



Canadian Addiction Survey 2004:

Microdata eGuide

Canadian Centre on Substance Abuse



Canadian Addiction Survey 2004: Microdata eGuide

June, 2005

This document is revised from
an earlier edition (November 2004)

Updates to November 2004 Microdata eGuide

1. Section 4.1 - Questionnaire Content and Design

This section has been revised and a table describing item allocation in the 3 panels of the questionnaire has been added (Table 1.1, page 4).

2. Section 5.1 - Data weighting

The variable "strata" in the CAS 2004 data file is based on the 21 regional strata described in Table 5.1 (page 13).

3. Variables not documented in this eGuide

The following variables in the CAS 2004 data file are not meant for analysis and are thus not documented:

rnr	j1 to j7	gend_rnr
strat	lcp5a	freqalc
aleaa	lcp5b	alclev7
aleac	age_6	

4. Occupation

The variable "sdem3" was revised in a new variable named "occupat". The variable "occupat", which contains revised occupation codes based on the NOC (National Occupation Codes), should be used for recoding purposes.

5. Updates to Appendix 1 (Derived Variables)

The information regarding derived variables has been extensively updated.

6. Updates to Appendix 3 (Questionnaire).

A detailed table describing the questionnaire content and item allocation across panels has been added (Table A3.1).

The Canadian Addiction Survey (CAS) is a major national survey of Canadians' attitudes, beliefs, and personal use of alcohol and other drugs. It is a collaborative initiative financially supported by Health Canada, the Canadian Executive Council on Addictions (CECA) -- which includes the Alberta Alcohol and Drug Abuse Commission (AADAC); the Addictions Foundation of Manitoba (AFM); the Canadian Centre on Substance Abuse (CCSA); the Centre for Addiction and Mental Health (CAMH); Prince Edward Island Mental Health and the Kaiser Foundation; -- the Victoria-based Centre for Addiction Research (CAR - BC), the British Columbia Ministry of Health Planning, the New Brunswick Department of Health and Wellness, and the Nova Scotia Department of Health.

The CAS Research Advisory Team includes the following (*alphabetical order*):

Edward Adlaf (CAMH, University of Toronto)
Patricia Begin (CCSA)
Andree Demers (University of Montreal),
Robert Hanson (Health Canada),
Florence Kellner (Carleton University),
Anca Ialomiteanu (CAMH),
David Patton (AFM),
Christiane Poulin (Dalhousie University)
Stephane Racine (Health Canada),
Juergen Rehm (CAMH, University of Toronto)
Ed Sawka (AADAC)
Eric Single (University of Toronto)
Patrick Smith (CAMH, University of Toronto)

The CAS Microdata eGuide was prepared by Edward Adlaf (CAMH, University of Toronto) and Anca Ialomiteanu (CAMH). This document was revised in June 2005 from an earlier edition (November, 2004)

Suggested Citation:

Canadian Centre on Substance Abuse (2005). Canadian Addiction Survey 2004: Microdata eGuide. Canadian Centre on Substance Abuse, Ottawa.

This publication can be accessed electronically at www.ccsa.ca

Table of Contents

1. Background and Rationale	1
2. Objectives	2
3. CAS Sample Design	2
4. Data Collection and Quality	3
4.1 Questionnaire Content and Design	3
4.2 Questionnaire Pretesting and Interviewing	3
4.3 Participation and Sample Evaluation	5
5. Data Weighting and Analysis	12
5.1 Data Weighting	12
5.2 Guidelines for Analysis and Release	13
5.3 Reliability and Suppression	14
6. Data Limitations	23
7. References	24
8. Appendices	25
8.1 Appendix 1 - Derived Variables	25
8.2 Appendix 2 - WHO-ASSIST Guidelines	50
8.3 Appendix 3 - Questionnaire	

1. Background and Rationale

Timely and relevant data are necessary prerequisites for effective health policy and programming and for the monitoring of established health objectives. During the last decade, national health surveys such as the Canadian Community Health Survey (CCHS) and the National Population Health Survey (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 provide the necessary knowledge base required for ongoing planning. Indeed, professionals in other health behaviours such as tobacco and physical activity have found the need for dedicated on-going surveys (Canadian Tobacco Use Monitoring Survey, Physical Activity Monitor). This absence of addiction specific data at a national level is especially important given that the political agenda will likely see the greatest changes to drug use policy since the turn of the century.

The Canadian Addiction Survey (CAS) is a major national survey of Canadians' attitudes, beliefs, and personal use of alcohol and other drugs. It is a collaborative initiative sponsored by 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 Mental Health and Addictions and the Kaiser Foundation - , the provinces of Nova Scotia, Ontario, Manitoba, Alberta and British Columbia and Health Canada.

The CAS Research Advisory Team included the following:

Edward Adlaf (CAMH, University of Toronto)
Patricia Begin (CCSA)
Andree Demers (University of Montreal),
Robert Hanson (Health Canada),
Florence Kellner (Carleton University),
Anca Ialomiteanu (CAMH),
David Patton (AFM),
Christiane Poulin (Dalhousie University)
Stephane Racine (Health Canada),
Juergen Rehm (CAMH, University of Toronto)
Ed Sawka (AADAC)
Eric Single (University of Toronto)
Patrick Smith (CAMH, University of Toronto)

2. Objectives

The key objectives of the proposed CAS are as follows:

1. To determine the prevalence, incidence and frequency of alcohol and other drug use in the Canadian population aged 15 and older. The drugs of interest include alcohol, tobacco, illicit drugs, including cannabis, heroin and other opiates, cocaine and crack, amphetamines, hallucinogens (including MDMA) and inhalants.
2. To assess the context of use and the extent of harms that result from those individuals who use drugs. Measures include indicators of hazardous and harmful drinking, dependence and abuse indicators, and the adverse effects on personal and social functioning.
3. To identify the risk and protective factors related to the use and consequences of drug use in the general population and in specific sub-groups.
4. To assess the public's opinions, views and knowledge regarding existing and potential addiction policies and to identify emerging policy issues.

3. CAS Sample Design

The CAS was based on a two-stage (telephone household, respondent) random sample stratified by 21 regional units. The CAS was administered by Jolicoeur et associés, who were responsible for sample selection, telephone interviewing, and preparation of the initial microdata file. The survey used random-digit-dialling (RDD) methods via 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 regional strata, defined by CMA versus non-CMA within each province (see Table 5.1), 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 age 15 or older who could complete the interview in English or French was selected according to the most recent birthday of household members. A minimum of 12 call-backs were placed to unanswered numbers and all households who 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 per province. In addition, some provinces purchased additional cases (1,400 in Alberta, 2,000 in British Columbia and 500 in Manitoba) resulting in a final allocation of 13,909.

The CAS sample represents some 24,214,815 Canadians aged 15 and older.

4. Data Collection and Quality

4.1 Questionnaire Content and Design

The CAS is one of the most detailed and extensive addiction surveys ever conducted in Canada, with more than 400 unique questionnaire items. In order to maximise the content areas of the survey without increasing the interview length, two categories of questions were created in the CAS: full items, those questions asked of all respondents, and panel items, those asked of three independent random sub-samples, Panels A through C. In total, **13,909** respondents comprised the full interview items, **4,612** were interviewed for **Panel A** items, **4,639** for **Panel B** items, and **4,658** for **Panel C** items (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 & 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
- New material allowing researchers to further study economic cost issues.

Table 1.1 - CAS 2004 - Questionnaire Panels

	Panel A	Panel B	Panel C
Number of respondents (Total N=13,909)	4,612	4,639	4,658
Attitudes, Opinions, Policy (part 1)			
Perceived seriousness at national level	✓		
Perceived seriousness at provincial level		✓	
Perceived seriousness at community			✓
Perceived harm of drug use	✓	✓	
Perceived risk			✓
Perceived availability	✓		
Health & Well-Being			
General Health; Mental Health		✓	
Social isolation		✓	
Tobacco Use			
			✓
Alcohol			
Prevalence, patterns of consumption	✓	✓	✓
Occasion-based drinking			✓
Home Brew (wine & beer)			✓
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 (cocaine, speed, ecstasy, hallucinogens, inhalants, heroin, steroids)	✓	✓	✓
Context of use	✓	✓	✓
Injection drug use	✓	✓	✓
Illicit drug use problems (WHO ASSIST)	✓	✓	✓
Harms and costs			
Self-reported harms (alcohol & drugs)	✓	✓	✓
Victimization and violence	✓	✓	✓
Willingness to pay	✓		
Attitudes, Opinions, Policy (part 2)			
Government programs	✓		
Societal impact		✓	
Policy opinion (alcohol, cannabis, drugs)			✓
Driving and substance use (alcohol and cannabis)			
		✓	
Treatment			
	✓	✓	✓
Demographics (MSCN-FSA)			
	✓	✓	✓

4.2 Questionnaire Pretesting and Interviewing

Core substance use measures were typically drawn from pre-existing national surveys, including the 1989 NADS (Eliany, Giesbrecht, et al., 1990), the 1994 CADS (MacNeil and Webster, 1997) and the current CCHS (Tjepkema, 2004). Prior to the initiation of fieldwork, all new questions and full interviews were pretested with approximately 25 respondents. This pre-survey analysis included information from pretest 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 to December 23, 2003 and from January 9 to April 21, 2004. Compared with “paper-pencil” questionnaires, CATI interviews have several advantages, including: immediate data capture, automatic control of question sequences, centralized interviewer supervision and capability of randomization of respondents to particular questions. For each time zone, the normal interviewer’s working schedule was from 8:00 am to 11:00 pm Monday to Friday, from 12:00 pm to 8:00 pm on Saturday and from 1:00 pm to 9:00 pm on Sunday. Ten percent of interviews were validated by re-contacts.

As seen in Table 1.2, the median interview time was 23 minutes (80% of interviews were completed within 30 min). Interviews were conducted by 89 interviewers, many of whom had considerable CATI experience. In addition, all respondents who refused to participate on the first call, were recontacted by an experienced interviewer in order to maximize participation. Table 1.2 also documents interviewing activity related to day of interview, length of interview and number of calls.

Table 1.2 - CAS Interviewing Activity

	N	Unweighted %
Fieldwork		
Dec. 16- Dec. 23, 2003;	409	2.1
Jan. 9 - April 21, 2004	13501	97.9
Days		
Sunday	2042	14.7
Monday	2155	15.5
Tuesday	2219	16.0
Wednesday	2107	15.1
Thursday	2000	14.4
Friday	1461	10.5
Saturday	1925	13.8
Interview length (min.)		
<10 min.	334	2.4
10-19	3,324	23.9
20-29	9,740	70.0
30-49	407	2.9
50-59	72	0.5
60+ min	32	0.2
Median	23 min	---
No. of contacts		
1	2,146	15.4
2-3	3,856	27.7
4-6	3,867	27.8
7+	4,040	29.1
Language of Interview		
English	12,596	90.6
French	1,313	9.4

4.3 Participation & 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, representing an effective response rate of 47.0% (Table 2). Response rates varied from 43.6% in British Columbia to 51.1% in Manitoba.

The response rate approaching 50% is lower than prior national addiction surveys, and thus, an evaluation of potential bias is necessary. It is important to note, however, that the potential bias of nonresponse is not solely a function of the response rate. It is influenced by (1) the magnitude of the response rate and (2) the difference between respondents and non-respondents (which is generally unknown). Thus, sizeable bias may occur in a survey with a good response rate, but with large differences between responders and non-responders, and ignorable bias may occur in a survey with low response rate, but with small differences between responders and non-responders (Groves & Couper, 1998).

Thus, to strengthen the confidence in these data, it is important to show that key demographic characteristics and the CAS sample are similar to the Canadian population, and that drug use indicators seem reasonable. Table 3 presents key demographic characteristics of the CAS sample, including the number of interviews, the unweighted and weighted percentages and the design effects. Table 4 compares demographic characteristics of the CAS sample to population data based on the 2001 Canadian Census. As seen in Table 4, the weighted CAS distribution compares favourably to the Census data (note that this should be case given that the weights include population adjustments for sex, age and province). It is important to note, however, that the CAS sample tends to underrepresent respondents who were never married and had some post-secondary education and overrepresent respondents who were married and had a university degree. These differences are common to telephone surveys (Trewin & Lee, 1988).

