categories also represent only a minority of Canadians (12.7%, combined). The rates for "heavy-infrequent" drinking are significantly higher in the four Atlantic Provinces and in Alberta, ranging from 7.5% to 11.5%, relative to the result for Canada (5.6%). Compared with other provinces, Newfoundland and Labrador's "heavy-frequent" drinking rate of 11.1% is significantly higher than the national finding of 7.1%.

Table 7.4 provides a closer examination of occurrences of heavy drinking, defined as four or more drinks on each occasion for women and five or more for men, reported by current drinkers on a monthly, weekly and daily basis. Also presented are the proportions of respondents who scored 8 or higher on the AUDIT, a standardized scale of hazardous or harmful alcohol use, reported by the total population as well as by drinkers only. As noted in Chapter 4, a score of 8 or more indicates high-risk drinking, based on signs of hazardous or harmful use or alcohol dependence.

A minority of Canadians across provinces are heavy drinkers and are drinking at hazardous or harmful levels, as classified by the AUDIT. Still, about one-fifth of respondents overall report heavy drinking monthly with the results for most provinces clustered around the result for Canada (20.2%), except for Newfoundland and Labrador where the rate is significantly higher at 26.1%. Six percent or less report heavy drinking on a weekly or daily basis, with no significant differences across provinces, relative to findings for Canada (4.9% and 3.5%, respectively).

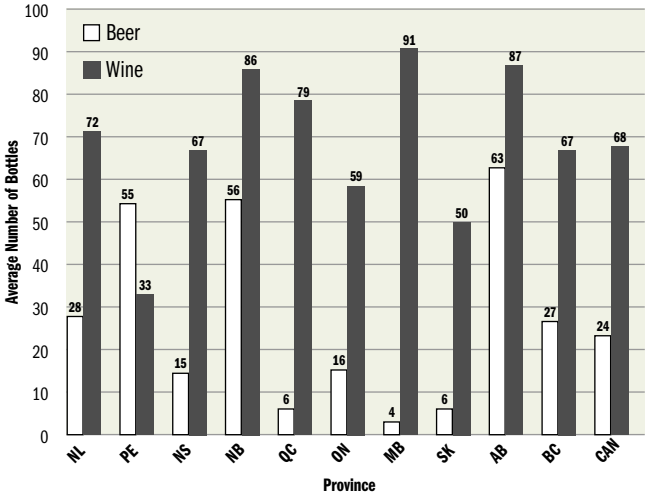
Multivariate analysis of heavy drinking, presented in Chapter 4, further indicates that heavy monthly drinking is significantly related to living in Newfoundland and Labrador while heavy weekly drinking is significantly related to living in New Brunswick—taking demographic and other factors into account.

In terms of experiencing substantial negative consequences of alcohol use as reflected by a score of 8 or higher on the AUDIT, findings based on the total population cluster around the result for Canada (13.6%), without significant differences among provinces. Not surprisingly, drinkers report generally higher rates of hazardous or harmful effects, ranging from 14.5% in Quebec to 22.9% in Newfoundland and Labrador, significantly higher than the rate for Canada (17.1%).

Non-commercial production of wine and beer (i.e., preparation by the consumer of their own beer or wine at their home or with others at someone else's home, or at a brewery or wine-outlet) has become a question of interest in Canada, as this may represent an important undocumented source of beverage alcohol (Addiction and Mental Health Research Laboratory, 2001; MacDonald, et al., 1999). While the current report focuses on alcohol consumption, the relationship of non-commercial production to consumption levels warrants further analysis and may be addressed in a future CAS report. Table 7.5 and Figure 7.1, below, introduce results on rates of production and volume of wine and beer produced across provinces.

A small minority of Canadians across the provinces report undertaking home production of wine or beer. The percentages of consumers producing wine or beer are significantly higher in British Columbia (12.4%), and lower in Quebec (2.8%). There are no significant differences for the remaining provinces, relative to the national finding of 6.7%.

Figure 7.1: Average number of bottles of beer and wine produced in the past year, by province, non-commercial producers, Canada, aged 15+, 2004



The extent of non-commercial wine production consistently exceeds levels of non-commercial beer production across provinces in terms of the average numbers of bottles by each producer, except for Prince Edward Island where average production of beer (55 bottles) far exceeded wine production (33 bottles). Average beer production ranged from 4 bottles in Manitoba to 63 bottles in Alberta. Average wine production ranged from 33 bottles in Prince Edward Island to 91 bottles in Manitoba. For Canada, production averaged 24 bottles of beer and 68 bottles of wine.

Effects and experience—alcohol and other drug use

Table 7.6 presents information based on lifetime experience of harms reported by former and current drinkers in a number of selected life areas as related to their own drinking.

The areas of largest reported harmful impacts over the lifetime involve friendships and physical health, with results for Canada of 14.2% and 14.8%, respectively. With regard to friendships, significantly higher percentages are reported for Prince Edward Island (20.6%), and the four western provinces—Manitoba (19.1%), Saskatchewan (19.7%), Alberta (17.3%) and British Columbia (17.7%)—with Quebec recording the lowest and statistically significant result (9.6%). In terms of physical health, significant findings ranged from 10.5% in Newfoundland and Labrador to 18.0% in British Columbia.

Fewer than 10% of drinkers nationally report drinking-related lifetime harms in the areas of home and marriage; work, studies and employment; finances; and legal issues. There are slight differences in the rates of alcohol-related harms involving home and marriage, ranging from 6.0% in Newfoundland and Labrador to significantly higher rates of 12.8% in Prince Edward Island, 11.3% in Saskatchewan, 11.1% in Manitoba, and 10.1% in British Columbia. Harms related to alcohol use involving work, studies and employment range from a low of 4.7% in Newfoundland and Labrador to the significantly higher rates of 10.3% in Saskatchewan, 10.2% in Prince Edward Island and 9.9% in Manitoba, relative to the national average (6.8%). Negative impact of alcohol use on finances is significantly higher in Prince Edward Island (11.0%), Saskatchewan (9.5%) and Manitoba (9.4%). Finally, a small percentage of current and former drinkers experience legal problems as a result of their alcohol use, ranging from 2.6% in Newfoundland and Labrador to the significantly higher rates of 6.7% in Prince Edward Island and 6.6% in Saskatchewan. Within the overall range of results presented in Table 7.6, the provinces of Prince Edward Island, Manitoba and Saskatchewan and British Columbia reveal the most consistent pattern of significantly higher findings in these life areas.

Respondents 18 years of age and older were asked about the occurrence and types of harm experienced because of alcohol use by others. Table 7.7 displays provincial results on selected harm indicators involving alcohol experienced over the past 12 months.

Overall for Canada, these alcohol-related harms are reported by substantial proportions of respondents, including being hit or physically assaulted (3.2%), pushed or shoved (10.8%), in serious arguments (15.5%), or experiencing verbal abuse (15.8%).

Within the variation around the national results, a pattern of significantly higher findings across these indicators emerges for western provinces. In particular, being pushed or shoved for Saskatchewan (14.2%) and Alberta (13.6%); serious arguments for Saskatchewan (19.5%), Alberta (19.5%) and British Columbia (18.1%); verbal abuse for Alberta (19.3%); and hit or physically assaulted for Manitoba (5.0%), Saskatchewan (5.4%) and Alberta (5.4%). Significant differences do not emerge in the results for other provinces across these indicators except for the lower rate of serious arguments in Quebec (11.9%). Chapter 4 contains other detailed analysis by province of past-year and lifetime rates of harm related to one's own and others' use of alcohol.

Table 7.8 presents information based on lifetime experience of harms in selected life areas related to one's own drug use. A variety of negative impacts can arise from a person's own drug use, with percentages (about 5% to 15%, nationally) paralleling results for lifetime alcohol-related impacts. Most notable are the drug-related harms on physical health (15.1%) followed by impacts on friendships (10.7%), with significantly lower results noted for Newfoundland and Labrador with regard to reported harmful impacts on physical health (8.7%). Harmful impacts on home and marriage; work, studies and employment; and finances range from about 5% to 10% across provinces and were generally close to the national findings of 8.7%, 9.2%, and 8.4%, respectively. At 5.0%, Newfoundland and Labrador register significantly lower results for harmful impacts on work, studies, and employment. Harmful impact of drug use is lowest on legal matters across provinces, grouped around the rate for Canada of 4.2%, without significant differences.

Multivariate analysis of the relationship between demographic and other factors and harms related to a person's drug use, presented in Chapter 6, indicates that living in Newfoundland and Labrador and New Brunswick is significantly associated with lower rates of lifetime harms while living in Alberta and British Columbia is associated with higher rates. However, that analysis also shows that there is no systematic relationship between the rate of drug-related harms reported over the past 12 months and province of residence.

