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Addiction and Mental Health Indicators Among Ontario Adults, 1977–2011: Highlights from the CAMH Monitor eReport

This eBulletin highlights the key findings from the 2011 *CAMH Monitor*, an Ontario-wide telephone survey of substance use and mental health indicators among 3,039 adults aged 18 and older. Also highlighted are trends in alcohol, tobacco, and cannabis use, and mental health based on 26 random surveys conducted during a 35-year period between 1977 and 2011. The resulting compilation of these surveys represents the longest ongoing surveillance study of adult substance use in Canada.

Substance Use and Mental Health Indicators

Table 1 presents the major substance use and mental health estimates from the 2011 cycle of the *CAMH Monitor*. After controlling for other demographic characteristics, substance and mental health indicators were associated with the following demographic factors:

Gender was discernibly associated with substance use and related harms, with men showing higher prevalence rates than women. Specifically, men were more likely than women to:

- drink alcohol daily
- consume more alcoholic drinks weekly
- exceed the low-risk drinking guidelines
- binge drink weekly
- drink hazardously or harmfully
- report symptoms of alcohol dependence
- currently smoke cigarettes
- use cannabis in lifetime and in the past year
- experience problems from their cannabis use
- use cocaine in lifetime
- use prescription opioids non-medically, and
- drive within an hour of drinking alcohol.

Regarding mental health, women were more likely than men to report using antidepressant medication in the past year.

Age of respondent was discernibly associated with substance use and related harms. With the exception of daily drinking – which tends to increase with age – most substance use decreased with age or was highest among 18 to 29 year-olds. Specifically, after adjusting for other demographic characteristics, 18 to 29 year-olds were the most likely to:

- exceed the low-risk drinking guidelines
- binge drink weekly
- drink hazardously or harmfully
- report symptoms of alcohol dependence
- use cannabis in the past year
- experience problems from their cannabis use, and
- drive within an hour of using cannabis.

Age was discernibly associated with three mental health measures. The youngest respondents were most likely to report elevated psychological distress. Those in their 40s were most likely to report use of antianxiety and antidepressant medication in the past year.

Region was discernibly associated with three substance use and mental health measures. Compared with the province as a whole, those in the *South West* region were more likely to report drinking hazardously or harmfully; those in the *Central South* region were more likely to report frequent mental distress days; and those in the *East* region were more likely to report past year use of antidepressant medications.

Table 1
Addiction and Mental Health Indicators Among Ontario Adults, *CAMH Monitor* 2011

	Measure	Percentage Estimate	Population Estimate
Alcohol	Percentage drinking alcohol in the past 12 months	81.2%	7,676,200
	Percentage drinking alcohol daily	7.0% of total sample 8.6% of drinkers	658,500
	Average number of drinks consumed weekly (among *drinkers*)	4.7 drinks	
	Percentage exceeding the low-risk drinking guidelines	18.4% of total sample 22.3% of drinkers	1,746,800
	Percentage consuming 5 or more drinks on a single occasion weekly ("binge drinking weekly")	7.4% of total sample 9.1% of drinkers	691,700
	Percentage reporting hazardous or harmful drinking (AUDIT 8+)	14.4% of total sample 7.8% of drinkers	1,152,700
	Percentage of *drivers* who drove within an hour of drinking two or more drinks, at least once in the past 12 months	5.8% of drivers	489,300
Tobacco	Percentage currently smoking cigarettes	15.4%	1,445,800
	Percentage smoking cigarettes daily	11.5%	1,082,600
	Average number of cigarettes smoked daily (among *smokers*)	11.3 cigarettes	
	Percentage of *daily smokers* reporting high nicotine dependence	12.1% of daily smokers	129,500
Cannabis	Percentage using cannabis in lifetime	40.5%	3,791,900
	Percentage using cannabis in the past 12 months	13.4%	1,254,400
	Percentage of *cannabis users* reporting a moderate or high risk of cannabis problems (ASSIST-CIS 4+)	5.6% of total sample 41.7% of users	514,000
	Percentage of *drivers* who drove within an hour of using cannabis, at least once in the past 12 months	2.4% of drivers	197,600
Other Drug Use	Percentage using cocaine in lifetime	7.0%	647,000
	Percentage using cocaine in past 12 months	1.1%	102,700
	Percentage using a prescription opioid pain reliever for non-medical purposes in the past 12 months	4.0%	365,200
Mental Health	Percentage reporting elevated psychological distress in the past few weeks (GHQ12 3+)	14.7%	1,361,000
	Percentage using any prescribed antianxiety medication in the past 12 months	7.1%	654,400
	Percentage using any prescribed antidepressant medication in the past 12 months	7.1%	654,600
	Percentage rating their mental health, in general, as fair or poor	6.0%	583,100
	Percentage reporting frequent mental distress days (14+) in the past 30 days	7.1%	648,100