In addition, confidence in the CAS data would also be strengthened by demonstrating that substance use estimates were similar to recent surveys such as the 2002 CCHS. As seen in Table 5, CAS estimates are generally within range of those found in the CCHS. Indeed, of the 66 estimates in Table 5, only 9 comparisons exceed $\pm 3\%$ points. In all instances, the CAS estimates are higher than the CCHS. For the total sample the CAS estimates are higher for lifetime cannabis use and any lifetime illicit drug use; for men, the CAS estimates are higher for lifetime cannabis, lifetime cocaine, lifetime hallucinogens and any illicit drug use; for women, the CAS estimates are higher for lifetime alcohol, past year alcohol and lifetime cannabis use. In sum, despite a response rate of 47%, there is no obvious evidence of systematic bias in the CAS 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).

Table 2. CAS Fieldwork Statistics

	NWF	PEI	NS	NB	QUE	ONT	MAN	SAS	ALB	BC	TOTAL	%
NUMBERS AVAILABLE	4600	3725	3900	4600	3700	4850	6500	4200	9920	13800	59795	
NUMBERS CALLED	4600	3725	3900	4600	3700	4850	6500	4200	9920	13800	59795	100.00%
Out of service	1832	1052	1223	1722	905	1427	2362	1295	2034	3459	17311	28.95%
Non-residential	299	245	261	343	285	476	422	285	1012	903	4531	7.58%
Line problems	54	35	21	41	21	34	29	36	52	72	395	0.66%
Fax	205	206	207	235	230	308	378	328	883	1140	4120	6.89%
Changed numbers	30	46	47	108	83	103	34	18	91	96	656	1.10%
NON VALIDE {out-of-scope}}	2420	1584	1759	2449	1524	2348	3225	1962	4072	5670	27013	45.18%
VALIDE {in scope}	2180	2141	2141	2151	2176	2502	3275	2238	5848	8130	32782	54.82%
Not eligible	8	11	8	9	10	16	13	5	28	45	153	0.47%
Language problems	19	8	8	10	42	155	114	28	185	555	1124	3.43%
Age, sickness	76	72	65	68	39	48	94	64	87	167	780	2.38%
Duplicate	6	5	4	3	0	6	3	2	7	12	48	0.15%
B, HORS ÉCHANTILLON	109	96	85	90	91	225	224	99	307	779	2105	6.42%
ÉCHANTILLON	2071	2045	2056	2061	2085	2277	3051	2139	5541	7351	30677	93.58%
C, Household refusal	435	410	472	372	421	579	745	474	1389	2063	7360	23.99%
D, Selected person refusal	170	158	172	195	252	173	227	168	394	521	2430	7.92%
D, Long absence	28	18	11	7	4	21	14	5	27	51	186	0.61%
D, Incomplete	16	7	8	17	20	19	18	15	27	38	185	0.60%
C, No answer	225	305	258	231	191	302	343	279	755	1025	3914	12.76%
D, Call backs	196	147	133	239	194	183	202	198	548	653	2693	8.78%
COMPLETED	1001	1000	1002	1000	1003	1000	1502	1000	2401	3000	13909	
% REFUSAL	29.2%	27.8%	31.3%	27.5%	32.3%	33.0%	31.9%	30.0%	32.2%	35.2%	31.9%	
% COMPLETED	48.3%	48.9%	48.7%	48.5%	48.1%	43.9%	49.2%	46.8%	43.3%	40.8%	45.3%	
ER ELIGIBILITY RATE	92.8%	93.3%	94.0%	94.2%	94.3%	86.1%	89.8%	93.3%	91.7%	84.6%	90.2%	
RR RESPONSE RATE	49.5%	50.1%	49.9%	49.4%	48.9%	46.4%	51.1%	47.9%	44.8%	43.6%	47.0%	

Table 3. Demographic Characteristics of the CAS 2004 Sample

	No. Interviews	Unweighted % (N=13909)	Weighted % (N=25773)	Design Effect
Gender				
Male	5721	41.1	48.5	3.4
Female	8188	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	1065	7.7	8.5	3.5
25-34	2342	16.8	16.1	2.9
35-44	2720	19.6	20.5	3.5
45-54	2706	19.5	17.8	3.4
55-64	1853	13.3	11.5	2.9
65-74	1179	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	6778	48.7	45.2	3.3
Partner/ Common-law	1152	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	3632	26.1	27.6	3.3
Missing	94	0.7	0.5	3.2
Province *				
Newfoundland	1001	7.2	1.7	1.14
Prince Edward Island	1000	7.2	0.4	1.10
Nova Scotia	1002	7.2	3.0	1.19
New Brunswick	1000	7.2	2.4	1.11
Quebec	1003	7.2	24.1	1.09
Ontario	1000	7.2	38.5	1.11
Manitoba	1502	10.8	3.6	1.07
Saskatchewan	1000	87.2	3.1	1.06
Alberta	2401	17.3	9.8	1.15
British Columbia	3000	21.6	13.4	1.09
Rural FSA				

	No. Interviews	Unweighted % (N=13909)	Weighted % (N=25773)	Design Effect
Rural	3016	21.7	15.7	2.8
Not-Rural	10893	78.3	84.3	2.8
Highest Education				
Less than high school	2471	17.8	17.2	3.1
Completed high school	3926	28.2	26.6	3.2
Some college or university	4267	30.7	30.3	3.3
Graduated university	3146	22.6	25.1	3.3
Missing	99	0.7	0.8	3.2
Gross Family Income (,000s)				
<\$20	1067	7.7	6.8	3.0
\$20-29.9	1083	7.8	7.2	3.2
\$30-39.9	1139	8.2	7.8	3.2
\$40-49.9	1039	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+	2286	16.4	18.0	3.5
DK	1470	10.6	10.2	3.2
Refused	2471	17.8	18.4	3.4
Employment Status				
Full-time job	6018	43.3	45.3	3.3
Part-time job	1366	9.8	9.0	3.1
Unemployed	674	4.8	4.4	2.9
Homemaker	724	5.2	4.5	2.9
Student	1236	8.9	9.1	3.3
Retired	2526	18.2	19.2	3.6
Other	1304	9.4	8.0	3.2
Missing	61	0.8	1.0	3.1
Language spoken at home				
English	12014	86.4	70.1	1.8
French	1338	9.6	23.2	1.2
Other	525	3.8	6.5	4.6
Missing	32	0.4	0.4	1.4

Table 4. Selected Demographic Characteristics: Weighted CAS 2004 versus 2001 Census Data, Canada Population, Aged 15 Years and over.

	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	17.2)	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	(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 is not within the bounds of the CAS CI (CAS data excludes missing data).

Source: Statistics Canada. [On-line]. Available: <http://www12.statcan.ca/english/census01/home/index.cfm>

Table 5. Comparison of Substance Use Indicators, CAS versus CCHS 2002

	Total		Men		Women	
	CAS	CCHS	CAS	CCHS	CAS	CCHS
Alcohol - life	92.8 (92.0-93.6)	90.3	94.1 (92.8-95.2)	93.6	91.6 (90.5-92.7)	87.2
Alcohol - 12m	79.3 (78.1-80.5)	77.3	82.0 (80.1-83.8)	82.0	76.8 (75.1- 78.4)	72.7
Cannabis - life	44.5 (43.0- 46.0)	41.3	50.1 (47.8-52.5)	47.0	39.2 (37.3-41.1)	35.9
Cannabis - 12m	14.1 (13.1-15.2)	12.2	18.2 (16.6-20.0)	15.5	10.2 (9.1-11.5)	9.1
Cocaine/crack—life	10.6 (9.7-11.6)	8.0	14.1 (12.6-15.8)	10.7	7.3 (6.4-8.3)	5.4
Ecstasy - life	4.1 (3.5-4.7)	2.9	5.2 (4.3-6.3)	3.7	3.0 (2.4-3.7)	2.2
Hallucinogens -life	11.4 (10.5-12.4)	8.4	16.0 (14.4-17.8)	11.1	7.1 (6.2-8.1)	5.8
Speed -- life	6.4 (5.6-7.2)	4.6	8.7 (7.4-10.2)	6.0	4.1 (3.5-4.9)	3.2
Heroin - life	0.9 (0.6-1.2)	0.7	1.3 (0.9-1.9)	1.1	0.5 (0.3-0.7)	0.4
Any illicit -life	17.0 (15.9-18.1)	13.7	21.8 (20.0-23.8)	17.3	12.4 (11.2-13.7)	10.2
Any illicit—12m	3.1 (2.6-3.6)	2.4	4.4 (3.6-5.4)	3.2	1.9 (1.4-2.4)	1.6

5. Data Weighting and Analysis

5.1 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 based on 21 regional strata (variable = strata) by 6 age groups and by sex (Table 5.1).

Table 5.1. Regional strata, age groups and sex variables (used for weights calculation)

<i>STRATA</i> (21 regional strata)	<i>AGE</i>	<i>SEX</i>
1. St-John's CMA (Newfoundland)	15 to 24 years old	Men
2. Other in Newfoundland	25 to 34 years old	Women
	35 to 44 years old	
3. Charlottetown CMA	45 to 54 years old	
4. Other in Prince-Edward-Island	55 to 64 years old	
	65 years and older	
5. Halifax CMA		
6. Other in Nova-Scotia		
7. St-John (N.-B.) CMA and Moncton CMA		
8. Other in New-Brunswick		
9. Montreal CMA and Quebec CMA		
10. Other in Quebec		
11. Ottawa CMA and Toronto CMA		
12. Other in Ontario		
13. Winnipeg CMA		
14. Other in Manitoba		
15. Saskatoon CMA and Regina CMA		
16. Other Saskatchewan		
17. Calgary CMA		
18. Edmonton CMA		
19. Other in Alberta		
20. Vancouver CMA		
21. Other in British-Colombia		

5.2 Guidelines for Analysis and Release

Sample designs employing complex sampling procedures, such as stratification, weighting and multistage selection, tend to underestimate the variance (or error) of estimates when simple random sampling (SRS) formulas are used. The implication of using SRS formulas on estimates from complex sampling designs is that we are likely to create a more narrow confidence interval than truly exists. We will therefore be more likely to find a greater number of statistically significant differences than ought to exist. The Deff is a measure which can be used to crudely adjust for this problem. It 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. A Deff of 1.0 indicates that the variance of a given sample design is equivalent to the variance of a SRS. Most complex designs, however, tend to have Deffs larger than one. The adjustment can also be seen as reducing the size of the sample; thus, if the sample size is 10,000, a Deff of 3.0 would reduce our sample to an equivalent SRS, or effective sample size, of 3,0001 (i.e., $10,000/3.0$). Because each estimate has a unique Deff, attempts to use an average Deff to downweight the sample to an effective sample size is not feasible. See Kish (1965) or Lee et al. (1989) for an elaboration of Deffs.

In the CAS design, the Deffs are primarily influenced by the two-stage selection and the disproportional sampling fractions related to equal provincial allocations. As seen in Table 3, the CAS generally has a Deff of about 3.4, although this can vary by various outcomes and subgroups.

If the particular research question involves inference to the total population of Canadians aged 15 and older (e.g., epidemiological estimates of drinking or drug use), the investigator must employ weights. If the research question does not require a probability sample, the requirement of weighting can be relaxed (see Groves 1989: 279-294, for a discussion on this matter). If a probability sample is a necessary component of the analysis, the following MUST be applied when using CAS data.

In order to provide proper estimates of variance, confidence intervals and statistical tests, appropriate computer software that corrects for the complex sampling design must be used (e.g., SUDDAN, Stata, Epiinfo, and special modules found in SPSS (Complex Sampling) and SAS).

The CAS design variables for statistical analysis are as follows:

- Weight variable = XWGT
- PSU/Cluster variable = IDNUM
- Stratification variable = STRATA

For exploratory analysis purposes, a relative weight variable (RWGT) is also included in the microdata file.

5.3 Reliability and Suppression

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

The relative standard error or the coefficient of variation (CV) should be employed to identify unstable estimates (see Tables 6.1-6.4).

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 $\pm 0.8\%$ 95% CI (based on the total CAS sample of 13,909 ($\pm 2.8\%$ assuming a Deff 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 nonsampling errors such as question nonresponse, problems of respondent memory and recall, interviewer effects, sensitivity of questions, underreporting of drug use, and the like. 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.

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

Guidelines for data suppression based on the CV are as follows:

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

As seen in Table 6.1, for the total CAS sample of 13,909 respondents, estimates as low as 0.5% are reportable without suppression, and estimates as low as 4% are reportable without suppression provincially.