Summary and Discussion

Typically, Canadians are current drinkers (79.3%) and most drink moderately (66.4%). A large majority have used alcohol in their lifetime (92.8%). Prevalence rates for past-year use are fairly consistent across provinces although notably lower rates are recorded for the Atlantic Provinces of Prince Edward Island, New Brunswick and Newfoundland and Labrador, and a higher rate for Quebec. Overall, a minority (12.7%) of Canadians are heavy drinkers, with higher rates of heavier use and higher-risk drinking styles noted in Newfoundland and Labrador, other Atlantic Provinces and Alberta. About 14% of the Canadian population experience impacts on friendships and physical health over their lifetime, related to their own drinking.

A key finding in relation to provincial differences is the general pattern of consistently higher reported rates of alcohol-related harms over the lifetime in many of these life areas for five provinces: Prince Edward Island, Manitoba, Saskatchewan, Alberta, and British Columbia. Lifetime harms related to one's own drug use also follows a somewhat similar geographic pattern, with higher rates associated with living in Alberta and British Columbia.

Although non-commercial production of beer and wine is a relatively modest activity in most provinces, ranging from a low of 2.8% in Quebec to a high of 12.4% in British Columbia, it yields substantial volumes of beverage alcohol. Continued monitoring of this method of production will provide more accurate estimates of alcohol consumed by Canadians.

With regard to other drugs, the substance of major note is cannabis. After alcohol, it is the most commonly used substance (past-year use is 14.1% in Canada, ranging from 10.7% in Prince Edward Island to 16.8% in British Columbia). Lifetime use is much higher (44.5% in Canada, ranging from 36.5% in Prince Edward Island to 52.1% in British Columbia). Other than cannabis, all other drug use across provinces remains relatively low with past-year use levels lower than 3%. The main finding is the pattern of significantly lower rates of use of most drug categories in Prince Edward Island, New Brunswick and Newfoundland and Labrador, and rates above the national average in Quebec, Alberta, and, most notably, in British Columbia.

Irrespective of province, a substantial number of individuals across the provinces are heavy drinkers or are drug users and therefore risk harming their health or experiencing a range of harms. Other people besides drinkers/users are also often affected. Continuing efforts are warranted that focus on alcohol- and drug-using populations with harm reduction and prevention measures, address evolving treatment needs, and reduce the social and economic costs of substance use.

For a country of Canada's size and diversity, there is considerable convergence in findings across provinces on the prevalence of alcohol and other drug use and related impacts. There are also important differences in terms of levels and patterns of use and risk of harms that are of significance not only to researchers, but also to decision-makers and ultimately to Canadians in all provinces.

The CAS results presented in this chapter represent a first step toward an overview of results and variations by province on key variables. Additional analysis would provide further insights into the picture of alcohol and other drug use on a regional or local basis. Such efforts would yield useful results for policy and program decision-makers and would contribute to the knowledge base of addictions in Canada.

References

Addiction and Mental Health Research Laboratory (2001). *AADAC Consumer-Produced Alcohol Study: Additional Findings From the Survey*. Edmonton: University of Alberta (September).

MacDonald, S., Wells S. and Giesbrecht, N. (1999). Unrecorded alcohol consumption in Ontario, Canada: estimation procedures and research implications. *Drug and Alcohol Review*. 18:21-29.

Table 7.1: Percentage of alcohol and other drug use in the past year, by province, Canada, aged 15+, 2004

	Alcohol % [CI]	Cannabis % [CI]	Cocaine % [CI]	Speed % [CI]	Ecstasy % [CI]	Hallucinogens % [CI]
Newfoundland & Labrador	73.9 [70.9-76.7]	11.6 [9.6-13.9]	0.9[Q] [0.4-1.8]	S	0.9[Q] [0.4-1.9]	S
Prince Edward Island	70.2 [67.2-73.1]	10.7 [8.7-13.0]	1.1[Q] [0.6-2.2]	S	0.8[Q] [0.3-1.8]	1.3[Q] [0.7-2.4]
Nova Scotia	76.0 [73.1-78.7]	14.4 [12.2-17.0]	1.1[Q] [0.6-2.0]	S	1.1[Q] [0.6-2.2]	1.5[Q] [0.9-2.6]
New Brunswick	73.8 [70.8-76.6]	11.1 [9.1-13.3]	S	0.6[Q] [0.2-1.5]	S	S
Quebec	82.3 [79.7-84.6]	15.8 [13.6-18.2]	2.5[Q] [1.7-3.7]	2.3[Q] [1.5-3.5]	1.1[Q] [0.6-2.0]	0.6[Q] [0.3-1.4]
Ontario	78.7 [76.0-81.3]	12.4 [10.4-14.6]	1.3[Q] [0.7-2.4]	S	1.2[Q] [0.7-2.1]	S
Manitoba	76.5 [74.3-78.6]	13.4 [11.7-15.3]	2.0[Q] [1.4-2.9]	S	S	0.6[Q] [0.3-1.2]
Saskatchewan	78.2 [75.5-80.7]	11.4 [9.6-13.5]	1.7[Q] [1.0-2.7]	S	0.7[Q] [0.4-1.5]	1.1[Q] [0.6-1.9]
Alberta	79.5 [77.7-81.2]	15.4 [13.9-17.0]	2.4 [1.8-3.1]	S	0.8[Q] [0.5-1.2]	0.9[Q] [0.6-1.4]
British Columbia	79.3 [77.7-80.7]	16.8 [15.5-18.3]	2.6 [2.1-3.3]	0.6[Q] [0.4-1.0]	1.4[Q] [1.0-1.9]	1.3[Q] [0.9-1.7]
Canada	**79.3** [78.1-80.5]	**14.1** [13.1-15.1]	**1.9** [1.5-2.3]	**0.8** [0.6-1.1]	**1.1** [0.8-1.5]	**0.7** [0.5-0.9]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability.

S—Estimate suppressed due to unacceptably high sampling variability.

Estimates for use of heroin, inhalants, and steroids were not presented due to unacceptably high sampling variability.

Table 7.2: Percentage of lifetime alcohol and other drug use, by province, Canada, aged 15+, 2004

	Alcohol % [CI]	Cannabis % [CI]	Cocaine % [CI]	Speed % [CI]	Ecstasy % [CI]	Hallucinogens % [CI]	Heroin % [CI]	Inhalants % [CI]
Newfoundland & Labrador	90.7 [88.6-92.4]	38.5 [35.4-41.7]	3.7 [2.6-5.2]	1.2Q [0.7-2.2]	1.5Q [0.9-2.6]	6.2 [4.8-8.0]	S	0.7Q [0.3-1.4]
Prince Edward Island	91.5 [89.5-93.2]	36.5 [33.4-39.7]	5.5 [4.2-7.3]	3.3Q [2.3-4.8]	2.6Q [1.7-4.0]	9.1 [7.4-11.2]	1.1Q [0.6-2.0]	1.4Q [0.8-2.5]
Nova Scotia	93.0 [91.2-94.4]	43.4 [40.1-46.7]	7.1 [5.6-9.1]	3.2Q [2.2-4.5]	3.4Q [2.4-4.9]	10.6 [8.7-12.9]	S	1.1Q [0.6-2.2]
New Brunswick	90.1 [87.8-91.9]	42.1 [38.9-45.3]	4.2 [3.0-5.7]	4.5 [3.3-6.1]	1.9Q [1.2-3.0]	7.3 [5.8-9.2]	S	1.0Q [0.5-1.9]
Quebec	93.9 [92.2-95.2]	46.4 [43.2-49.6]	12.2 [10.2-14.5]	8.9 [7.2-11.0]	3.7 [2.7-5.1]	11.0 [9.1-13.2]	0.6Q [0.2-1.5]	2.1Q [1.3-3.2]
Ontario	91.9 [89.9-93.5]	40.4 [37.3-43.7]	8.7 [7.0-10.7]	5.5 [4.1-7.2]	3.7 [2.7-5.2]	10.5 [8.6-12.7]	0.7Q [0.3-1.5]	S
Manitoba	93.1 [91.7-94.3]	44.6 [42.0-47.2]	8.9 [7.6-10.6]	4.5 [3.5-5.7]	2.6Q [1.8-3.6]	10.6 [9.1-12.3]	1.1Q [0.7-1.8]	1.6Q [1.0-2.3]
Saskatchewan	95.4 [93.9-96.5]	41.0 [37.9-44.1]	8.0 [6.5-9.9]	4.0 [2.9-5.4]	3.1Q [2.2-4.3]	9.3 [7.6-11.3]	0.7Q [0.3-1.5]	1.6Q [1.0-2.7]
Alberta	93.6 [92.5-94.6]	48.7 [46.5-50.8]	12.3 [11.0-13.8]	6.1 [5.2-7.2]	5.1 [4.2-6.0]	12.3 [11.0-13.8]	1.2Q [0.8-1.8]	1.6Q [1.1-2.2]
British Columbia	93.2 [92.2-94.1]	52.1 [50.2-54.0]	16.3 [14.9-17.7]	7.3 [6.4-8.4]	6.5 [5.6-7.5]	16.5 [15.2-18.0]	1.8Q [1.4-2.4]	1.7Q [1.3-2.3]
Canada	**92.8** [92.0-93.6]	**44.5** [43.0-46.0]	**10.6** [9.7-11.6]	**6.4** [5.6-7.2]	**4.1** [3.5-4.7]	**11.4** [10.5-12.4]	**0.9** [0.6-1.2]	**1.3** [1.0-1.6]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability.