Notes: (1) total survey sample size was 3,039 Ontario adults; (2) population estimates, based on an adult population of 9,460,369, are rounded up to the nearest hundred; (3) drivers are defined as those with a valid driver's licence.

Trends in Substance Use

Alcohol

- The percentage of adults reporting **drinking alcohol in the past year** discernibly increased between 2010 (78%) and 2011 (81%). Since 1996, there has been fluctuation, but no dominant trend in past year alcohol use, with a low of 77% in 1998 and a high of 82% in 2007. Women have shown an increase in alcohol prevalence during recent years, whereas men have not.

- **Daily drinking** among past year drinkers has changed since 1977. From 13% in 1977, it decreased three-fold to 4% in 1992 and remained stable until the early 2000s. However, over the past decade daily drinking increased from 5% (in 2002) to 9% in 2011. This reversal was especially prominent among drinking men, whose daily drinking dropped from 20% in 1977 to 7% in 2005, and then increased to 12% in 2011.

- Between 1996 and 2009, there was a discernible increase in the **average number of drinks consumed weekly** among past year drinkers, from 3.3 drinks in 1996 to 4.7 drinks in 2011. This increase was evident among both male and female drinkers.

- The percentage of Ontarians **exceeding the low-risk drinking guidelines** in 2011 (18%) was unchanged from 2009 (18%). There has been no change in this indicator since 2003, when it was first measured.

- **Weekly binge drinking** among adults did not change between 2010 (8%) and 2011 (7%). However, discernible declines were noted between 2006 (12%) and 2011 (7%). Both men and women showed declines in weekly binge drinking since 2006.

- The percentage of adults reporting **hazardous or harmful drinking** remained stable between 2010 (15%) and 2011 (14%). Over the past decade, there was discernible fluctuation in hazardous/harmful drinking, declining from 13% in 1998 to 10% in 2005, increasing to a high of 16% in 2007, followed by another decline and stabilization in recent years.

- The prevalence of **driving after drinking** among adult licensed drivers in 2011 (6%) did not change from 2010 (5%). Drinking and driving declined two-fold between 1996 (13%) and 2006 (6%), and has remained stable since then.

Tobacco

- The percentage of Ontario adults reporting **current cigarette smoking** remained stable between 2010 and 2011 (18% and 15%, respectively). Current smoking decreased from 28% in 1991 to 24% in 1993, and then rebounded to 27% to 28% in the mid-1990s. Since 1996, smoking has discernibly decreased from 27% in 1996 to 15% in 2011.

- **Daily smoking** also decreased over time, from 23% in 1996 to 12% in 2011.

Cannabis

- **Past year cannabis use** among Ontario adults remained stable between 2010 (14%) and 2011 (13%). Cannabis use has been steadily increasing since 1977 (8%). This increase is especially evident among women (from 5% in 1977 to 11% in 2011), among 18 to 29 year-olds (from 23% to 34%), and among those aged 50 and older (from 1% to 5%).

- The percentage of licensed adult drivers in Ontario reporting **driving after cannabis use** at least once during the past year remained stable between 2010 and 2011, at 2%. This rate has not changed since 2002, when this was first measured.

Cocaine

- **Past year cocaine use** has remained stable since 1996, varying between 1% and 2%.

Non-Medical Use of Prescription Opioids

- **Past year non-medical prescription opioid pain reliever use** discernibly decreased between 2010 (8%) and 2011 (4%).

Trends in Mental Health

- **Elevated psychological distress** remained stable between 2010 and 2011 (at 15%) and has been stable since 2000, when measurement began.