Table 6.1 Coefficient of Variation Values by Percentage Estimate and CAS Sample Size

CAS Sample size		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
Total	13909	12	8.4	6.9	5.9	5.3	4.8	4.5	4.2	3.7	3.4	3.1			
Sex															
Men	5721	18.7	13.2	10.7	9.3	8.3	7.5	6.9	6.5	5.8	5.2	4.8			
Women	8188	15.6	11	9	7.7	6.9	6.3	5.8	5.4	4.8	4.4	4			
Age															
15-17	581	58.6	41.3	33.6	29.1	25.9	23.6	21.8	20.3	18.1	16.4	15.1	14.1	13.2	12.5
18-19	439	67.4	47.5	38.7	33.4	29.8	27.2	25.1	23.4	20.8	18.9	17.4	16.2	15.2	14.3
20-24	1065	43.2	30.5	24.8	21.5	19.1	17.4	16.1	15	13.4	12.1	11.2	10.4	9.7	9.2
25-34	2342	29.2	20.6	16.7	14.5	12.9	11.8	10.9	10.1	9	8.2	7.5	7	6.6	6.2
35-44	2720	27.1	19.1	15.5	13.4	12	10.9	10.1	9.4	8.4	7.6	7	6.5	6.1	5.8
45-54	2706	27.1	19.1	15.6	13.5	12	10.9	10.1	9.4	8.4	7.6	7	6.5	6.1	5.8
55-64	1853	32.8	23.1	18.8	16.3	14.5	13.2	12.2	11.4	10.1	9.2	8.5	7.9	7.4	7
65-74	1179	41.1	29	23.6	20.4	18.2	16.6	15.3	14.3	12.7	11.5	10.6	9.9	9.3	8.7
75+	719	52.6	37.1	30.2	26.1	23.3	21.2	19.6	18.3	16.3	14.8	13.6	12.7	11.9	11.2
Province															
Newfoundland	1001	44.6	31.5	25.6	22.1	19.7	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
Prince Edward Island	1000	44.6	31.5	25.6	22.1	19.8	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
Nova Scotia	1002	44.6	31.4	25.6	22.1	19.7	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
New Brunswick	1000	44.6	31.5	25.6	22.1	19.8	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
Quebec	1003	44.6	31.4	25.6	22.1	19.7	18	16.6	15.5	13.8	12.5	11.5	10.7	10	9.5
Ontario	1000	44.6	31.5	25.6	22.1	19.8	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
Manitoba	1502	36.4	25.7	20.9	18.1	16.1	14.7	13.6	12.6	11.3	10.2	9.4	8.8	8.2	7.7
Saskatchewan	1000	44.6	31.5	25.6	22.1	19.8	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
Alberta	2401	28.8	20.3	16.5	14.3	12.7	11.6	10.7	10	8.9	8.1	7.4	6.9	6.5	6.1

CAS Sample size		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
British Columbia	3000	25.8	18.2	14.8	12.8	11.4	10.4	9.6	8.9	8	7.2	6.7	6.2	5.8	5.5
<i>Marital status</i>															
Never married	3632	23.4	16.5	13.4	11.6	10.4	9.4	8.7	8.1	7.2	6.6	6	5.6	5.3	5
Married	7930	15.8	11.2	9.1	7.9	7	6.4	5.9	5.5	4.9	4.4	4.1	3.8	3.6	3.4
Prev. married	2253	29.7	21	17.1	14.8	13.2	12	11.1	10.3	9.2	8.3	7.7	7.1	6.7	6.3
<i>Education</i>															
<High School	2471	28.4	20	16.3	14.1	12.6	11.4	10.6	9.9	8.8	8	7.3	6.8	6.4	6
Completed HS	3926	22.5	15.9	12.9	11.2	10	9.1	8.4	7.8	7	6.3	5.8	5.4	5.1	4.8
Some post-sec	4267	21.6	15.2	12.4	10.7	9.6	8.7	8	7.5	6.7	6.1	5.6	5.2	4.9	4.6
Univ. Degree	3146	25.2	17.7	14.4	12.5	11.1	10.1	9.4	8.7	7.8	7.1	6.5	6	5.7	5.3
<i>Income</i>															
>\$30,000	2150	30.4	21.5	17.5	15.1	13.5	12.3	11.3	10.6	9.4	8.5	7.9	7.3	6.9	6.5
\$30,000-\$49,000	2178	30.2	21.3	17.4	15	13.4	12.2	11.3	10.5	9.3	8.5	7.8	7.3	6.8	6.4
\$50,000-\$79,000	2461	28.4	20.1	16.3	14.1	12.6	11.5	10.6	9.9	8.8	8	7.3	6.8	6.4	6
\$80,000+	3179	25	17.6	14.4	12.4	11.1	10.1	9.3	8.7	7.7	7	6.5	6	5.6	5.3
DK/REF	3941	22.5	15.9	12.9	11.2	9.9	9.1	8.4	7.8	6.9	6.3	5.8	5.4	5.1	4.8

Note: Green (dark shaded) entries represent unstable estimates; Yellow (light shaded) entries represent estimates with moderate sampling variability; Unshaded entries represent estimates with acceptable reliability.
CV assume simple random sampling

Table 6.2 Panel A - Coefficient of Variation Values by Percentage Estimate and Sample Size

PANEL A (sample size)		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
Total	4612	20.8	14.7	11.9	10.3	9.2	8.4	7.7	7.2	6.4	5.8	5.4			
Sex															
Men	1928	32.1	22.7	18.5	15.9	14.2	13	12	11.2	9.9	9	8.3			
Women	2684	27.2	19.2	15.6	13.5	12.1	11	10.1	9.5	8.4	7.6	7			
Age															
15-17	201	99.7	70.4	57.3	49.5	44.2	40.2	37.1	34.6	30.8	28	25.8	24	22.5	21.2
18-19	141	119.2	84.1	68.5	59.2	52.8	48.1	44.4	41.4	36.8	33.5	30.8	28.7	26.9	25.4
20-24	349	75.6	53.3	43.4	37.5	33.5	30.5	28.1	26.3	23.4	21.2	19.5	18.2	17	16.1
25-34	796	50	35.3	28.7	24.8	22.1	20.2	18.6	17.4	15.5	14	12.9	12	11.3	10.6
35-44	882	47.5	33.5	27.3	23.6	21	19.2	17.7	16.5	14.7	13.3	12.3	11.4	10.7	10.1
45-54	906	46.9	33.1	26.9	23.3	20.8	18.9	17.5	16.3	14.5	13.2	12.1	11.3	10.6	10
55-64	635	56	39.5	32.2	27.8	24.8	22.6	20.9	19.5	17.3	15.7	14.5	13.5	12.6	11.9
65-74	372	73.2	51.7	42.1	36.3	32.4	29.5	27.3	25.4	22.6	20.5	18.9	17.6	16.5	15.6
75+	231	93	65.6	53.4	46.2	41.2	37.5	34.6	32.3	28.7	26.1	24	22.4	21	19.8
Province															
Newfoundland	317	79.4	56	45.6	39.4	35.1	32	29.5	27.6	24.5	22.3	20.5	19.1	17.9	16.9
Prince Edward Island	353	75.2	53	43.2	37.3	33.3	30.3	28	26.1	23.2	21.1	19.4	18.1	16.9	16
Nova Scotia	334	77.3	54.5	44.4	38.4	34.2	31.2	28.8	26.8	23.9	21.7	20	18.6	17.4	16.4
New Brunswick	314	79.7	56.2	45.8	39.6	35.3	32.1	29.7	27.7	24.6	22.4	20.6	19.2	18	17
Quebec	337	77	54.3	44.2	38.2	34.1	31	28.6	26.7	23.8	21.6	19.9	18.5	17.3	16.4
Ontario	340	76.6	54	44	38	33.9	30.9	28.5	26.6	23.7	21.5	19.8	18.4	17.3	16.3
Manitoba	478	64.6	45.6	37.1	32.1	28.6	26	24	22.4	20	18.1	16.7	15.5	14.6	13.7
Saskatchewan	329	77.9	54.9	44.7	38.7	34.5	31.4	29	27.1	24.1	21.9	20.1	18.7	17.6	16.6
Alberta	811	49.6	35	28.5	24.6	21.9	20	18.4	17.2	15.3	13.9	12.8	11.9	11.2	10.5

PANEL A (sample size)		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
British Columbia	999	44.7	31.5	25.7	22.2	19.8	18	16.6	15.5	13.8	12.5	11.5	10.7	10.1	9.5
Marital status															
Never married	1233	40.2	28.3	23.1	19.9	17.8	16.2	15	14	12.4	11.3	10.4	9.7	9.1	8.5
Married	2593	27.7	19.5	15.9	13.7	12.3	11.2	10.3	9.6	8.6	7.8	7.2	6.7	6.2	5.9
Prev. married	749	51.6	36.4	29.6	25.6	22.8	20.8	19.2	17.9	15.9	14.5	13.3	12.4	11.6	11
Education															
<High School	826	49.1	34.6	28.2	24.4	21.7	19.8	18.3	17.1	15.2	13.8	12.7	11.8	11.1	10.4
Completed HS	1298	39.2	27.6	22.5	19.4	17.3	15.8	14.6	13.6	12.1	11	10.1	9.4	8.8	8.3
Some post-sec	1395	37.8	26.6	21.7	18.7	16.7	15.2	14.1	13.1	11.7	10.6	9.8	9.1	8.5	8
Univ. Degree	1057	43.4	30.6	24.9	21.5	19.2	17.5	16.2	15.1	13.4	12.2	11.2	10.4	9.8	9.2
Income															
>\$30,000	725	52.4	37	30.1	26	23.2	21.1	19.5	18.2	16.2	14.7	13.5	12.6	11.8	11.1
\$30,000-\$49,000	721	52.6	37.1	30.2	26.1	23.3	21.2	19.6	18.3	16.2	14.8	13.6	12.6	11.9	11.2
\$50,000-\$79,000	798	50	35.2	28.7	24.8	22.1	20.1	18.6	17.4	15.4	14	12.9	12	11.3	10.6
\$80,000+	1075	43	30.4	24.7	21.4	19.1	17.4	16	14.9	13.3	12.1	11.1	10.3	9.7	9.2
DK/REF	1293	39.2	27.7	22.5	19.5	17.4	15.8	14.6	13.6	12.1	11	10.1	9.4	8.8	8.3

Note: Green (dark shaded) entries represent unstable estimates; Yellow (light shaded) entries represent estimates with moderate sampling variability; Unshaded entries represent estimates with acceptable reliability. CVs assume simple random sampling

Table 6.3 Panel B - Coefficient of Variation Values by Percentage Estimate and Sample Size

PANEL B sample size		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
Total	4639	20.7	14.6	11.9	10.3	9.2	8.3	7.7	7.2	6.4	5.8	5.4			
Sex															
Men	1853	32.8	23.1	18.8	16.3	14.5	13.2	12.2	11.4	10.1	9.2	8.5			
Women	2786	26.7	18.9	15.4	13.3	11.8	10.8	9.9	9.3	8.3	7.5	6.9			
Age															
15-17	195	101.3	71.4	58.2	50.3	44.8	40.8	37.7	35.2	31.3	28.4	26.2	24.3	22.8	21.5
18-19	143	118.4	83.5	68	58.7	52.4	47.7	44.1	41.1	36.6	33.2	30.6	28.5	26.7	25.2
20-24	357	74.8	52.7	42.9	37.1	33.1	30.1	27.8	26	23.1	21	19.3	18	16.9	15.9
25-34	778	50.6	35.7	29.1	25.1	22.4	20.4	18.8	17.6	15.6	14.2	13.1	12.2	11.4	10.8
35-44	914	46.7	32.9	26.8	23.2	20.7	18.8	17.4	16.2	14.4	13.1	12.1	11.2	10.5	9.9
45-54	930	46.3	32.6	26.6	23	20.5	18.7	17.2	16.1	14.3	13	12	11.1	10.4	9.8
55-64	584	58.4	41.2	33.6	29	25.9	23.6	21.7	20.3	18.1	16.4	15.1	14	13.2	12.4
65-74	383	72.2	50.9	41.5	35.8	32	29.1	26.9	25.1	22.3	20.3	18.6	17.4	16.3	15.3
75+	246	90.1	63.6	51.8	44.7	39.9	36.3	33.5	31.3	27.8	25.3	23.3	21.7	20.3	19.2
Province															
Newfoundland	345	76.1	53.6	43.7	37.7	33.7	30.7	28.3	26.4	23.5	21.3	19.7	18.3	17.1	16.2
Prince Edward Island	325	78.4	55.3	45	38.9	34.7	31.6	29.2	27.2	24.2	22	20.2	18.8	17.7	16.7
Nova Scotia	336	77.1	54.4	44.3	38.2	34.1	31.1	28.7	26.8	23.8	21.6	19.9	18.5	17.4	16.4
New Brunswick	322	78.7	55.5	45.2	39.1	34.9	31.7	29.3	27.3	24.3	22.1	20.3	18.9	17.7	16.7
Quebec	329	77.9	54.9	44.7	38.7	34.5	31.4	29	27.1	24.1	21.9	20.1	18.7	17.6	16.6
Ontario	313	79.9	56.3	45.9	39.6	35.4	32.2	29.7	27.7	24.7	22.4	20.6	19.2	18	17
Manitoba	512	62.4	44	35.8	31	27.6	25.2	23.2	21.7	19.3	17.5	16.1	15	14.1	13.3
Saskatchewan	345	76.1	53.6	43.7	37.7	33.7	30.7	28.3	26.4	23.5	21.3	19.7	18.3	17.1	16.2
Alberta	797	50	35.3	28.7	24.8	22.1	20.2	18.6	17.4	15.4	14	12.9	12	11.3	10.6