S—Estimate suppressed due to unacceptably high sampling variability.

Estimates for use of steroids were not presented due to unacceptably high sampling variability.

Table 7.3: Drinking status in the past year, by province, Canada, aged 15+, 2004

	Abstainer % [CI]	Former Drinker % [CI]	Light-infrequent % [CI]	Light-frequent % [CI]	Heavy-infrequent % [CI]	Heavy-frequent % [CI]
Newfoundland & Labrador	9.5 [7.7-11.6]	17.1 [14.6-19.8]	34.4 [31.3-37.5]	16.5 [14.1-19.1]	11.5 [9.5-13.7]	11.1 [9.2-13.4]
Prince Edward Island	8.6 [6.9-10.6]	21.5 [19.0-24.3]	36.9 [33.8-40.0]	15.2 [13.0-17.6]	9.6 [7.8-11.8]	8.2 [6.5-10.3]
Nova Scotia	7.1 [5.7-9.0]	17.2 [14.9-19.9]	40.1 [36.8-43.4]	18.3 [15.7-21.1]	9.2 [7.8-11.8]	8.1 [6.5-10.1]
New Brunswick	10.1 [8.2-12.4]	16.5 [14.3-19.1]	39.8 [36.6-43.0]	16.0 [13.7-18.6]	9.1 [7.4-11.3]	8.5 [6.8-10.5]
Quebec	6.2 [4.8-7.9]	11.7 [9.7-13.9]	39.0 [36.0-42.2]	33.8 [30.8-36.9]	3.7 [2.7-5.0]	5.7 [4.3-7.5]
Ontario	8.3 [4.8-7.9]	13.3 [9.7-13.9]	37.8 [36.0-42.2]	28.3 [30.8-36.9]	5.0 [2.7-5.0]	7.3 [4.3-7.5]
Manitoba	7.1 [6.6-10.3]	17.0 [11.3-15.7]	40.0 [34.7-41.0]	21.1 [25.4-31.4]	7.2 [3.8-6.7]	7.7 [5.7-9.2]
Saskatchewan	4.7 [[3.5-6.2]	17.5 [15.2-20.0]	43.6 [40.5-46.8]	19.5 [17.1-22.2]	7.8 [6.3-9.7]	6.9 [5.4-8.7]
Alberta	6.5 [5.5-7.6]	14.3 [12.9-15.9]	40.5 [38.4-42.6]	23.4 [21.6-25.3]	7.5 [6.5-8.7]	7.9 [6.8-9.1]
British Columbia	6.9 [6.0-7.9]	14.1 [12.9-15.5]	37.9 [36.1-39.7]	27.8 [26.1-29.5]	6.0 [5.2-7.0]	7.3 [6.4-8.4]
Canada*	**7.3** [6.5-8.1]	**13.7** [12.7-14.7]	**38.7** [37.2-40.2]	**27.7** [26.3-29.2]	**5.6** [5.0-6.3]	**7.1** [6.3-7.9]

Pattern	Definition
Lifetime Abstainers	Never had alcohol beyond sips or tastes
Former Drinkers	Drank sometimes during their lives but not during the past 12 months preceding the survey
Light-infrequent Drinkers	Current drinkers who drink less often than once a week usually fewer than five drinks when alcohol is used
Light-frequent Drinkers	Current drinkers who drink once a week or more usually fewer than five drinks when alcohol is used
Heavy-infrequent Drinkers	Current drinkers who drink less often than once a week usually five drinks or more when alcohol is used
Heavy-frequent Drinkers	Current drinkers who drink once a week or more usually five drinks or more when alcohol is used
Not Stated	Excluded

Notes: *Differences in rates for Canada between this Table and Table 8.2 in Chapter 8 occur because "not stated responses" were excluded from the calculation in this Table.

Table 7.4: Heavy drinking monthly, weekly, daily, AUDIT 8+ score, past-year drinkers and total population, by province, Canada, aged 15+, 2004

	Heavy drinking monthly % [CI]	Heavy drinking weekly % [CI]	Heavy drinking daily % [CI]	AUDIT 8+ by total population % [CI]	AUDIT 8+ by current drinkers % [CI]
Newfoundland & Labrador	26.1 [23.3-29.1]	5.8 [4.4-7.7]	2.9 [1.9-4.2]	16.9 [14.5-19.5]	22.9 [19.8-26.3]
Prince Edward Island	18.3 [15.9-21.0]	5.0 [3.7-6.7]	3.6 [2.5-5.1]	14.8 [12.6-17.4]	21.1 [18.0-24.6]
Nova Scotia	20.8 [18.2-23.7]	6.0 [4.6-7.8]	3.6 [2.5-5.0]	15.8 [13.5-18.5]	20.9 [17.9-24.3]
New Brunswick	20.6 [18.0-23.4]	5.3 [4.0-7.0]	2.6[Q] [1.7-3.9]	14.1 [12.0-16.6]	19.1 [16.3-22.3]
Quebec	20.7 [18.2-23.5]	5.0 [3.7-6.7]	2.0[Q] [1.3-3.2]	11.9 [10.0-14.2]	14.5 [12.1-17.2]
Ontario	19.6 [17.1-22.3]	4.9 [3.6-6.5]	4.6 [3.4-6.2]	13.7 [11.6-16.1]	17.5 [14.8-20.5]
Manitoba	20.9 [18.8-23.1]	5.4 [4.3-6.8]	3.6 [2.7-4.7]	15.1 [13.3-17.1]	19.7 [17.4-22.3]
Saskatchewan	18.9 [16.6-21.5]	4.3 [3.2-5.8]	2.1[Q] [1.3-3.2]	13.8 [11.8-16.1]	17.7 [15.1-20.6]
Alberta	21.0 [19.4-22.8]	4.7 [3.9-5.7]	3.5[Q] [2.8-4.3]	15.3 [13.8-16.9]	19.3 [17.4-21.2]
British Columbia	19.3 [17.9-20.9]	4.7 [4.0-5.6]	3.6 [3.0-4.4]	13.4 [12.1-14.7]	16.9 [15.4-18.5]
Canada	**20.2** [19.0-21.4]	**4.9** [4.3-5.6]	**3.5** [2.9-4.1]	**13.6** [12.6-14.6]	**17.1** [15.9-18.5]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability.

Table 7.5: Non-commercial production of wine or beer in the past year, by province, Canada, aged 15+, 2004

	Percentage producing non-commercial wine or beer
	% [CI]
Newfoundland & Labrador	8.4Q [5.7-12.2]
Prince Edward Island	7.5Q [4.9-11.2]
Nova Scotia	7.0Q [4.2-11.5]
New Brunswick	9.0Q [6.2-13.0]
Quebec	2.8Q [1.5-5.1]
Ontario	6.6Q [4.3-10.0]
Manitoba	6.1Q [4.3-8.6]
Saskatchewan	8.2Q [5.5-11.9]
Alberta	7.9Q [6.1-10.2]
British Columbia	12.4 [10.4-14.9]
Canada	**6.7** [5.5-8.0]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability.