- The percentage of adults who reported using **prescribed antianxiety medication** increased between 1999 and 2011, from 5% to 7%.

- Similarly, the percentage who reported using **prescribed antidepressant medication** increased between 1999 and 2011, from 4% to 7%.

- The percentage who rated their **mental health as fair or poor** did not change between 2010 and 2011, at 6%. This indicator has remained stable since 2003, when measurement first began.

Methods

The *CAMH Monitor* is an addiction and mental health surveillance survey of the Ontario adult population aged 18 and older. It is an anonymous, random-digit-dialling telephone survey, administered by the Institute for Social Research, York University. The *CAMH Monitor* is continuously conducted on monthly probability samples from January to December, and employs a stratified (region) two-stage (telephone number, respondent) probability sample design. The following six public health regional strata are used: Toronto, Central East, East, Central West, West, and North. The full sample size in 2011 was 3,039 (51% of eligible respondents). All survey estimates were weighted, and variance and statistical tests were corrected for the complex sampling design. The sample is representative of over 9 million Ontarians aged 18 and older.

Measures & Terminology

- **Daily drinking** is defined as drinking at least one alcoholic drink everyday in the past 12 months.
- **Binge drinking weekly** is defined as drinking five or more drinks on a single occasion at least once a week during the past 12 months.
- **Exceeding the low-risk drinking guidelines** refers to drinking beyond the amount recommended in Canada's "Low-Risk Drinking Guidelines." The recommendation is no more than 2 drinks a day or 10 standard drinks a week for women, and no more than 3 drinks a day or 15 standard drinks a week for men. Compliance is based on reported number of drinks daily for each of the past 7 days, and derived separately by gender.
- **Hazardous or harmful drinking** was measured with the *Alcohol Use Disorders Identification Test* (AUDIT), a 10-item instrument designed to detect hazardous or harmful drinking at the less severe end of the spectrum. The percentage reported here is based on a score of 8 or more out of 40, which represents an established high-risk pattern of drinking that increases the likelihood of future medical and physical problems, or indicates harmful consequences of use already experienced. The reference period for the AUDIT is the past 12 months before the survey.
- **Current cigarette smoker** is defined as someone who: 1) has smoked over 100 cigarettes in his/her lifetime, 2) is a daily or occasional smoker, and 3) has smoked in the past 30 days.
- **Nicotine dependence** was measured among daily smokers using the *Heaviness of Smoking Index* (HSI), a scale based on points given for the time to the first cigarette each morning and number of cigarettes smoked per day. High dependence is based on a score 5 or more of 6.
- **Cannabis use problems** was measured with the *Cannabis Involvement Score* (CIS) on the ASSIST screener, which consists of 6 items assessing cannabis consumption and past-3-month cannabis-related problems. A score of 4 or more of 39 was used as a cut-off value.
- **Non-medical use of prescription opioid pain relievers** is defined as using a prescribed opioid such as such as Percocet, Percodan, Demerol, OxyContin, or Tylenol #3 during the past 12 months without a doctor's prescription of one's own.
- **Elevated psychological distress** was measured with the 12-item version of the *General Health Questionnaire* (GHQ), a screening instrument used to assess current mental health problems. The items assess the recent frequency of experiencing 12 symptoms (e.g., stress, depression, problem making decisions). Elevated psychological distress is defined as experiencing 3 or more of the 12 symptoms.

(continued...)

- **Fair/poor mental health** is defined as responses of "fair" or "poor" to the question: "*In general, would you say your overall mental health is excellent, very good, good, fair or poor?*"
- **Frequent mental distress days** was measured with the question "*During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?*" and is defined as reporting 14 or more of such days.
- **Region** refers to the Ontario Ministry of Health's seven public health planning regions: Toronto; Central South; Central West; South West; Central East; East; and North.
- **95% confidence interval (CI)** shows the uncertainty in inferring a true population value from a single sample. The CI is interpreted as follows: with repeated sampling, 95 of 100 sample CIs would contain the "true" population value. Design-based confidence intervals also account for characteristics of the sample design (i.e., stratification, weighting).
- **Discernible difference** refers to a difference between (or among) estimates that is statistically different at the $p<.05$ level, or lower, after adjusting for the sampling design, and thus not likely due to chance alone.

Source

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