PANEL B sample size		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
British Columbia	1015	44.3	31.2	25.4	22	19.6	17.9	16.5	15.4	13.7	12.4	11.4	10.6	10	9.4
Marital status															
Never married	1201	40.7	28.7	23.4	20.2	18	16.4	15.2	14.1	12.6	11.4	10.5	9.8	9.2	8.7
Married	2655	27.4	19.3	15.7	13.6	12.1	11	10.2	9.5	8.5	7.7	7.1	6.6	6.2	5.8
Prev. married	750	51.5	36.4	29.6	25.6	22.8	20.8	19.2	17.9	15.9	14.5	13.3	12.4	11.6	11
Education															
<High School	830	49	34.6	28.1	24.3	21.7	19.7	18.2	17	15.1	13.7	12.7	11.8	11	10.4
Completed HS	1269	39.6	27.9	22.8	19.7	17.5	16	14.7	13.8	12.2	11.1	10.2	9.5	8.9	8.4
Some post-sec	1472	36.8	25.9	21.1	18.3	16.3	14.8	13.7	12.8	11.4	10.3	9.5	8.8	8.3	7.8
Univ. Degree	1038	43.8	30.9	25.2	21.7	19.4	17.7	16.3	15.2	13.5	12.3	11.3	10.5	9.9	9.3
Income															
>\$30,000	698	53.4	37.7	30.7	26.5	23.7	21.5	19.9	18.6	16.5	15	13.8	12.8	12	11.4
\$30,000-\$49,000	709	53	37.4	30.5	26.3	23.5	21.4	19.7	18.4	16.4	14.9	13.7	12.7	12	11.3
\$50,000-\$79,000	835	48.8	34.5	28.1	24.2	21.6	19.7	18.2	17	15.1	13.7	12.6	11.7	11	10.4
\$80,000+	1085	42.8	30.2	24.6	21.3	19	17.3	15.9	14.9	13.2	12	11.1	10.3	9.7	9.1
DK/REF	1312	39	27.5	22.4	19.3	17.2	15.7	14.5	13.5	12	10.9	10.1	9.4	8.8	8.3

Note: Green (dark shaded) entries represent unstable estimates; Yellow (light shaded) entries represent estimates with moderate sampling variability; Unshaded entries represent estimates with acceptable reliability. CVs assume simple random sampling

Table 6.4 Panel C - Coefficient of Variation Values by Percentage Estimate and Sample Size

PANEL C sample size		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
Total	4658	20.7	14.6	11.9	10.3	9.2	8.3	7.7	7.2	6.4	5.8	5.3			
Sex															
Men	1940	32	22.6	18.4	15.9	14.2	12.9	11.9	11.1	9.9	9	8.3			
Women	2718	27.1	19.1	15.5	13.4	12	10.9	10.1	9.4	8.4	7.6	7			
Age															
15-17	185	104	73.4	59.7	51.6	46	41.9	38.7	36.1	32.1	29.2	26.9	25	23.4	22.1
18-19	155	113.7	80.2	65.3	56.4	50.3	45.8	42.3	39.5	35.1	31.9	29.4	27.3	25.6	24.2
20-24	359	74.6	52.6	42.8	37	33	30.1	27.8	25.9	23	20.9	19.3	17.9	16.8	15.9
25-34	768	50.9	35.9	29.3	25.3	22.5	20.5	19	17.7	15.7	14.3	13.2	12.2	11.5	10.8
35-44	924	46.4	32.8	26.7	23	20.6	18.7	17.3	16.1	14.3	13	12	11.2	10.5	9.9
45-54	870	47.9	33.8	27.5	23.7	21.2	19.3	17.8	16.6	14.8	13.4	12.4	11.5	10.8	10.2
55-64	634	56.1	39.5	32.2	27.8	24.8	22.6	20.9	19.5	17.3	15.7	14.5	13.5	12.6	11.9
65-74	424	68.6	48.4	39.4	34	30.4	27.6	25.5	23.8	21.2	19.2	17.7	16.5	15.5	14.6
75+	242	90.9	64.1	52.2	45.1	40.2	36.6	33.8	31.6	28.1	25.5	23.5	21.8	20.5	19.3
Province															
Newfoundland	339	76.7	54.1	44.1	38.1	34	30.9	28.6	26.6	23.7	21.5	19.8	18.4	17.3	16.3
Prince Edward Island	322	78.7	55.5	45.2	39.1	34.9	31.7	29.3	27.3	24.3	22.1	20.3	18.9	17.7	16.7
Nova Scotia	332	77.5	54.7	44.5	38.5	34.3	31.3	28.9	26.9	24	21.8	20	18.6	17.5	16.5
New Brunswick	364	74	52.2	42.5	36.7	32.8	29.8	27.6	25.7	22.9	20.8	19.1	17.8	16.7	15.7
Quebec	337	77	54.3	44.2	38.2	34.1	31	28.6	26.7	23.8	21.6	19.9	18.5	17.3	16.4
Ontario	347	75.8	53.5	43.6	37.6	33.6	30.6	28.2	26.3	23.4	21.3	19.6	18.2	17.1	16.1
Manitoba	512	62.4	44	35.8	31	27.6	25.2	23.2	21.7	19.3	17.5	16.1	15	14.1	13.3
Saskatchewan	326	78.3	55.2	45	38.8	34.6	31.5	29.1	27.2	24.2	22	20.2	18.8	17.6	16.6
Alberta	793	50.1	35.4	28.8	24.9	22.2	20.2	18.7	17.4	15.5	14.1	13	12	11.3	10.7

PANEL C sample size		Percentage Estimate													
		0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
British Columbia	986	44.9	31.7	25.8	22.3	19.9	18.1	16.7	15.6	13.9	12.6	11.6	10.8	10.1	9.6
Marital status															
Never married	1198	40.8	28.8	23.4	20.2	18.1	16.4	15.2	14.2	12.6	11.4	10.5	9.8	9.2	8.7
Married	2682	27.2	19.2	15.7	13.5	12.1	11	10.1	9.5	8.4	7.6	7	6.5	6.1	5.8
Prev. married	754	51.4	36.3	29.5	25.5	22.8	20.7	19.1	17.9	15.9	14.4	13.3	12.4	11.6	10.9
Education															
<High School	815	49.4	34.9	28.4	24.5	21.9	19.9	18.4	17.2	15.3	13.9	12.8	11.9	11.1	10.5
Completed HS	1359	38.3	27	22	19	16.9	15.4	14.2	13.3	11.8	10.7	9.9	9.2	8.6	8.1
Some post-sec	1400	37.7	26.6	21.7	18.7	16.7	15.2	14	13.1	11.7	10.6	9.7	9.1	8.5	8
Univ. Degree	1051	43.5	30.7	25	21.6	19.3	17.5	16.2	15.1	13.5	12.2	11.2	10.5	9.8	9.3
Income															
>\$30,000	727	52.4	36.9	30.1	26	23.2	21.1	19.5	18.2	16.2	14.7	13.5	12.6	11.8	11.1
\$30,000-\$49,000	748	51.6	36.4	29.6	25.6	22.8	20.8	19.2	17.9	15.9	14.5	13.3	12.4	11.6	11
\$50,000-\$79,000	828	49.1	34.6	28.2	24.3	21.7	19.8	18.3	17	15.2	13.8	12.7	11.8	11.1	10.4
\$80,000+	1019	44.2	31.2	25.4	21.9	19.6	17.8	16.5	15.4	13.7	12.4	11.4	10.6	10	9.4
DK/REF	1336	38.6	27.2	22.2	19.2	17.1	15.6	14.4	13.4	11.9	10.8	10	9.3	8.7	8.2

Note: Green (dark shaded) entries represent unstable estimates; Yellow (light shaded) entries represent estimates with moderate sampling variability; Unshaded entries represent estimates with acceptable reliability. CVs assume simple random sampling

6.0 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, as well, transient populations such as the homeless, are not included. These excluded groups often contain an especially large number of drug users and heavy drinkers (Rossi 1989). However, the bias caused by such noncoverage depends upon 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 are those in the sampled group, if the size of the excluded group is small relative to the total population the bias is usually minimal (see Kandel 1991; Trinkoff et al. 1990). 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 et al. 1993; Turner et al. 1992). 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 underreporting 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 - November 5, 1994	March, 1989
Design	Random-digit-dailling sample of telephone households. Stratified two-stage selection.	Random-digit-dailling sample of telephone households. Stratified two-stage selection.	Random-digit-dailling sample of telephone households. Stratified two-stage selection.
Provincial allocation	Equal	Unequal	Unequal
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

The short timetable of the CAS required that interviews were conducted between December 2003 and April 2004. However, to ensure that the data were not seriously biased by the holiday season, interviews were not conducted during a three week period (December 24th-January 8th). It is expected that such seasonal differences would affect alcohol use estimates more than drug use estimates. Indeed, a comparison of eleven key substance use measures (lifetime, 12-month and 30 day alcohol use, monthly and weekly 5+ drinking, AUDIT, lifetime 12-month and 30 day cannabis use and lifetime and 12-month any illicit drug use) showed that three measures - 12-month and 30-day alcohol use and lifetime cannabis use showed higher reports after the holiday period.

7. Cited References

- Eliany, M., N. Giesbrecht, et al., (Eds.). (1990). National Alcohol and Other Drugs Survey: Highlights Report. Ottawa, Health and Welfare Canada.
- Groves, R. M. (1989). Survey Errors and Survey Costs. New York: Wiley.
- Groves, R. M, & Couper, M. P. (1998). Nonresponse in Household Interview Surveys. New York: Wiley.
- Harrison, E. R., Haaga, J., & Richards, T. (1993). Self-reported drug use data: What do they reveal? American Journal of Drug and Alcohol Abuse, 19(4), 423-441.
- Kandel, D. (1991). The social demography of drug use. The Millbank Quarterly, 69, 365-414.
- Kish, L. (1965). Survey Sampling. New York: Wiley & Sons.
- Lee, E. S., Forthofer, R. N. & Lorimor, R. J. (1989). Analyzing Complex Survey Data. Newbury Park: Sage Publications.
- MacNeil, P. & I. Webster (1997). Canada's Alcohol and Other Drugs Survey 1994: A Discussion of the Findings. Ottawa, Minister of Public Works and Government and Services Canada.
- Rossi, P. H. (1989). Down And Out In America. Chicago: The University of Chicago Press.
- 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 (pp. 9-24). New York: John Wiley & Sons.
- Trinkoff, A. M., Ritter, C., & Anthony, J. C. (1990). The prevalence and self-reported consequences of cocaine use: An exploratory and descriptive analysis. Drug & Alcohol Dependence, 26, 217-225.
- Turner, C. F., Lessler, J. T., & Gfroerer, J. C. (Eds.). (1992). Survey Measurement of Drug Use: Methodological Studies. Washington DC: Department of Health and Human Services.

APPENDIX 1

Derived Variables

Several derived variables have been created on the CAS file. In this section, the methods used to derive the more complex variables and some of the coding structures are described. Some of the derived variables have been grouped for ease of use .