Table 7.6: Harms related to one's own drinking over the lifetime, by province, former and past-year drinkers, Canada, aged 15+, 2004

	Friends % [CI]	Physical Health % [CI]	Home and Marriage % [CI]	Work, Studies and Employment % [CI]	Finances % [CI]	Legal % [CI]
Newfoundland & Labrador	13.0 [10.8-15.5]	10.5 [8.6-12.9]	6.0 [4.5-7.9]	4.7 [3.5-6.4]	5.5 [4.0-7.3]	2.6[Q] [1.7-4.0]
Prince Edward Island	20.6 [18.0-23.6]	16.3 [13.9-19.0]	12.8 [10.6-15.3]	10.2 [8.3-12.6]	11.0 [9.0-13.5]	6.7 [5.1-8.7]
Nova Scotia	16.8 [14.3-19.6]	15.9 [13.5-18.7]	9.1 [7.3-11.4]	6.7 [5.1-8.7]	7.2 [5.5-9.2]	4.2 [3.0-5.9]
New Brunswick	13.6 [11.4-16.1]	11.5 [9.5-13.8]	8.9 [7.1-11.0]	6.2 [4.7-8.0]	7.1 [5.5-9.0]	4.2 [3.0-5.9]
Quebec	9.6 [7.7-11.9]	14.2 [12.0-16.7]	7.4 [5.7-9.5]	5.5 [4.1-7.3]	6.1 [4.6-8.0]	3.2[Q] [2.2-4.8]
Ontario	14.0 [11.8-16.5]	13.3 [11.1-15.8]	6.7 [5.2-8.6]	6.3 [4.8-8.2]	6.2 [4.7-8.1]	3.6 [2.5-5.1]
Manitoba	19.1 [17.0-21.4]	16.4 [14.4-18.5]	11.1 [9.5-12.9]	9.9 [8.3-11.6]	9.4 [7.9-11.1]	5.6 [4.4-7.0]
Saskatchewan	19.7 [17.3-22.5]	16.5 [14.3-19.0]	11.3 [9.4-13.6]	10.3 [8.5-12.4]	9.5 [7.8-11.6]	6.6 [5.2-8.4]
Alberta	17.3 [15.7-19.0]	17.5 [15.9-19.2]	9.7 [8.5-11.1]	8.2 [7.0-9.4]	8.4 [7.3-9.7]	4.1 [3.3-5.1]
British Columbia	17.7 [16.3-19.2]	18.0 [16.6-19.6]	10.1 [9.0-11.3]	8.6 [7.6-9.7]	7.9 [6.9-9.0]	4.2 [3.5-5.1]
Canada	**14.2** [13.2-15.3]	**14.8** [13.7-15.9]	**8.1** [7.3-8.9]	**6.8** [6.1-7.7]	**6.9** [6.2-7.7]	**3.8** [3.3-4.5]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability.

Table 7.7: Harms related to others' drinking in the past year, by province, Canada, aged 18+, 2004

	Push or Shoved % [CI]	Serious Arguments % [CI]	Verbal Abuse % [CI]	Hit or Physically Assaulted % [CI]
Newfoundland & Labrador	10.7 [8.7-13.0]	14.2 [12.0-16.6]	14.7 [12.5-17.2]	5.0 [3.7-6.7]
Prince Edward Island	10.4 [8.4-12.7]	17.1 [14.7-19.7]	16.2 [13.9-18.9]	4.4 [3.2-6.1]
Nova Scotia	9.9 [8.1-12,2]	15.5 [13.2-18.2]	16.0 [13.7-18.8]	4.6 [3.3-6.4]
New Brunswick	11.6 [9.6-13.9]	13.8 [11.7-16.2]	13.5 [11.4-15.9]	3.8 [2.7-5.2]
Quebec	9.9 [6.1-12.0]	11.9 [9.9-14.2]	15.1 [12.9-17.6]	2.3[Q] [1.5-3.5]
Ontario	9.9 [8.1-12.1]	15.4 [13.2-17.9]	14.3 [12.1-16.8]	2.5[Q] [1.6-3.8]
Manitoba	11.9 [10.2-13..8]	17.5 [15.5-19.6]	18.1 [16.1-20.2]	5.0 [3.9-6.4]
Saskatchewan	14.2 [12.1-16.7]	19.5 [17.0-22.1]	18.5 [16.1-21.1]	5.4 [4.1-7.1]
Alberta	13.6 [12.2-15.2]	19.5 [17.8-21.3]	19.3 [17.7-21.1]	5.4 [4.5-6.4]
British Columbia	11.6 [10.4-12.9]	18.1 [16.7-19.7]	18.2 [16.8-19.8]	4.0 [3.3-4.8]
Canada	**10.8** [9.9-11.7]	**15.5** [14.4-16.6]	**15.8** [14.7-17.0]	**3.2** [2.8-3.8]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability.

Table 7.8: Harms related to one's own drug use over the lifetime, by province, Canada, aged 15+, 2004

	Friends % [CI]	Physical Health % [CI]	Home and Marriage % [CI]	Work, Studies and Employment % [CI]	Finances % [CI]	Legal % [CI]
Newfoundland & Labrador	9.1 [6.5-12.5]	8.7 [6.1-12.1]	5.2 [3.3-8.2]	5.0 [3.1-7.9]	5.9 [3.8-9.1]	1.9Q [.0.8-4.1]
Prince Edward Island	13.1 [9.8-17.3]	15.5 [11.9-20.0]	10.0 [7.1-13.9]	11.9 [8.7-16.0]	9.1 [6.4-12.8]	4.1 [2.4-7.0]
Nova Scotia	7.4 [5.1-10.6]	11.7 [8.8-15.4]	5.4 [3.4-8.3]	6.9 [4.7-10.1]	5.7 [3.7-8.8]	2.8Q [1.5-5.2]
New Brunswick	9.2 [6.6-12.6]	10.5 [7.7-14.0]	4.9 [3.1-7.6]	5.3 [3.4-8.0]	5.3 [3.5-8.1]	2.5Q [1.3-4.8]
Quebec	11.3 [8.6-14.7]	17.4 [14.1-21.4]	11.2 [8.5-14.7]	9.6 [7.1-12.8]	11.2 [8.4-14.6]	4.8 [3.1-7.4]
Ontario	8.9 [6.3-12.4]	13.1 [10.1-16.8]	7.4 [5.1-10.5]	8.6 [6.1-12.1]	6.7 [4.7-9.6]	4.0 [2.4-6.7]
Manitoba	10.7 [8.5-13.4]	13.9 [11.4-16.8]	7.5 [5.7-9.9]	9.7 [7.6-12.4]	7.9 [6.0-10.3]	3.0Q [1.9-4.6]
Saskatchewan	11.1 [8.4-14.5]	14.2 [11.2-17.9]	10.8 [8.2-14.1]	10.2 [7.6-13.6]	9.2 [6.7-12.5]	5.9 [3.9-8.6]
Alberta	13.3 [11.4-15.5]	16.0 [13.9-18.3]	9.2 [7.6-11.0]	9.7 [8.1-11.6]	8.7 [7.2-10.6]	5.4 [4.2-7.0]
British Columbia	12.7 [11.1-14.6]	17.5 [15.6-19.6]	8.9 [7.6-10.5]	10.7 [9.2-12.4]	8.7 [7.4-10.3]	3.5Q [2.6-4.5]
Canada	**10.7** [9.4-12.1]	**15.1** [13.6-16.7]	**8.7** [7.6-10.1]	**9.2** [8.0-10.6]	**8.4** [7.3-9.7]	**4.2** [3.4-5.2]

Notes: CI—Confidence Intervals

Q—Qualified release due to high sampling variability

8. Changes in Alcohol and Other Drug Use

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Highlights

• The overall percentage of drinkers in Canada declined from 77.7% in 1989 to 72.3% in 1994 and has now risen again to 79.3% in 2004. Changes in rates of self-reported alcohol use are consistent with alcohol sales data. Variations in drinking patterns across studies are consistent with the corresponding variations in rates of alcohol use.

• Today's drinkers are more likely to report having had harms associated with their drinking in their lifetime than they were in 1994 or 1989. However, when we examine harms experienced in the 12 months preceding the survey in 2004, people are not more likely to report harm from their own drinking, but are more likely, for most categories of harms, to report harm from others' drinking.

• The comparison of illicit drug use rates across surveys suggests that the prevalence of use has risen over time.

• These higher rates of use do not translate into higher rates of reported harms associated with one's own drug use.

• The data indicate that the number of Canadians reporting use of an injectable drug at some point in their life increased from 1.7 million in 1994 to a little more than 4.1 million in 2004. Of those, 7.7% (132,000) reported past-year use of a drug by injection in 1994 compared with 6.5% (269,000) in 2004.

Introduction

This chapter compares results from the Canadian Addiction Survey (CAS) with the National Alcohol and Other Drugs Survey (NADS) of 1989 and the Canada's Alcohol and Other Drugs Survey (CADS) of 1994. The chapter examines changes across these three surveys, but does not present an exhaustive literature review of data available about alcohol and other drugs. However, some data from other sources were used when necessary for the analysis.

The NADS and the CADS are the direct ancestors of the CAS. These were surveys dedicated to alcohol and other drugs conducted as part of the research activities of Canada's Drug Strategy. Just as the CADS, conducted in 1994, built and expanded on the NADS, conducted in 1989, the CAS represents an expansion of the CADS. However, the differences between the CAS and the CADS are much greater than the differences between the CADS and the NADS. The CAS was initiated and developed in partnership with provincial governments and organizations representing the field of addiction provincially and nationally. As such, the scope of the CAS is wider than the monitoring and surveillance mandate of the renewed Canada's Drug Strategy announced in May 2003. The reader can consult Chapter 1 for more details on the origins, scope and new material included in the CAS.

Although comparable questions were asked across all three surveys, results were not subjected to systematic trends analysis. This chapter is mostly a recapitulation of already available data, with the exception of the CAS data and of confidence intervals for the NADS and the CADS. Confidence intervals were calculated for the NADS and the CADS specifically for the purpose of making statements about the significance of results in the current analysis. The rule for determining whether differences between the surveys are statistically significant is based on confidence interval overlap. If there is no overlap between the confidence intervals for two estimates, then these estimates are considered to be significantly different. Although statements are made in the text and the tables about differences between past surveys and the CAS data, the same rule could be applied to differences between the NADS and the CADS.

Only rates (%) are reported in the current chapter in order to present each survey within the perspective of its time. With a growing population, equivalent rates of prevalence imply, in fact, a greater number of people concerned. Despite these caveats, it is believed that this presentation of data should provide useful insights into the changes over time of the variables of interest.

National Alcohol and Other Drugs Survey 1989 (NADS)
The NADS was conducted by Statistics Canada on behalf of Health Canada (then known as Health and Welfare Canada) and was in the field in March 1989. A total of 11,634 Canadians aged 15 years and older participated in the survey. People living in the territories, the homeless and people living in institutions were excluded.

The NADS was conducted by telephone interviews. A stratified multi-stage (telephone household, respondent) sample of households was taken. Random Digit Dialling (RDD) and the Elimination of Non-Working Banks of telephone numbers were procedures used. At each eligible household contacted, one person was randomly selected into the sample.

Point estimates from the NADS are based on already published data. As already mentioned, confidence intervals were calculated for the purpose of the current analysis. The estimates used in this chapter originate from the report Alcohol and Other Drug Use by Canadians: A National Alcohol and Other Drugs Survey (1989) Technical Report (1992). Details about the methodology of the survey were obtained from the micro data documentation guide provided with the NADS dataset (Haining, 1990).

Canada's Alcohol and Other Drugs Survey 1994 (CADS)
The CADS was conducted by Statistics Canada on behalf of Health Canada and was in the field in the fall of 1994. A total of 12,155 Canadians aged 15 years and older participated in the survey. People living in the territories, the homeless and people living in institutions were excluded.

The CADS collected data using Computer Assisted Telephone Interviewing (CATI) with Random Digit Dialling (RDD) telephone sampling and the Elimination of Non-Working Banks technique. A stratified multi-stage (telephone household, respondent) process was used in order to carry out sampling.

Point estimates from the CADS are based on already published data. Confidence intervals were calculated for the purpose of the current analysis. The estimates used in this chapter originate mainly from two reports: Canada's Alcohol and Other Drugs Survey: Preview 1995 (1995), and Canada's Alcohol and Other Drugs Survey 1994: A Discussion of the Findings (1997). Details about the methodology of the survey were obtained from the micro data documentation guide provided by Statistics Canada with the CADS dataset (Statistics Canada, 1994).

Measures used for comparisons in this chapter were selected based on available published data. The aim was to allow positioning of the new data coming from the CAS within the frame of already known and commonly used data in the field. For that reason, the categories used for this chapter sometimes differ from those selected throughout other chapters in this report. The analysis is descriptive and focuses on data about prevalence of use and about the harms associated with this use. When possible, data are presented broken down by sex.

Results

Alcohol

According to the CAS 2004, the prevalence rate for past-12-months (past-year) drinkers in Canada is 79.3%, ranging from a low of 70.2% in Prince Edward Island to a high of 82.3% in Quebec. The data in Table 8.1 indicate that the overall percentage of drinkers in Canada declined from 77.7% in 1989 to 72.3% in 1994 and rose significantly to 79.3% in 2004. A comparison of provincial rates of past-year drinkers across the three surveys reveals three instances of significant change: rates were significantly lower in 1994 in Quebec and Ontario and significantly lower in 1989 in Quebec than in 2004.

Drinking Patterns

Rates of alcohol use are only one part of the story. Patterns of drinking are significant predictors of alcohol harms over and above use itself. For this reason, six patterns of drinking, based on a combination of quantity and frequency of alcohol use, are examined. A description of these patterns of drinking is presented in Table 8.2 below. A more in-depth analysis of drinking patterns is presented in Chapter 3.

When compared with 1994, the number of lifetime abstainers is lower in 2004 and the number of light-infrequent and heavy drinkers, frequent or infrequent, is higher. When compared with 1989, the number of heavy-infrequent drinkers is higher and the number of former drinkers and light-frequent drinkers is lower. These variations in drinking patterns across studies are consistent with the corresponding variations in rates of alcohol use.

Harms arising from alcohol use

Harms associated with one's own alcohol use reported by people over their lifetime in key life areas are presented in Table 8.3. Except in the case of harms to one's financial position between 1994 and 2004, rates of all other forms of harms from one's own drinking are higher in 2004. Across surveys, the harms most likely to be reported are harms to physical health (11.6% in NADS, 12.2% in CADS, and 14.8% in the CAS) and to friendships/social life (10.5% in NADS, 10.1% in the CADS, and 14.2% in the CAS).

When examining the same harms using the lens of the last 12 months, a different picture emerges (see Table 8.4). The reported rates in 2004 are lower. These differences reach significant levels when compared with 1994 only for harms to one's own "financial position" (2.7% in 2004 vs. 4.0% in 1994), but when compared with 1989 they are significantly lower for harms to "friendships or social life" (3.0% vs. 4.7%), "physical health" (5.4% vs. 7.1%), and "home life or marriage" (1.8% vs. 3.0%). Harms to physical health remain the most frequently reported harm across surveys at 7.1% in 1989, 6.2% in 1994 and 5.4% in 2004.

Harms associated with other people's drinking across surveys follow a pattern similar to that of one's own alcohol use, declining from 1989 to 1994 and rising again in 2004 (see Table 8.5). Rates of reported harms are significantly higher in 2004 compared with 1994 for "having been insulted or humiliated" (22.1% vs. 19.2%), "family problems or marriage difficulties" (10.5% vs. 5.4%) and "having been a passenger with a drunk driver" (17.8% vs. 7.5%). Rates are not significantly different for "having been pushed or shoved" or for "arguments and quarrels", but are lower for "having been physically hit or assaulted" (3.2% vs. 4.4%). When compared with 1989, rates are higher in 2004 for "family problems and marriage difficulties" (10.5% vs. 7.7%) or "having been a passenger with a drunk driver" (17.8% vs. 10.4%) and are lower for "having been hit or physically assaulted" (3.2% vs. 7.2%).

In conclusion, today's drinkers are more likely to report having had harms associated with their drinking in their lifetime than they were in 1994 or 1989. However, when we examine harms experienced in the 12 months preceding the survey, people are less likely in 2004 to report harm from their own drinking, but are more likely, for most categories of harms, to report harm from others' drinking.

Other Drugs

This section presents an overview of information about illicit drugs that can be compared across surveys. We will first examine the rate of individuals reporting use of any of the surveyed illicit drugs and then look at the rates of use for the individual substances. Data are presented on the five major categories of substance of abuse: cannabis, cocaine/crack; LSD or hallucinogens; speed (amphetamines); and heroin. It should be noted that the NADS (1989) and the CADS (1994) both contained a question about the use of LSD. In the CAS 2004, this question is asked more broadly to include other illicit hallucinogens besides LSD. This general question of hallucinogens is likely to produce higher rates of use than the LSD question alone. Rates of use for LSD, speed, and heroin were not presented independently in the NADS (1989) but as a composite aggregate category. Results from this aggregate category are presented. Data for use of inhalants and steroids are available only from the CADS (1994) and the CAS (2004). Ecstasy is a relatively new substance of abuse on the Canadian drug scene and was not measured either in the NADS (1989) or the CADS (1994). For this reason, results from the CAS are compared with a recent survey called the Canadian Community Health Survey (CCHS) cycle 1.2: Focus on Mental Health (2002). Finally, we will examine the harms associated with drug use with a special comment on injection drug use.

Prevalence

Self-reported rates of drug use are higher in 2004 than they were in 1994. The proportion of Canadians reporting any illicit drug use in their lifetime went from 28.5% in 1994 to 45.0% in 2004 and from 7.6% to 14.4% in the 12 months preceding the survey (see Table 8.6).

Prevalence rates across the surveys for lifetime use of specific illicit drugs overall, and by sex, are presented in Table 8.7. Across all surveys, cannabis is the most widely used illicit drug followed in order by LSD or hallucinogens, cocaine and crack, speed, and heroin. Rates of lifetime use identified in 2004 are significantly higher in all cases except for heroin. In terms of lifetime use, the rate for cannabis increased from 23.2% in 1989 to 28.2% in 1994 and to 44.5% in 2004. For cocaine, the figures rose from 3.5% in 1989 to 3.8% in 1994 and to 10.6% in 2004. For LSD or hallucinogens the corresponding figures increased from 5.2% in 1994 to 11.4% in the CAS. However, as already mentioned, it is not possible to isolate what portion of this change is due to a real change in rate of use and what portion is due to the modification of the question. For speed, rates increased from 2.1% in 1994 to 6.4% in 2004. Use of heroin stayed below 1% across studies. Finally, for the LSD/speed/heroin aggregate category, rates went from 4.1% in 1989 to 5.9% in 1994 and to 13.2% in 2004.