In some cases, the creation of intermediate variables was needed due to the complex structure of the derived variable. These intermediate variables are also listed and documented as much as possible. Also, due to the complexity of the coding structure and analysis requests, for some of the grouped and derived variables, alternatively coded versions have been created. These alternatively coded variables are also listed and documented.

The descriptions of the derived variables below are listed according to topic.

Alcohol Use

ALCSTAT3	Drinking status
ALCLIFE	Alcohol use lifetime
ALC12M	Alcohol use past 12 months
ALC30D	Alcohol use past 30 days
QFVOL	Total volume of alcohol consumed in standard drinks in past 12 months
QFVOLWK	Weekly volume of alcohol consumed in standard drinks in past 12 months
ALDAILY	Daily drinking - past 12 months
FIVEMN	Five or more drinks in a single sitting once a month or more often
FIVEWK	Five or more drinks in a single sitting once a week or more often
AHEAVYMN	Heavy monthly alcohol use (past 12 months) (5+ men; 4+ women)
AHEAVYWK	Heavy weekly alcohol use (past 12 months) (5+ men; 4+ women)
ALC7D	Total standard drinks in past 7 days
ALCLEV4	Daily alcohol intake level (past 12 months)
LRISKDRK	Percent exceeding the low-risk drinking guidelines (past 7 days)
ALCSTAT6	Drinking pattern (6 categories) (total sample)
HEAVYDRK	Heavy drinking pattern

Alcohol Use Problems (AUDIT) and Harm

AUDIT	AUDIT total score (total sample)
AUDIT8	AUDIT score - 8+ cut-off (total sample)
AUDITC	AUDIT score for consumption/ intake
AUDITD	AUDIT score for dependence
AUDITAC	AUDIT score for adverse consequences
AUDITP	AUDIT score for problems (adverse consequences + dependence)
AHARML	One or more types of harm from one's own alcohol use – lifetime
AHARM12	One or more types of harm from one's own alcohol use – past 12m
HARMOTHR	One or more types of harm from others' alcohol use – past 12m

Cannabis Use

CANLIFE	Cannabis use lifetime
CAN12M	Cannabis use past 12 months
CAN3M	Cannabis use past 3 months
CAN30D	Cannabis use past 30 days
DRIVCAN	Driven a motor vehicle after using cannabis within 2 hours before driving (among valid drivers) (Panel B only)

Cannabis Use Problems (WHO's ASSIST)

ASISTCAN	Cannabis ASSIST score
ASISTCN3	Risk level for cannabis consumption (3 categories)
ASISTCN2	Risk level for cannabis consumption (2 categories)

Illicit Drug Use

COCLIFE	Cocaine use lifetime
COC12M	Cocaine use past 12 months
COC3M	Cocaine use past 3 months
SPEDLIFE	Speed use lifetime
SPED12M	Speed use past 12 months
SPED3M	Speed use past 3 months
XTCLIFE	Ecstasy use lifetime
XTC12M	Ecstasy use past 12 months
XTC3M	Ecstasy use past 3 months
HALLIFE	Hallucinogens use lifetime
HAL12M	Hallucinogens use past 12 months
HAL3M	Hallucinogens use past 3 months
INHLIFE	Inhalant use lifetime
INH12M	Inhalant use past 12 months
INH3M	Inhalant use past 3 months
HERLIFE	Heroin use lifetime
HER12M	Heroin use past 12 months
HER3M	Heroin use past 3 months
STERLIFE	Steroid use lifetime
STER12M	Steroid use past 12 months
STER3M	Steroid use past 3 months

Any Illicit Drug Use (grouped variables - different combinations)

ANY8DL	Lifetime use (any drug, including cannabis)
ANY8D12	Past 12 months use (any drug including cannabis)
ANY8D3M	Past 3 months use (any drug including cannabis)
ANY7DXL	Lifetime use (any drug excluding cannabis)
ANY7DX12	Past 12 months use (any drug excluding cannabis)
ANY7DX3M	Past 3 months use (any drug excluding cannabis)
IL6DL	Lifetime use (any illicit drug including cannabis)
IL6D12	Past 12 months use (any illicit drug including cannabis)
IL5DXL	Lifetime use (any illicit drug excluding cannabis)
IL5DX12	Past 12 months use (any illicit drug excluding cannabis)

Illicit Drug Use Problems (WHO's ASSIST) (cannabis not included)

ASISTIL	Illicit Drugs ASSIST score
ASISTIL3	Risk level for illicit drug use (3 categories)
ASISTIL2	Risk level for illicit drug use (2 categories)

Harm From Drug Use

DHARML	One or more types of harm from one's own drug use – lifetime
DHARM12	One or more types of harm from one's own drug use – past 12m

Smoking (Panel C only)

SMKSTAT3	Smoking status (3 cat)
-----------------	-------------------------------

Health Related Quality of Life Measures (Panel B only)

FAIRHLT	Percent fair or poor health
FAIRMHLT	Percent fair or poor mental health
UNHLTPD	Physically unhealthy days
UNHLTMD	Mentally unhealthy days
ACTLIMD	Activity limitation days
UNHLTD	Sum of unhealthy days (physically & mentally)
MENTDISD	Frequent mental distress days

Demographics

AGECAT9	Age recoded in 9 categories
AGECAT3	Age recoded in 3 categories
AGECAT4	Age recoded in 4 categories
AGECAT6	Age recoded in 6 categories
AGECAT7	Age recoded in 7 categories
AGE8CCHS	Age recoded in 8 categories (CCHS comparable)
AGE8NPHS	Age recoded in 8 categories (NPHS comparable)
EDUCAT4	Highest level of education recoded (4 categories)
MARSTAT3	Marital status recoded (3 categories)
MARSTAT4	Marital status recoded (4 categories)
EMPCAT8	Employment status recoded (8 categories)
PINCOME	Personal Income Before Taxes (past year)
HINCOME	Household Income Before Taxes (past year)
HINCCAT5	Household Income (5 categories)
INCADEQ4	Income Adequacy (4 categories)
INCADEQ5	Income Adequacy (5 categories)
LANGHOME	Language spoken at home
RURAL	Location of Household
REGION	Canada's five regions

1. ALCOHOL DERIVED VARIABLES

1.1. ALCOHOL USE

ALCSTAT3 **Drinking status**
Based on ALC1 and ALC3

ALCSTAT3=	DESCRIPTION	CONDITION
1	Current drinker	ALC1=1
2	Former drinker	ALC3=1 AND ALC1=5
3	Abstainer (never drank)	ALC3=5 AND ALC1=5

ALC12M **Alcohol use past 12 months**
Based on ALCSTAT3

ALC12M=	DESCRIPTION	CONDITION
0	Not used alcohol past 12 months	ALCSTAT3=2,3
1	Used alcohol past 12 months	ALCSTAT3=1

QFVOL **Volume of alcohol consumed in standard drinks in past 12 months.**
Estimated using usual quantity by usual frequency approach, recoded for total sample.

Based on ALC2 and ALC6.

$QFVOL = ALC2 \text{ (recoded)} * ALC6.$

Note: ALC2 (frequency of use of alcohol) and related frequency categories are recoded as follows:

- 7 'every day' = 365 times
- 6 '4 to 6 times a week' = 260 times
- 5 '2 to 3 times a week' = 130 times
- 4 'once a week' = 52 times
- 3 '2 to 3 times a month' = 30 times
- 2 'once a month' = 12 times
- 1 'less than once a month' = 6 times
- 0 'non-drinker' = 0

QFVOL =	DESCRIPTION
0 through highest	Number of standard drinks in past 12 months
99999	Missing

See also: Item **QFVOLWK** (weekly volume of alcohol consumed in standard drinks in past 12 months).

ALDAILY Daily drinking (past 12 months)
Based on ALC2 -- recoded for total sample.

ALDAILY=	DESCRIPTION	CONDITION
0	Non-daily /non-drinker past 12 months	ALC2=1 through 6, system missing=0
1	Daily drinker past 12 months	ALC2=7

FIVEMN FIVE or more drinks in a single sitting once a month or more often
Based on item ALC5, recoded for total sample

FIVEMN =	DESCRIPTION	CONDITION
0	No/ non-drinker past 12 months	Never 5+ monthly/ non-drinker
1	Five plus monthly past 12 months	5+ drinks monthly (ALC5=5, 6)

FIVEWK FIVE or more drinks in a single sitting once a week or more often
Based on item ALC5, recoded for total sample

FIVEWK =	DESCRIPTION	CONDITION
0	No/ non-drinker past 12 months	Never 5+ weekly/ non-drinker
1	Five plus weekly past 12 months	5+ drinks weekly (ALC5=5, 6)

AHEAVYMN Heavy Monthly Alcohol Use (past 12 months)
FOUR or more drinks (for women) OR FIVE or more drinks (for men) in a single sitting once a month or more often
Based on items ALC5 (men) or ALC5A (women), recoded for total sample

AHEAVYMN =	DESCRIPTION	CONDITION	
		Males	Females
0	No/ non-drinker past 12 months	Never 5+ monthly/ non-drinker	Never 4+ monthly/ non-drinker
1	Four or Five plus monthly past 12 months	5+ drinks monthly (ALC5=4 through 6)	4+drinks monthly (ALC5A=4 through 6)

**AHEAVYWK Heavy Weekly Alcohol Use (past 12 months)
FOUR or more drinks (for women) OR FIVE or more drinks (for men) in a single sitting weekly)**

Based on items ALC5 (men) or ALC5A (women), recoded for total sample

AHEAVYWK =	DESCRIPTION	CONDITION	
		Males	Females
0	No/ non-drinker past 12 months	Never 5+ weekly/ non-drinker	Never 4+ weekly/ non-drinker
1	Four or Five plus weekly past 12 months	5+ drinks weekly (ALC5=5,6)	4+drinks weekly (ALC5A=5,6)

ALC7D Total standard drinks in past 7 days

Based on items AL5A1 (Sunday) to AL5A7 (Saturday)– total no. of standard drinks consumed in the past 7 days, recoded for total sample

ALC7D = summation of items AL5A1 (Sunday) to AL5A7 (Saturday).

See also: Items SUN to SAT (no. of standard drinks consumed each day in past 7 days).

ALCLEV4 Daily Alcohol Intake Level ¹ (past 12 months)

Volume of alcohol consumed in a day in standard drinks (1 standard drink=13.6g) in the past 12 months

Based on QFVOL in standard drinks per day, recoded for total sample (adapted in grams of alcohol to match English et al. typology).

ALCLEV4	Standard Drinks per Day (1 standard drink=13.6grams)	
	Males	Females
0= Abstinence	0	0
1= Low	0.01 - 3.00	0.01- 1.50
2= Hazardous/Harmful	3.01+	1.51+

Note: ¹ (see (English 1995))

LRISKDRK - EXCEEDING LOW- RISK DRINKING GUIDELINES

Canadian guidelines referring to “low-risk drinking” were disseminated in 1994 following an international conference on health benefits and risks (Ashley, Ferrence et al. 1994). In 1997, revised guidelines were released by the former Addiction Research Foundation (currently CAMH) and the Canadian Centre on Substance Abuse). These guidelines have now been endorsed by various national and provincial government and non-government agencies (Bondy, Rehm et al. 1999). The “low-risk drinking” guidelines (LRD) 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 2 standard drinks. Caution should be taken to avoid intoxication and injury, and circumstances were identified where abstinence may be warranted. The guidelines are intended to represent low risk of the most important forms of harm and to address usual drinking over many years.

LRISKDRK Percent exceeding the low-risk drinking guidelines (past 7 days)

It is based on items ALC7D and items AL5A1 (Sunday) to AL5A7 (Saturday).

LRISKDRK	DESCRIPTION	CONDITION	
		Males	Females
0	Not exceeding LRD/ non-drinker past 12 months	14 or less drinks/week AND 2 or less drinks/day	9 or less drinks/week AND 2 or less drinks/day
1	Exceeding weekly and daily sex specific limits past 12 months	15+ drinks/week 3+drinks/day	10+ drinks/week 3+ drinks/day

See also: Items SUN3DK to SAT3DK (percent exceeding 3 standard drinks each day, past 7days).

DRINKING PATTERN**ALCSTAT6** Drinking pattern – 6 categories (similar to CADS, 1994 and NADS, 1989)

Based on items ALCSTAT3, ALC2 and ALC6R.