Rates of past-year use are presented in Table 8.8. Rates of past-year use of cannabis across the surveys rise from 6.5% in 1989 to 7.4% in 1994 and significantly to 14.1% in 2004. For cocaine and crack, rates go from 1.4% in 1989 down to 0.7% in 1994 and back up significantly to 1.9% in 2004. Use of hallucinogens and speed are both at about the 1% level and reportable differences do not emerge in comparisons of 2004 rates with earlier surveys. Rates of past-year use of heroin are unreportable across all surveys. Finally, rates for the aggregate category of LSD/speed/heroin go from 0.4% in 1989 to 1.1% in 1994 and 1.3% in 2004.

Results are presented for lifetime use of steroids and inhalants from 1994 and the CAS in Table 8.9. Rates of use of these substances remain very low and rates of past-year use are too low to be reportable.

The last substance for which we present data on rates of use across time is ecstasy. Recognition of ecstasy as a substance of abuse is relatively new and it did not exist per se at the time of the NADS (1989) and the CADS (1994). Ecstasy is the street name for the substance MDMA (3,4-methylenedioxy-N-methamphetamine). MDMA is a stimulant with hallucinogenic properties that existed throughout most of the 20th century and was probably used in Canada. However, the black market name of ecstasy hadn't been coined yet and it was most likely used as speed without distinction from other amphetamine-type substances. The Canadian Community Health Survey (CCHS) cycle 1.2: Focus on Mental Health was the first major general population health survey to measure its national prevalence (Tjepkema, 2004). The CCHS was conducted in 2002 by Statistics Canada. More details on this survey can be obtained on their website at www.statcan.ca.

Rates of use for ecstasy from the CCHS 1.2 in 2002 were 2.9% for lifetime use and 0.8% for past-year use in contrast to rates of use from the CAS in 2004 of 4.1% lifetime use and 1.1% past-year use (see Table 8.10). Confidence interval data from the CCHS 1.2 data were not available to make a statement about statistical significance.

Harms arising from drug use

Results for drug-related harms that users attribute to their own use of drugs are displayed in Table 8.11 for lifetime rates and in Table 8.12 for past-year rates only for the CADS (1994) and the CAS (2004).

In terms of harms associated with lifetime use of drugs, the dominant category is harms related to physical health in both surveys and for both lifetime and past-year harms. None of the differences reached a significant level except for a decrease in rates of reported harms in the past year associated with one's financial situation, which declined from 10.3% in 1994 to 6.5% in 2004. It should be noted that the higher rates of use of most illicit drugs documented here do not seem to translate into higher rates of reported harms.

Injection drug use (IDU) is a mode of administration that is associated with extensive harms. IDU had been an issue of lesser relevance to Canadian public health in 1989 at the time of the NADS and it was not measured then. In the 1990s, IDU became an increasing concern in Canada. Currently, IDU is a significant and increasingly important public health issue in Canada (Meeting of Ministers of Health, September 2001). The enormous costs and other health, social and economic consequences of IDU account for the major share of deaths and hospitalizations attributed to drug misuse. Although attention is often focused on the situation in cities such as Vancouver, Toronto, and Montreal, IDU and its related harms can be seen and felt across the country, from coast to coast, in both urban and rural settings. It affects the family and friends of those who inject drugs, and ultimately all Canadians.

It is commonly believed that the CADS (1994) was conducted towards the beginning of the period of increasing rates of IDU in Canada. It is therefore to be expected that rates of exposure to IDU would be more elevated in the CAS (2004). The injectable drugs surveyed in both the CADS (1994) and the CAS (2004) are heroin, cocaine/crack, speed/amphetamines, and steroids, LSD (CADS) and hallucinogens (CAS).

The number of Canadians reporting use of an injectable drug at some point in their life increased from 1.7 million in 1994 (7.4% overall: 10% of males, 4.9% of females) to a little more than 4.1 million in 2004 (16.1% overall: 20.8% males, 11.7% females). Of those who used an injectable drug at least once in their lifetime, 7.7% (132,000) reported past-year use by injection in 1994 compared with 6.5% (269,000) in 2004. The numbers of individuals having used drugs by injection in the past year are too small to allow any analysis.

Summary and Discussion

As noted in Table 8.1, the percentage of drinkers in Canada declined from 1989 to 1994 and rose again in 2004. In order to control for the possibility that these changes might be due to differences in the surveys rather than to real changes in Canada, the data can be examined in relation to other indicators of alcohol use. One series of data that provides a validation are statistics on the sale of alcohol in Canada; that is, if Canadians report drinking more or less alcohol in self-report surveys, then alcohol sales should increase or decrease accordingly. The volumes of sales of alcohol in litres per capita are presented in Figure 8.1 (Statistics Canada, 2004)[1].

It can be observed that the NADS (1989) was conducted during a period when alcohol sales were declining at a fast rate. This decline slowed down at the beginning of the 1990s, but was still present in 1994 when the CADS was conducted. Then, alcohol sales rose again starting in 1996 at about the same rate at which they were declining in the early 1990s. This last period is the one in which the CAS (2004) was conducted. As Figure 8.2 shows, variations in self-reported alcohol use correspond to alcohol sales data. This increases our confidence that self-reported alcohol use rates are true indications of actual behaviours.

As the data and analysis confirm, respondents can identify a variety of harms or negative impacts associated with use of alcohol. Related to one's own drinking, harms to physical health are the most apparent phenomenon across surveys whether reporting relates to lifetime or past-year harms. Being insulted or humiliated is the harm most often cited as associated with others' drinking in the past year across surveys.

[1] Data taken from the Statistics Canada report, The control and sales of alcoholic beverages (Cat No 63-202), are based on the first published statistics for any given year. Alcohol sales are based on the fiscal year—April 1st to March 31th—with the year indicated in the figure representing the beginning of the reference year. Alcohol sales figures are based on volume of alcoholic beverages (beer, wine and spirits) sold and have not been converted to litres of absolute alcohol.

Figure 8.1: Volume of sales of alcohol in litres per capita, Canada, aged 15+, 1975-2001

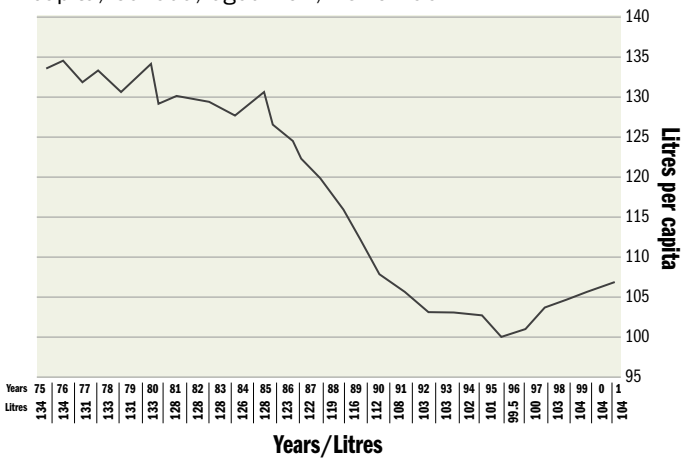
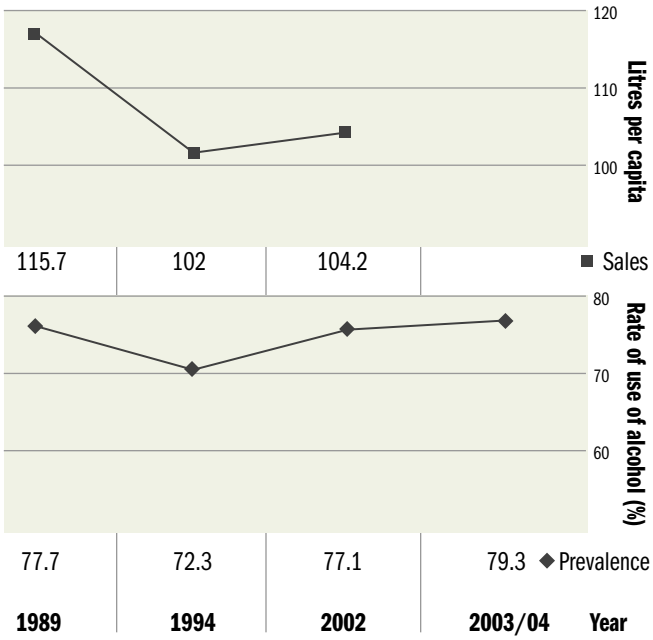


Figure 8.2: Alcohol use indicators, self-reported prevalence and sales in litres per capita



A comparison of illicit drug use rates across surveys suggests that the prevalence of use has risen over time. This finding seems to fit the data for virtually all drug categories, but is particularly true for cannabis where the rates of use, both past-year and lifetime, essentially doubled from 1989 to 2004. Rates of lifetime use for cocaine/crack and hallucinogens surpassed the 10% mark in 2004 and past-year use of cocaine/crack hovered from a low of 0.7% in 1994 to a high of 1.9% in 2004. Rates of past-year use for all other substances remained below 1%. Use of steroids and inhalants remains mostly stable at low levels. It can be noted that these higher rates of use do not translate into higher rates of reported harms associated with one's own drug use.