ALCSTAT6	PATTERN	DESCRIPTION
0	Lifetime abstainers	Never had alcohol
1	Former drinkers	Drank sometime during their lives, but not during the past 12 months preceding the survey
2	Light/infrequent drinkers	Drink less often than once a week, usually fewer than 5 drinks, when alcohol is used
3	Light/frequent drinkers	Drink once a week or more, usually fewer than 5 drinks, when alcohol is used
4	Heavy/infrequent drinkers	Drink less often than once a week, usually 5 or more drinks, when alcohol is used
5	Heavy/frequent drinkers	Drink once a week or more, usually 5 or more drinks, when alcohol is used

See also: Item HEAVYDRK (heavy drinking pattern, 3 categories)

1.2. ALCOHOL PROBLEMS - AUDIT (WHO)**Harmful and Hazardous Drinking - based on WHO's Alcohol Use Disorders Identification Test (AUDIT)**

The World Health Organization has developed a screening instrument - the Alcohol Use Disorders Identification Test (AUDIT) - designed to detect problem drinkers at the less severe end of the spectrum of alcohol (Saunders, Aasland et al. 1993; Babor, Higgins-Biddle et al. 2001). The AUDIT assesses hazardous and harmful drinking. *Hazardous* drinking refers to an established pattern of drinking that increases the likelihood of future physical and mental health problems (e.g., liver disease), whereas *harmful* drinking refers to a pattern of drinking that is already causing damage to health (e.g., alcohol-related injuries; depression). A score of 8 or more is conventionally used as a cut-off point to estimate the percentage who drink at hazardous or harmful levels.

AUDIT, AUDIT8

Derived AUDIT variables (**AUDIT, AUDIT8**) are based on the following items:

Variable name	AUDIT Items	Recoded category
Alcohol Intake		
ALC2 (aud1)	1. How often did you drink alcoholic beverages during the past 12 months?	0. Never
		1. Monthly or less
		2. 2-4 times/month
		3. 2-3 times/week
		4. 4+ times/week
ALC6 (aud2)	2. On those days when you drink, how many drinks do you usually have?	0. None/ or One
		1. Two to Three
		2. Four
		3. Five to Seven
		4. Eight or more
ALC5 (aud3)	3. About how often during the past 12 months would you say that you had five or more drinks at the same sitting or occasion?	0. Never
		1. Less than monthly
		2. Monthly
		3. Weekly
		4. Daily or almost daily
Dependence Indicators		
AUD4	4. How often during the last year have you found that you were not able to stop drinking once you had started?	0. Never
		1. Less than monthly
		2. Monthly
		3. Weekly
		4. Daily or almost daily
AUD5	5. How often during the last year have you failed to do what was normally expected from you because of drinking?	0. Never
		1. Less than monthly
		2. Monthly
		3. Weekly
		4. Daily or almost daily
AUD6	6. How often during the last year have you needed a first alcoholic drink in the morning to get yourself going after a heavy drinking session?	0. Never
		1. Less than monthly
		2. Monthly
		3. Weekly
		4. Daily or almost daily
Adverse Consequences		

AUD7	7. How often during the last year have you had a feeling of guilt or remorse after drinking?	0. Never
		1. Less than monthly
		2. Monthly
		3. Weekly
AUD8	8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	4. Daily or almost daily
		0. Never
		1. Less than monthly
		2. Monthly
AUD9	9. Have you or someone else ever been injured as a result of your drinking?	3. Weekly
		4. Daily or almost daily
		0. No
AUD10	10. Has a relative or friend or a doctor or other health worker ever been concerned about your drinking or suggested that you cut down?	2. Yes, but not last year
		4. Yes, during last year
		0. No

AUDIT AUDIT score (total sample)

Items aud1 to aud10 were recoded for total sample: aud1t to aud10t.

summation of: aud1t, aud2t, aud3t, aud4t, aud5t, aud6t, aud7t, aud8t, aud9t, aud10t

min: 0 max: 40 (higher score = increased likelihood of alcohol problems)

AUDIT8 AUDIT score cut-off 8+ (total sample)

Based on AUDIT

AUDIT8=	DESCRIPTION	CONDITION
0	AUDIT score less than 8	AUDIT ge 0 and AUDIT le 7
1	AUDIT score of 8 and over	AUDIT ge 8

See also: Items **AUDITC** (consumption/ intake), **AUDITAC** (adverse consequences), **AUDITD** (dependence), **AUDITP** (problems); based on the 3 AUDIT domains.

1.3. HARM from ALCOHOL

Harm from one's own alcohol use

AHARML **One or more types of harm from one's own alcohol use – lifetime**
Based on 8 items, ahar1 to ahar8, recoded for lifetime harm.

AHARML=	DESCRIPTION
0	Never any harm from alcohol use
1	At least one harm from alcohol use during lifetime (1 of 8)

See also: Items **AHAR1L** to **AHAR8L** (derived lifetime harm items).

AHARM12 **One or more types of harm from one's own alcohol use – past 12m**
Based on 8 items, ahar1 to ahar8, recoded for past12m harm.

AHARM12=	DESCRIPTION
0	No harm from alcohol use – past 12m
1	At least one harm from alcohol use during past 12m (1 of 8)

See also: Items **AHAR1C12** to **AHAR8C12** (derived past 12 months harm items).

Harm from others' alcohol use – past 12 months Only respondents aged 18 years and older

HARMOTHR **One or more types of harm from others' alcohol use – past 12m**
Based on items 6 opd1, opd2, opd3, opd5, vic1, and vic4;
asked only of respondents aged 18+.

HARMOTHR=	DESCRIPTION
0	No harm from others' alcohol use – past 12m
1	At least one harm from others' alcohol use – past 12m (1 of 6)

2. CANNABIS

2.1 CANNABIS USE

CANLIFE **Lifetime cannabis use**
Based on CAN1

CANLIFE=	DESCRIPTION	CONDITION
0	Never used	CAN1=3
1	Ever used in lifetime	CAN1=1,2

CAN12M **Cannabis use past 12 months**
Based on CAN2 – recoded for total sample

CAN12M=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	CAN2=2 and [valid skip=0]
1	Used past 12 months	CAN2=1

CAN3M **Cannabis use past 3 months**
Based on CAN3 – recoded for total sample

CAN3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	CAN3=2 AND [valid skip=0]
1	Used past 3 months	CAN3=1 through 4

See also: Items **CAN30D** (cannabis use past 30 day); **CANLIFEX** (cannabis use lifetime, excluding one time use); **CAN12MX** (cannabis use past 12m, excluding one time use); **CNONLYL** (used only cannabis, lifetime); **CNONLY12** (used only cannabis, past 12m).

2.2. CANNABIS PROBLEMS - ASSIST (WHO)

Based on WHO's Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

The World Health Organization has developed a screening instrument – the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) - designed to assess, for users of specific substances, the risk of experiencing health and other problems (e.g. social, financial, legal, relationship) from their current pattern of use (WHO ASSIST Working Group 2002)(see Appendix 2).

The **ASSIST** is asked only of **past 3 months** users. The **ASSIST** score ranges from 0 to 39. Three cut-off points are used to assess the risk of experiencing health and other problems: 1) “low” (a score of 0-3) refers to a pattern of use associated with a low risk of experiencing problems; 2) “moderate” (a score of 4-26)

refers to a pattern of use associated with a moderate risk of experiencing problems; and 3) “high” (a score of 27 +) refers to a pattern of use that is associated with a high risk of experiencing problems and is likely to lead to dependency.

ASISTCAN Cannabis ASSIST score
Based on 6 items CAN3M, CNAS1 through CNAS5.

summation of items: can3m, cnas1, cnas2, cnas3, cnas4, cnas5

min: 0 max: 39 (higher score = increased likelihood of experiencing problems)

ASISTCN3 Risk level for cannabis consumption - 3 categories
Based on CANASIST score

ASISTCN3=	DESCRIPTION	CONDITION
0= “low”	Score <=3 Low risk of developing health and other problems	CANASIST ge 0 and le 3
1= “moderate”	4=< Score <=26 Moderate risk of developing health and other problems	CANASIST ge 4 and le 26
2= “high”	Score >=27 High risk of developing health and other problems and likely to be dependent	CANASIST ge 27

ASISTCN2 Risk level for cannabis consumption - 2 categories
Based on CANASIST score – categories (moderate /high) combined

ASISTCN2=	DESCRIPTION	CONDITION
0= “low”	Score <=3 Low risk of developing health and other problems	CANASIST ge 0 and le 3
1= “moderate/ high”	Score >=4 Moderate or high risk of developing health and other problems (eventually likely to be dependent)	CANASIST ge 4

3. ILLICIT DRUGS

3.1. COCAINE

COCLIFE **Lifetime cocaine use**
Based on COC1

COCLIFE=	DESCRIPTION	CONDITION
0	Never used	COC1=3
1	Ever used in lifetime	COC1=1,2

COC12M **Cocaine use past 12 months**
Based on COC2 – recoded for total sample

COC12M=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	COC2=2 AND sysmis=0
1	Used past 12 months	COC2=1

COC3M **Cocaine use past 3 months**
Based on COC3 – recoded for total sample

COC3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	COC3=2 AND sysmis=0
1	Used past 3 months	COC3=1 through 4

3.2. SPEED

SPEDLIFE **Lifetime speed use**
Based on SPED1

SPEDLIFE=	DESCRIPTION	CONDITION
0	Never used	SPED1=3
1	Ever used in lifetime	SPED1=1,2

SPED12M **Speed use past 12 months**
Based on SPED2 – recoded for total sample

SPED12M =	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	SPED2=2 AND sysmis=0
		SPED2=1

1	Used past 12 months	
---	---------------------	--

SPED3M **Speed use past 3 months**
Based on SPED3 – recoded for total sample

SPED3M =	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	SPED3=2 AND sysmis=0
1	Used past 3 months	SPED3=1 through 4

3.3. ECSTASY

XTCLIFE **Lifetime ecstasy use**
Based on EXT1

XTCLIFE=	DESCRIPTION	CONDITION
0	Never used	EXT1=3
1	Ever used in lifetime	EXT1=1,2

XTC12M **Ecstasy use past 12 months**
Based on EXT2 – recoded for total sample

XTC12M=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	EXT2=2 AND sysmis=0
1	Used past 12 months	EXT2=1

XTC3M **Ecstasy use past 3 months**
Based on EXT3 – recoded for total sample

XTC3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	EXT3=2 AND sysmis=0
1	Used past 3 months	EXT3=1 through 4

3.4. HALLUCINOGENS

HALLIFE **Lifetime hallucinogens use**
Based on HAL1

HALLIFE=	DESCRIPTION	CONDITION
0	Never used	HAL1=3

1	Ever used in lifetime	HAL1=1,2
---	-----------------------	----------

HAL12M **Hallucinogens use past 12 months**
Based on HAL2 – recoded for total sample

HAL12M=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	HAL2=2 AND sysmis=0
1	Used past 12 months	HAL2=1

HAL3M **Hallucinogens use past 3 months**
Based on HAL3 – recoded for total sample

HAL3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	HAL3=2 AND sysmis=0
1	Used past 3 months	HAL3=1 through 4

3.5. INHALANTS

NHLIFE **Lifetime inhalant use**
Based on GLUE1

INHLIFE=	DESCRIPTION	CONDITION
0	Never used	GLUE1=3
1	Ever used in lifetime	GLUE1=1,2

INH12M **Inhalant use past 12 months**
Based on GLUE2 – recoded for total sample

INH12M=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	GLUE2=2 AND sysmis=0
1	Used past 12 months	GLUE2=1

INH3M **Inhalant use past 3 months**
Based on GLUE3 – recoded for total sample

INH3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	GLUE3=2 AND sysmis=0

1	Used past 3 months	GLUE3=1 through 4
---	--------------------	-------------------

3.6. HEROIN

HERLIFE **Lifetime heroin use**
Based on HER1

HERLIFE=	DESCRIPTION	CONDITION
0	Never used	HER1=3
1	Ever used in lifetime	HER1=1,2

HER12M **Heroin use past 12 months**
Based on HER2 – recoded for total sample

HER12M=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	HER2=2 AND sysmis=0
1	Used past 12 months	HER2=1

HER3M **Heroin use past 3 months**
Based on HER3 – recoded for total sample

HER3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	HER3=2 AND sysmis=0
1	Used past 3 months	HER3=1 through 4

3.7. STEROIDS

STERLIFE **Lifetime steroid use**
Based on STER1

STERLIFE=	DESCRIPTION	CONDITION
0	Never used	STER1=3
1	Ever used in lifetime	STER1=1,2

STER12M **Steroid use past 12 months**
Based on STER2 – recoded for total sample

STER12M=	DESCRIPTION	CONDITION
----------	-------------	-----------

0	Never used/ not used past 12 months	STER2=2 AND sysmis=0
1	Used past 12 months	STER2=1

STER3M Steroid use past 3 months
Based on STER3 – recoded for total sample

STER3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	STER3=2 AND sysmis=0
1	Used past 3 months	STER3=1 through 4

3.9. ANY ILLICIT DRUG USED

3.9.1. ANY DRUG INCLUDING CANNABIS

(8 drugs: cannabis, cocaine, speed, ecstasy, hallucinogens, inhalants, heroin, and steroids)

ANY8DL Lifetime use (any drug, including cannabis)
Based on 8 items (can1, coc1 through ster1)

ANY8DL =	DESCRIPTION	CONDITION
0	Never used	if (can1=3 or coc1=3 or sped1=3 or ext1=3 or hal1=3 or glue1=3 or her1=3 or ster1=3)
1	Used at least one drug in lifetime	if (can1=1,2 or coc1=1,2 or sped1=1,2 or ext1=1,2 or hal1=1,2 or glue1=1,2 or her1=1,2 or ster1=1,2)

ANY8D12 Past 12 months use (any drug including cannabis)
Based on 8 items (can2, coc2 through ster2) recoded for total sample

ANY8D12=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	if (can2=2 or coc2=2 or sped2=2 or ext2=2 or hal2=2 or glue2=2 or her2=2 or ster2=2) AND sysmis=0
1	Used at least one drug in past 12 months	if (can2=1 or coc2=1 or sped2=1 or ext2=1 or hal2=1 or glue2=1 or her2=1 or ster2=1)

ANY8D3M Past 3 months use (any drug including cannabis)
Based on 8 items (can3, coc3 through ster3) recoded for total sample

ANY8D3M=	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	can3, coc3 through ster3=0 AND sysmis=0
1	Used at least one drug in past 3 months	can3, coc3 through ster3=1 through 4

See also: Item ANY8D3 (frequency of use past 3m).

3.9.2. ANY DRUG EXCLUDING CANNABIS

(7 drugs: cocaine, speed, ecstasy, hallucinogens, inhalants, heroin, and steroids)

ANY7DXL Lifetime use (any drug excluding cannabis)

Based on 7 items (coc1 through ster1)

ANY7DXL=	DESCRIPTION	CONDITION
0	Never used	if (coc1=3 or sped1=3 or ext1=3 or hal1=3 or glue1=3 or her1=3 or ster1=3)
1	Used at least one drug in lifetime	if (coc1=1,2 or sped1=1,2 or ext1=1,2 or hal1=1,2 or glue1=1,2 or her1=1,2 or ster1=1,2)

ANY7DX12 Past 12 months use (any drug excluding cannabis)

Based on 7 items (coc2 through ster2) recoded for total sample

ANY7DX12=	DESCRIPTION	CONDITION
0	Never used/ not used past 12 months	if (coc2=2 or sped2=2 or ext2=2 or hal2=2 or glue2=2 or her2=2 or ster2=2) AND sysmis=0
1	Used at least one drug in past 12 months	if (coc2=1 or sped2=1 or ext2=1 or hal2=1 or glue2=1 or her2=1 or ster2=1)

ANY7DX3M Past 3 months use (any drug excluding cannabis)

Based on 7 items (coc3 through ster3) recoded for total sample

ANY7DX3M =	DESCRIPTION	CONDITION
0	Never used/ not used past 3 months	coc3 through ster3=0 AND sysmis=0
1	Used at least one drug in past 3 months	coc3 through ster3=1 through 4

See also:

3.9.3. ANY ILLICIT DRUG INCLUDING CANNABIS
(6 drugs: cannabis, cocaine, speed, ecstasy, hallucinogens, and heroin)

IL6DL Lifetime use (any illicit including cannabis)
 Based on 6 items (can1, coc1 through hal1, her1)

IL6D12 Past 12 months use (any illicit including cannabis)
 Based on 6 items (can2, coc2 through hal2, her2) recoded for total sample

3.9.4. ANY ILLICIT DRUG EXCLUDING CANNABIS
(5 drugs: cocaine, speed, ecstasy, hallucinogens, and heroin)

IL5DXL Lifetime use (any illicit excluding cannabis)
 Based on 5 items (coc1 through hal1, her1)

IL5DX12 Past 12 months use (any illicit excluding cannabis)
 Based on 7 items (coc2 through hal2, her2) recoded for total sample

See also: items **IL51DL, IL51D12, IL50DL, IL50D12, IL4DXL, IL4DX12, IL3DXL, IL3DX12** (different drug use combinations for comparison across surveys); **IVLIFE; IV5DL** (injection drug use)

3.10. DRUG USE PROBLEMS (Cannabis excluded) – ASSIST (WHO)

Based on WHO’s Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

The **ASSIST** is asked only of **past 3 months** illicit drugs users (see Appendix 2). The score ranges from 0 to 39. Three cut-off points are used to assess the risk of experiencing health and other problems (e.g. social, financial, legal, relationship): 1) “low” (a score of 0-3) refers to a pattern of use associated with a low risk of experiencing problems; 2) “moderate” (a score of 4-26) refers to a pattern of use associated with a moderate risk of experiencing problems; and 3) “high” (a score of 27+) refers to a pattern of use that is associated with a high risk of experiencing problems and is likely to lead to dependency.

ASISTIL Illicit Drugs ASSIST score
 Based on 6 items: ANY7DX3M (past 3 months any drug use - coc3m through ster3m) + ASIS1 through ASIS5

summation of: any7dx3m, asis1, asis2, asis3, asis4, asis5

min: 0 max: 39 (higher score = increased likelihood of experiencing problems)

ASISTIL3 Risk level for illicit drug use- 3 categories
 Based on ASISTIL score

ASISTIL3=	DESCRIPTION	CONDITION
-----------	-------------	-----------

0= "low"	Score <3 Low risk of developing health and other problems	ASISTIL ge 0 and le 3
1= "moderate"	4< Score <26 Moderate risk of developing health and other problems	ASISTIL ge 4 and le 26
2= "high"	Score >27 High risk of developing health and other problems and likely to be dependent	ASISTIL ge 27

ASISTIL2 Risk level for illicit drug use- 2 categories
Based on ASISTIL score – categories (moderate/high) combined

ASISTIL2=	DESCRIPTION	CONDITION
0= "low"	Score <=3 Low risk of developing health and other problems	ASISTIL ge 0 and le 3
1= "moderate/ high"	Score >=4 Moderate or high risk of developing health and other problems (eventually likely to be dependent)	ASISTIL ge 4

3.11. HARM FROM DRUGS

DHARML One or more types of harm from one's own drug use – lifetime
Based on 8 items, dhar1 to dhar8, recoded for lifetime harm.

DHARML=	DESCRIPTION
0	Never any harm from drug use
1	At least one harm from drug use during lifetime (1 of 8)

See also: Items **DHAR1L** to **DHAR8L** (derived lifetime harm items).

DHARM12 One or more types of harm from one's own drug use – past 12m
Based on 8 items, dhar1 to dhar8, recoded for past12m harm.

DHARM12=	DESCRIPTION
0	No harm from drug use – past 12m

1	At least one harm from drug use during past 12m (1 of 8)
---	--

See also: Items **DHAR1C12** to **DHAR8C12** (derived past 12 months harm items).

4. **SMOKING** (only in Panel C)

SMKSTAT3 **Smoking status - Standard to Health Canada Recommendations**
Based on SMOK1, SMOK2, SMOK5

SMKSTAT3=	DESCRIPTION	CONDITION
1	Current smoker	(SMOK1=1, 3) OR (SMOK1=5 AND SMOK2=1 AND SMOK5=1)
2	Former smoker (includes those who “recently” quit- 1-11 months ago)	(SMOK1 =5 AND SMOK2=1 AND SMOK5=2,3,4,5) OR (SMOK1=3 AND SMOK5=2,3,4,5)
3	Never 100 cigarettes	SMOK1=5 AND SMOK2=5

5. **HRQOL - HEALTH-RELATED QUALITY OF LIFE MEASURES**

Based on the health-related quality of life core module (HRQOL-4) developed by the Centers for Disease Control and Prevention (CDC), Atlanta, US.

Investigators at Centers for Disease Control and Prevention (CDC) have developed a brief survey tool to identify health-related quality of life in adult populations (Öunpuu, Krueger et al. 2000; Moriarty, Zack et al. 2003). The four-item HRQOL core module measures self-perceived health, recent physical and mental health, and recent activity limitation. HRQOL measures capture the key concepts of health, identified by the World Health Organization (WHO) in 1948, as “a state of complete physical, mental, and social well-being – not merely the absence of disease or infirmity.”

HRQOL measures are based on 4 items: gh1, gh3, gh4, gh5. Unlike other health profiles, the HRQOL-4 does not use a summary score or subscale scores based on psychometrically derived or preference-based weights. The only scoring used is with a summary “unhealthy days” index, computed by adding a respondent’s physically and mentally unhealthy days, with a maximum of 30 days for one person. For comparing populations and examining patterns and trends, population means are generally used for the “days” measures. For some analyses, derived measures based on a cut point are used, for example, “frequent mental distress” is defined as 14 or more mentally unhealthy days reported by a respondent.

DERIVED “HRQOL” VARIABLES

FAIRHLT **Percent fair or poor health**
Based on item gh1 (self-rated health)
Recoded into 2 categories: ‘0’ (excellent, very good, good); ‘1’ (fair, poor)

FAIRMHLT	Percent fair or poor mental health Based on item gh2 (self-rated mental health) Recoded into 2 categories: '0' (excellent, very good, good); '1' (fair, poor)
UNHLTPD	Physically unhealthy days Based on item gh3. Range: 0-30.
UNHLTMD	Mentally unhealthy days Based on item gh4. Range: 0-30.
ACTLIMD	Activity limitation days Based on item gh5. Range: 0-30.
UNHLTD	Sum of unhealthy days (physically & mentally) Sum of items UNHLTPD and UNHLTMD, recoded so max=30. Range: 0-30.
MENTDISD	Frequent mental distress days Based on item UNHLTMD (mentally unhealthy days) Recoded into 2 categories: '0' (0-13 days); '1' (14+ days) (as recommended by CDC).

6. DERIVED DEMOGRAPHICS

AGE – recoded in several categories.

AGECAT9 **Age recoded in 9 categories (CADS)**
Based on age

AGECAT9	DESCRIPTION	CONDITION
1	15 - 17 years	age= 15 thru 17
2	18- 19 years	age= 18 thru 19
3	20 - 24 years	age= 20 thru 24
4	25 - 34 years	age= 25 thru 34
5	35 – 44 years	age = 35 thru 44
6	45 – 54 years	age = 45 thru 54
7	55 - 64 years	age = 55 thru 64
8	65 –74 years	age = 65 thru 74
9	75+ years	age= 75 thru HI

See also: items **AGECAT3, AGECAT4, AGECAT6, AGECAT7, AGE8CCHS, AGE8NPHS.**

EDUCAT4 **Highest level of education recoded (4 categories)**
Based on SDED1

EDUCAT4	DESCRIPTION	CONDITION
1	less than high school	SDED1 = 1 thru 4
2	completed high school	SDED1 = 5
3	some post-secondary (college or university)	SDED1 = 6 thru 10
4	university degree	SDED1 = 11 thru 14

See also: item **EDU4CADS**

MARSTAT3 **Marital status recoded (3 categories)**
Based on MSCN

MARSTAT3	DESCRIPTION	CONDITION
1	Married/ Living with partner	MSCN=1,2
2	Previously married (divorced, widowed, separated)	MSCN=3,4,5

3	Never married	MSCN=6
---	---------------	--------

MARSTAT4 Marital status recoded (4 categories)
Based on MSCN

MARSTAT4	DESCRIPTION	CONDITION
1	Married/ Living with partner	MSCN=1,2
2	Divorced, separated	MSCN=3,4,5
3	Widowed	MSCN=6
4	Never married	MSCN=6

See also: items **MS4CADS; MSTAT4R**.