There was almost 10 years between the fieldwork for the CADS (1994) and the CAS (2004). Many things about the alcohol and other drugs situation have changed in this period. Rates of high-risk behaviours such as injection drug use are higher. New issues have arisen such as the advent of ecstasy and, more recently, new patterns of use of crystal methamphetamine, for example.

The CAS was designed to be the first piece of a new, ongoing monitoring and surveillance initiative focused on alcohol and other drugs issues. This monitoring is essential to provide a strong evidence-based rationale for sound policy and decision-making. The limitations and challenges in drawing conclusions from separate independent surveys highlight the importance of developing a sustained and ongoing monitoring and surveillance strategy.

In its evolution, the CAS will be a strong foundation for ongoing surveillance activities. While it is essential to maintain a core of basic indicators in time, flexibility is also critical. The modular approach used in the CAS was intended to allow the sustained monitoring of core indicators while at the same time allowing flexibility to address emerging issues, thus permitting the CAS instrument to evolve and be responsive.

References

Haining, A. (1990). *National Alcohol and Other Drugs Survey Micro data Documentation and User's Guide.* Special Surveys Programs, Statistics Canada: Ottawa (ON).

Meeting of Ministers of Health (St. John's, NL, September 2001). *Reducing the harm associated with injection drug use in Canada.* Prepared by F/P/T Advisory Committee on Population Health, F/P/T Committee on Alcohol and Other Drug Issues, F/P/T Advisory Committee on AIDS, and F/P/T Heads of Corrections Working Group on HIV/AIDS.

Statistics Canada (1994). *Canada's Alcohol and Other Drugs Survey, 1994 Micro data documentation and User's Guide.* Special Surveys Division, Statistics Canada: Ottawa (ON).

Statistics Canada (2004). *The control and sales of alcoholic beverages* (Cat No 63-202).

Tjepkema, M. (2004). Use of Cannabis and Other Illicit Drugs. *Health Reports, Vol. 15 (No. 4)*, 43-47.

Table 8.1: Rate of past-year drinkers, Canada and provinces, aged 15+, 1989, 1994, 2004

	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Canada	77.7 [76.6-78.8]	72.3* [71.2-73.4]	79.3 [78.1-80.5]
Newfoundland & Labrador	67.6 [64.2-71.0]	71.4 [67.4-75.4]	73.9 [70.9-76.7]
Prince Edward island	63.7 [59.9-67.5]	67.2 [61.9-72.5]	70.2 [67.2-73.1]
Nova Scotia	71.2 [68.1-74.3]	72.1 [68.8-75.4]	76.0 [73.1-78.7]
New Brunswick	68.0 [64.1-71.8]	67.8 [64.0-71.6]	73.8 [70.8-76.6]
Quebec	76.4* [74.1-78.6]	73.9* [71.8-75.9]	82.3 [79.7-84.6]
Ontario	77.6 [75.4-79.8]	69.4* [67.3-71.5]	78.7 [76.0-81.3]
Manitoba	79.3 [76.3-82.3]	73.6 [70.3-76.8]	76.5 [74.3-78.6]
Saskatchewan	78.4 [75.3-81.4]	73.0 [69.5-76.4]	78.2 [75.5-80.7]
Alberta	81.9 [79.3-84.5]	76.4 [73.8-79.0]	79.5 [77.7-81.2]
British Columbia	82.9 [80.3-85.5]	75.6 [73.1-78.1]	79.3 [77.7-80.7]

Notes: CI—Confidence Intervals

*Significantly different from CAS

Table 8.2: Drinking patterns, Canada, aged 15+, 1989, 1994 and 2004

Drinking Pattern	Definition	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Lifetime Abstainers	Never had alcohol beyond sips or tastes	6.6 [6.0-7.2]	12.8* [12.0-13.6]	7.2 [6.4-8.0]
Former Drinkers	Drank some time during their lives, but not during the 12 months preceding the survey	15.7* [14.8-16.6]	13.5 [12.6-14.4]	13.5 [12.5-14.5]
Light-infrequent drinkers	Past-year drinkers who drink less often than once a week usually fewer than five drinks when alcohol is used	35.5 [34.2-36.7]	33.6* [32.4-34.8]	38.1 [36.6-39.6]
Light-frequent drinkers	Past-year drinkers who drink once a week or more usually fewer than five drinks when alcohol is used	31.3* [30.1-32.5]	29.2 [28.0-30.4]	27.3 [25.9-28.7]
Heavy-infrequent drinkers	Past-year drinkers who drink less often than once a week usually five drinks or more when alcohol is used	3.6* [3.1-4.1]	3.3* [2.8-3.8]	5.5 [4.9-6.2]
Heavy-frequent drinkers	Past-year drinkers who drink once a week or more usually five drinks or more when alcohol is used	6.7 [6.0-7.3]	5.4* [4.8-6.0]	7.0 [6.2-7.8]
Not Stated		0.6* [0.4-0.8]	2.1 [1.7-2.5]	1.5 [1.2-1.9]

Notes: CI—Confidence Intervals
* Significantly different from CAS
Differences between this table and Table 7.3 in Chapter 7 are due to the fact that "Not stated" was used for calculations in this table

Table 8.3: Percentages of drinkers[a] reporting various types of harm from one's own alcohol use in their lifetime, Canada, aged 15+, 1989, 1994 and 2004

Was there ever a time in your life when you felt your alcohol use had a harmful effect on the following?	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Friendships or social life	10.5* [9.6-11.4]	10.1* [9.3-10.9]	14.2 [13.2-15.3]
Physical health	11.6* [10.6-12.6]	12.2* [11.3-13.1]	14.8 [13.7-15.9]
Home life or marriage [b]	5.5* [4.8-6.2]	b	8.1 [7.3-8.9]
Work, studies or employment opportunities	3.5* [2.9-4.0]	4.9* [4.3-5.5]	6.8 [6.1-7.7]
Financial position	5.4* [4.7-6.1]	6.9 [6.2-7.6]	6.9 [6.2-7.7]

Notes: CI—Confidence Intervals

* Significantly different from CAS

[a] In NADS: Past-year drinkers; in CADS & CAS: Past-year and former drinkers

[b] Questions asked separately in the CADS: Home life: 5.7%; Spouse/partner: 4.7%

Table 8.4: Percentages of past-year drinkers reporting various types of harm from one's own alcohol use in the past year, Canada, aged 15+, 1989, 1994 and 2004

Was there ever a time in your life when you felt your alcohol use had a harmful effect on the following? If yes, was this during the past 12 months	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Friendships or social life	4.7* [4.1-5.3]	3.4 [2.8-3.9]	3.0 [2.5-3.7]
Physical health	7.1* [6.3-7.9]	6.2 [5.5-6.9]	5.4 [4.6-6.2]
Home life or marriage [a]	3.0* [2.5-3.5]	a	1.8 [1.4-2.4]
Work, studies or employment opportunities	2.0 [1.6-2.4]	1.7 [1.3-2.1]	1.7 [1.3-2.2]
Financial position	3.8 [3.2-4.4]	4.0* [3.4-4.6]	2.7 [2.1-3.3]

Notes: CI—Confidence Intervals

* Significantly different from CAS

[a] Questions asked separately in the CADS: Home life: 2.9%; Spouse/partner: 2.4%

Table 8.5: Percentages reporting various harms from other people's drinking in the past year, Canada, aged 15+, 1989, 1994 and 2004

Have you ever been or have you ever had the following due to someone else's drinking?	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Insulted or humiliated	21.3 [20.2-22.4]	19.2* [18.2-20.2]	22.1 [20.9-23.4]
Arguments/quarrels	16.6 [15.6-17.6]	14.0 [13.1-14.9]	15.5 [14.4-16.6]
Family problems or marriage difficulties	7.7* [7.0-8.4]	5.4* [4.8-6.0]	10.5 [9.6-11.4]
Passenger with a drunk driver	10.4* [9.6-11.2]	7.5* [6.8-8.2]	17.8 [15.8-20.0]
Pushed or shoved	a	10.8 [10.0-11.6]	10.8 [9.9-11.7]
Hit/assaulted	7.2* [6.5-7.9]	4.4* [3.9-4.9]	3.2 [2.8-3.8]