EMPCAT8 Employment status recoded (8 categories)
Based on SDEM1

EMPCAT8	DESCRIPTION	CONDITION
1	full-time	SDEM1=1
2	part-time	SDEM1=2
3	unemployed	SDEM1=4
4	retired	SDEM1=5
5	homemaker	SDEM1=6
6	student	SDEM1=7
7	self-employed	SDEM1=8
8	other	SDEM1=0,3, 10, 11

PINCOME Personal Income Before Taxes (past year)
Based on items SDIN3 and SDIN4

PINCOME=	DESCRIPTION	CONDITION
1	less than \$20,000	sdin3 lt 20 or sdin4=1
2	between \$20,000 and \$29,999.99	(sdin3 ge 20 and sdin3 lt 30) or sdin4=2
3	between \$30,000 and \$39,999.99	(sdin3 ge 30 and sdin3 lt 40) or sdin4=3
4	between \$40,000 and \$49,999.99	(sdin3 ge 40 and sdin3 lt 50) or sdin4=4
5	between \$50,000 and \$59,999.99	(sdin3 ge 50 and sdin3 lt 60) or sdin4=5
6	between \$60,000 and \$69,999.99	(sdin3 ge 60 and sdin3 lt 70) or sdin4=6

7	between \$70,000 and \$79,999.99	(sdin3 ge 70 and sdin3 lt 80) or sdin4=7
8	between \$80,000 and \$89,999.99	(sdin3 ge 80 and sdin3 lt 90) or sdin4=8
9	between \$90,000 and \$100,000	(sdin3 ge 90 and sdin3 lt 100) or sdin4=9
10	more than \$100,000	(sdin3 ge 100) or sdin4=10
98	Don' know	Don' know
99	Refused	Refused

HINCOME Household Income Before Taxes (past year)
Based on items SDIN1 and SDIN2 and PINCOME

HINCOME=	DESCRIPTION	CONDITION
1	less than \$20,000	sdin1 lt 20 or sdin2=1
2	between \$20,000 and \$29,999.99	(sdin1 ge 20 and sdin1 lt 30) or sdin2=2
3	between \$30,000 and \$39,999.99	(sdin1 ge 30 and sdin1 lt 40) or sdin2=3
4	between \$40,000 and \$49,999.99	(sdin1 ge 40 and sdin1 lt 50) or sdin2=4
5	between \$50,000 and \$59,999.99	(sdin1 ge 50 and sdin1 lt 60) or sdin2=5
6	between \$60,000 and \$69,999.99	(sdin1 ge 60 and sdin1 lt 70) or sdin2=6
7	between \$70,000 and \$79,999.99	(sdin1 ge 70 and sdin1 lt 80) or sdin2=7
8	between \$80,000 and \$89,999.99	(sdin1 ge 80 and sdin1 lt 90) or sdin2=8
9	between \$90,000 and \$100,000	(sdin1 ge 90 and sdin1 lt 100) or sdin2=9
10	more than \$100,000	(sdin1 ge 100) or sdin2=10
98	Don' know	Don' know
99	Refused	Refused
		AND If HH (household)=1 HINCOME = PINCOME

HINCCAT5 Household Income (5 categories)
Based on items HINCOME

HINCCAT5=	DESCRIPTION	CONDITION
1	less than \$30,000	(HINCOME le 2)
2	between \$30,000 and \$49,999.99	(HINCOME gt 2 and HINCOME le 4)
3	between \$50,000 and \$79,999.99	(HINCOME gt 4 and HINCOME le 7)
4	more than \$80,000	(HINCOME gt 7 and HINCOME le 10)
5	Not stated (refused or DK)	(HINCOME = 98 or HINCOME = 99)

INCADEQ4 Income Adequacy - 4 categories

Based on items SDIN1, SDIN2, and SD_3 (HH size)

INCADEQ3	DESCRIPTION	INCOME (revised)	HH SIZE
1	Lowest income	<\$20,000	1-2 persons
		<\$30,000	3 or more persons
2	Middle income	\$20,000-\$59,000	1-2 persons
		\$30,000-\$79,000	3-4 persons
		\$30,000-\$79,000	5 or more persons
3	High income	\$60,000+	1-2 persons
		\$80,000+	3 or more persons
9	Not stated	Not stated	Unknown

INCADEQ5 Income Adequacy - 5 categories

Based on items SDIN1, SDIN2, and SD_3 (HH size)

INCADEQ	DESCRIPTION	INCOME (revised)	HH SIZE
1	Lowest income	<\$20,000	1-2 persons
		<\$30,000	3 or more persons
2	Lower middle income	\$20,000-\$29,000	1-2 persons
		\$30,000-\$49,999	3-4 persons
		\$30,000- \$59,000	5 or more persons
3	Upper middle income	\$30,000-\$59,000	1-2 persons
		\$50,000-\$79,000	3-4 persons
		\$60,000-\$79,000	5 or more persons
4	Highest income	\$60,000+	1-2 persons
		\$80,000+	3 or more persons
9	Not stated	Not stated	Unknown

See also: item **HH3CAT** (household size – 3cat)**RURAL** Location of Household - based on FSA (“Forward Sortation Area” – first 3 digits of the postal code)

1= rural; 0 = non-rural

Note:

OCCUPATION: Main Occupation Codes are recorded in item SDEM3, and are based on the National Occupation Codes (NOC).

7. DERIVED VARIABLES REFERENCES

Ashley, M., R. Ferrence, et al. (1994). "Moderate drinking and health: Report of an international symposium." CMAJ (151): 809-28.

Babor, T. F., J. C. Higgins-Biddle, et al. (2001). AUDIT: The Alcohol Use Disorders Identification Test. Guidelines for Use in Primary Care. Geneva, World Health Organization.

Bondy, S., J. Rehm, et al. (1999). "Low-risk Drinking Guidelines: The Scientific Evidence." Canadian Journal of Public Health **90**(4): 264-70.

English, D, et al. (1995). The quantification of drug caused morbidity and mortality in Australia 1993. Canberra, ACT : Dept. of Community Services and Health.

Moriarty, D. G., M. M. Zack, et al. (2003). "The Centers for Disease control and Prevention's Health Days Measures - Population tracking of perceived physical and mental health over time." Health and Quality of Life Outcomes **1**(37). Available at <http://www.hqlo.com>

Ôunpuu, S., P. Krueger, et al. (2000). "Using the U.S. Behavior Risk Factor Surveillance System's Health Related Quality of Life Survey Tool in a Canadian City." Canadian Journal of Public Health **91**(1): 67-72.

Saunders, J. B., O. G. Aasland, et al. (1993). "Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption BII." Addiction **88**: 791-804.

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

APPENDIX 2
WHO ASSIST

APPENDIX 3

Questionnaire

Canadian Addiction Survey (CAS) 2004 - ITEM ALLOCATION			
National Sample (Total N = 13909)	PANEL A	PANEL B	PANEL C
Panels (N)	4612	4639	4658
Variables description (variable name)	No. of items	No. of items	No. of items
1 Attitudes, Opinions, Policy (Block 1)			
1.1 Perceived seriousness			
a. at national level (HCP1 to HCP6)	6		
b. at provincial level (HCP7 to HCP12)		6	
c. at community (city or town) level (HCP13 to HCP18)			6
1.2 Opinions on govt. impact/ societal impact (agree/disagree) (HCP19- HCP33)	5	5	5
1.3 Perceived harm1 (users harming themselves) (HCR1-HCR20) (+metamph)	20		
1.4 Perceived harm2 (users harming others) (HCR21-HCR40) (+metamph)		20	
1.5 Perceived risk (RISK1 to RISK9)			8
1.6 Perceived availability (GET1 -GET7)	7		
2 Health & Well-Being			
2.1 General Health & Mental Health (GH1 - GH5)		5	
2.2 Social isolation (QSI1-QSI3)		3	
3 Tobacco			
Smoking status (SMOK1 -SMOK3)			3
4 Alcohol Use			
4.1 Use (ALC1-ALC8, ALC11)			
Prevalence of drinking	1	1	1
Lifetime drinkers	1	1	1
Past 12M drinkers - drinking patterns	8	8	8
4.2 Past 7 days drinking (ALC10- ALC5A7)	7	7	7
Age of onset (ALC12)	1	1	1
Past 12M have you consumed more/less (q/f) (ALC13-ALC14)	2	2	2
4.3 Drinking Occasions (AF1 - AT15A)			
(asked of only 40% of Panel C sample)			
Occ1			
12M drinker?			13
Partial			4
Occ2			

	12M drinker?			13
	Partial			4
	Occ3			
	12M drinker?			13
	Partial			4
4.4	Home brew (HB1-HB3)			3
4.5	Alcohol Problems			
	AUDIT (AUD4 - AUD10)	7	7	7
5	Cannabis Use			
5.1	Use (CAN1-CAN6)	7	7	7
	Age of onset (CAN4)	1	1	1
	Opportunity (CAN1A)	1	1	1
5.2	Patterns of use/ Reasons for use			
	Past 12M have you consumed more/less (q/f) (CAN5-CAN6)	2	2	2
	Where/ With whom...? (HCCN1-HCCN2)	2	2	2
	Reasons for use (HCCN3-HCCN4)	2	2	2
5.3	Medical use (CAME1-CAME2)	2	2	2
5.4	Market Info (CMI1-CMI7)	7	7	7
5.5	Cannabis Problems			
	ASIST (CNAS1-CNAS5) (past 3M)	5	5	5
6	Illicit Drugs			
6.1-6.8	Use (7 drugs)			
	Cocaine (COC1-COC3)	3	3	3
	Speed (SPED1-SPED3)	3	3	3
	Ecstasy (EXT1-EXT3)	3	3	3
	Hallucinogens (HAL1-HAL3)	3	3	3
	Inhalants (GLUE1-GLUE3)	3	3	3
	Heroin (HER1-HER3)	3	3	3
	Steroids (STER1-STER3)	3	3	3
	Age of onset (for each drug) (COC4, SPED4,....,STER4)	7	7	7
6.9	Patterns of use (HCCO1- HCHE4)			
	(asked for cocaine, speed, hall, ecstasy, heroin)			
	Past 12M consumed more/less	10	10	10
	Where usually consume	5	5	5
	With whom usually consume	5	5	5
6.10	Reasons for use/not use (HCRU1- HCRU4)			
	Why start using (past12M)	2	2	2
	Why not used (past 3M)	1	1	1
	Why still using (past 3M)	1	1	1
6.11	Injection drug use (IDU1-IDU13)	16	16	16
6.12	Drug Use Problems			

	ASIST (WHO) (ASIS1-ASIS5) (past 3M)	5	5	5
7	Consequences of use (asked of users of all drugs except tobacco)			
7.1	Alcohol Harm (AHAR1-AHAR8)	8	8	8
7.2	Illicit Drugs Harm (DHAR1-DHAR8) (ask non-users)	8	8	8
7.3	Reasons for not using (HCRN1 - HCRN2)	2	2	2
8	Victimization (asked only of respondents aged 18 and older)			
8.1	Alcohol - harm from others (OPD1-OPD5)	4	4	4
8.2	Violence (VIC1-VIC9)	9	9	9
8.3	Cost victimization (CV1-CV4)	4	4	4
8.4	Willingness to pay (WTP1-WTP6)	6		
9	Attitudes, Opinions, Policy (Block 2)			
9.1	Govt. programs to reduce use/conseq (HCP41-HCP54)	14		
9.2	Drug use impact on society (HCP55- HCP62)		8	
	Main cause of drug problem (HCP63)		1	
	Most likely at risk...? (HCP64)		1	
	Prevention/treatment OR Incarceration (HCP65)		1	
9.3	Alcohol Policy (ALCP1-ALCP6)			6
9.4	Drug Policy (DRP1-DRP6A)			11
9.5	Cannabis Policy (CANP1-CANP5)			5
9.6	Cannabis driving (CAND2-CAND3)			2
10	Driving and substance use (ADR1-DCD2)		12	
11	Treatment (T1 - T17K)			
	Ever treated?	5	5	5
	Yes effort/Yes treatment	3	3	3
	Needed treatment (past 12M only)?	8	8	8
	Made effort? (Y/N)	1	1	1
	Yes effort/No treatment (why?)	8	8	8
	No effort (why?)	11	11	11
12	Demographics (MSCN-FSA)	21	21	21
13	Administrative	3	3	3
	TOTAL ITEMS (for each panel)	282	286	324