Notes: CI—Confidence Intervals

* Significantly different from CAS

[a] Not asked in NADS

Table 8.6: Percentages reporting lifetime and past-year use of any illicit drugs[a], Canada, aged 15+, 1994, 2004

	CADS 1994 % [CI]	CAS 2004 % [CI]
Lifetime		
Overall	28.5* [27.4.5-29.6]	45.0 [43.5-46.6]
Male	33.6* [31.9-35.3]	50.6 [48.2-52.9]
Female	23.5* [22.0-25.0]	39.9 [38.0-41.8]
Past year		
Overall	7.6* [6.9-8.3]	14.4 [13.4-15.5]
Male	10.1* [9.0-11.2]	18.5 [16.9-20.3]
Female	5.1* [4.3-5.9]	10.6 [9.4-11.8]

Notes: Data for this category were not available from the NADS (1989)

CI—Confidence Intervals

* Significantly different from CAS

[a] Any illicit drugs include cannabis (including one-time-only use); cocaine/crack; LSD in CADS and hallucinogens in CAS; speed; and heroin

Table 8.7: Percentages reporting lifetime use of illicit drugs, Canada, aged 15+, 1989, 1994, 2004

	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Cannabis	23.2* [22.1-24.2]	28.2* [27.0-29.3]	44.5 [43.0-46.0]
Males	28.9* [27.2-30.6]	33.5* [31.8-35.2]	50.1 [47.8-25.5]
Females	17.7* [16.4-19.0]	23.1* [21.6-24.6]	39.2 [37.3-41.1]
Cocaine/crack	3.5* [3.0-4.0]	3.8* [3.3-4.3]	10.6 [9.7-11.6]
Males	4.5* [3.7-5.3]	4.9* [4.1-5.7]	14.1 [12.6-15.8]
Females	2.7* [2.1-3.3]	2.7* [2.1-3.3]	7.3 [6.4-8.3]
LSD or Hallucinogens[a]	b	5.2* [4.6-5.8]	11.4 [10.5-12.4]
Males	b	7.2* [6.3-8.1]	16.0 [14.4-17.8]
Females	b	3.3* [2.6-3.9]	7.1 [6.2-8.1]
Speed	b	2.1* [1.7-2.5]	6.4 [5.6-7.2]
Males	b	3.1* [2.5-3.7]	8.7 [7.4-10.2]
Females	b	1.2* [0.8-1.6]	4.1 [3.5-4.9]
Heroin	b	0.5 [0.3-0.7]	0.9 [0.6-1.2]
Males	b	0.8 [0.5-1.1]	1.3 [0.9-1.9]
Females	b	S	0.5 [0.3-0.7]
LSD/speed/heroin	4.1* [3.6-4.6]	5.9* [5.3-6.5]	13.2 [12.2-14.2]
Males	5.1* [4.2-5.9]	8.1* [7.1-9.1]	17.7 [16.0-19.5]
Females	3.1* [2.5-3.7]	3.6* [2.9-4.3]	9.0 [8.0-10.1]

Notes: CI—Confidence Intervals

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

* Significantly different from CAS

[a] In CADS and NADS the question asked about use of LSD, but in CAS the question asked about use of hallucinogens, PCP or LSD

[b] The NADS presented data for LSD/speed/heroin in an aggregate category

Table 8.8: Percentages reporting past-year use of illicit drugs, Canada, aged 15+, 1989, 1994, 2004

	NADS 1989 % [CI]	CADS 1994 % [CI]	CAS 2004 % [CI]
Cannabis	6.5* [5.8-7.1]	7.4* [6.7-8.1]	14.1 [13.1-15.1]
Males	8.9* [7.8-10.0]	10.0* [8.9-11.1]	18.2 [16.6-20.0]
Females	4.1* [3.4-4.8]	4.9* [4.1-5.7]	10.2 [9.1-11.5]
Cocaine/crack	1.4 [1.1-1.7]	0.7* [0.5-0.9]	1.9 [1.5-2.3]
Males	2.0 [1.5-2.5]	0.8[Q] [0.5-1.1]	2.7 [2.1-3.5]
Females	0.8[Q] [0.5-1.1]	0.5[Q] [0.2-0.8]	1.1 [0.8-1.6]
LSD or Hallucinogens[a]	b	0.9 [0.6-1.1]	0.7 [0.5-0.9]
Males	b	1.3 [0.9-1.7]	1.0 [0.7-1.5]
Females	b	0.6[Q] [0.3-0.9]	0.3[Q] [0.2-0.5]
Speed	b	0.2[Q] [0.1-0.3]	0.8 [0.6-1.1]
Males	b	0.4[Q] [0.2-0.6]	1.0 [0.6-1.5]
Females	b	S	0.6 [0.4-1.1]
Heroin	b	S	S
Males	b	S	S
Females	b	S	S
LSD/speed/heroin	0.4[Q] [0.2-0.6]	1.1 [0.8-1.4]	1.3 [1.0-1.7]
Males	0.5[Q] [0.2-0.8]	1.5 [1.1-1.9]	1.8 [1.3-2.4]
Females	S	0.7 [0.4-1.0]	0.9 [0.6-1.3]

Notes: CI—Confidence Intervals

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

* Significantly different from CAS; significance is not stated for qualified results

[a] In CADS and NADS the question asked about use of LSD, but in CAS the question asked about use of hallucinogens, PCP or LSD

[b] The NADS presented data for LSD/speed/heroin in an aggregate category

Table 8.9: Percentages reporting lifetime use of steroids and inhalants, Canada, aged 15+, 1994, 2004

	CADS 1994 % [CI]	CAS 2004 % [CI]
Steroids		
Overall	0.3[Q] [0.2-0.4]	0.6 [0.4-0.8]
Male	0.4[Q] [0.2-0.6]	1.0 [0.7-1.5]
Female	S	S
Inhalants		
Overall	0.8 [0.6-1.0]	1.3 [1.0-1.6]
Male	1.2 [0.8-1.6]	1.9 [1.4-2.5]
Female	0.3[Q] [0.1-0.5]	0.7 [0.5-1.0]

Notes: CI—Confidence Intervals

S—estimate suppressed due to high sampling variability;

Q—estimate has high sampling variability; interpret with caution

Table 8.10: Percentages reporting lifetime and past-year use of ecstasy, Canada, aged 15+, 2002, 2004

	CCHS 1.2 2002 % [CI]	CAS 2004 % [CI]
Lifetime		
Overall	2.9	4.1 [3.5-4.7]
Male	3.7	5.2 [4.3-6.3]
Female	2.2	3.0 [2.4-3.7]
Past 12 months		
Overall	0.8	1.1 [0.8-1.5]
Male	1.0	1.5 [1.1-2.2]
Female	0.6	0.7 [0.4-1.1]

Notes: CI—Confidence Intervals

Table 8.11: Percentages of lifetime users[a] reporting various types of harm from one's own drug use in their lifetime, Canada, aged 15+, 1994 and 2004

	CADS 1994 % [CI]	CAS 2004 % [CI]
Friendships or social life	10.6 [9.0-12.2]	11.9 [10.4-13.5]
Physical health	17.6 [15.6-19.6]	16.5 [14.9-18.3]
Home life or marriage	b	9.8 [8.4-11.3]
Work, studies or employment opportunities	12.8 [11.1-14.5]	10.3 [8.9-11.9]
Financial position	12.6 [10.9-14.3]	9.5 [8.3-11.0]

Notes: CI—Confidence Intervals

[a] Lifetime use: use in lifetime of at least one of the following drugs: cannabis (excluding one-time only), cocaine/crack, LSD or hallucinogens, speed, heroin, steroids or solvents. Numbers differ between this table and Table 7.7 in Chapter 7 because a different definition of users was used here to accommodate the CADS data

[b] Home life: 9.6%; Spouse/partner: 5.8%

Table 8.12: Percentages of past-year users[a] reporting various types of harm from one's own drug use in the 12 months preceding the survey, Canada, aged 15+, 1994 and 2004

	CCHS 1.2 2002 % [CI]	CAS 2004 % [CI]
Friendships or social life	6.6 [4.3-8.9]	6.0 [4.5-8.1]
Physical health	12.5 [9.4-15.6]	10.1 [8.1-12.6]
Home life or marriage	b	5.1 [3.8-7.0]
Work, studies or employment opportunities	7.5 [5.0-10.0]	5.1 [3.6-7.1]
Financial position	10.3* [7.4-13.2]	6.5 [4.9-8.7]

Notes: CI—Confidence Intervals

* Significantly different from CAS

[a] Past-year use: use in past 12 months of at least one of the following drugs: cannabis, cocaine/crack, LSD or hallucinogens, speed, heroin, steroids or solvents

[b] Home life: 7.9%; Spouse/partner: 4.8%