

# **The Prevalence of Alcohol and illicit drug Use in British Columbia**

By

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## **1. Objective**

The objective of this analysis was to estimate the prevalence of alcohol and illicit drug use by health areas in the province of British Columbia (BC) using the 2008 and 2009 Canadian Alcohol and Drug Use Monitoring surveys (CADUMS). This document also describes the methods and findings regarding use of alcohol and a variety of illicit drugs within BC. If sufficient precisions could be obtained, results are presented by Local Health Areas (LHA). Otherwise, results are presented by Health Service Delivering Areas (HSDA) or Health Authorities (HA).

## **2. Methods**

### **2.1. Survey sampling**

The CADUMS is an on-going survey on alcohol and other substance use among Canadians implemented in April 2008, commissioned by the Controlled Substances and Tobacco Directorate, Health Canada (Health Canada 2009; Health Canada 2010). The survey was derived from the Canadian Addiction Survey (CAS) of 2004 (Canadian Centre on Substance Abuse 2005) and addresses issues on alcohol and illicit drug use including prescription drug misuse and the associated harms. The CADUMS is a random digit dialed telephone based general population survey. It is a stratified sample across all 10 provinces (1,008 respondents per province) with equal representation of subjects each month. It is based on a two-stage (telephone household,

respondent) random sample stratified by province. The survey used random-digit-dialing (RDD) method via Computer Assisted Telephone Interviewing (CATI). The research firm Jolicoeur & Associates was responsible for sample selection, telephone interviewing, and preparation of the initial data file.

The survey covers population aged 15 years and older in ten provinces and excludes residents of the Yukon, the Northwest Territories and Nunavut, permanent residents of institutions, people living in households without a telephone and people with cell phones only. The sampling frame was based on an electronic inventory of all active telephone area codes and exchanges in Canada. Within each of the ten provincial strata, a random sample of telephone numbers was selected with equal probability in the first stage of selection (i.e., households). Within selected households, one respondent aged 15 years or older who could complete the interview in English or French was chosen. In order to reduce potential bias the person who would celebrate his/her birthday next within the household was asked to complete the interview. A minimum of 12 call-backs were placed to unanswered numbers to secure maximum participation.

The CADUMS sample size in 2008 consists of 16,674 through the additional over-sampling of respondents in BC and Alberta for 2008. BC and Alberta purchased additional 3,000 and 3,592 cases respectively, resulting in a final allocation of 16,672. For 2009, BC purchased 3,000 additional cases, resulting in a final allocation of 13,082 in ten provinces. The samples are intended to represent about 25,957,435 Canadians aged 15 years and older.

The 2008 CADUMS began on April 23, 2008 and was conducted over a ten month period. The total sample was divided into eight subsamples of 2,084 people. The 2009 CADUMS began on January 27, 2009 and was conducted over an eleven month period. The total

sample was divided into eleven subsamples of about 1100 to ensure a monthly distribution of the data. In summary, the sample size in BC was 4,008 in 2008 and 4,009 in 2009.

## 2.2. Statistical analysis

The first step was to combine the 2008 and 2009 CADUMS datasets of BC in order to gain the best precision of estimates for each region. The health authority structure of BC includes three levels of aggregated units: 89 Local Health Areas (LHA) nested within 16 Health Service Delivery Areas nested with 5 Health Authorities (HA). Subjects were geocoded into LHAs using a - postal translation file producing a sample of 7,180 subjects (10% was missing).

Weighting was done to adjust for differences in respondent distribution based on the sex and age at the level of HSDA. Weighting by LHA were considered too problematic due to small sample size. This weighting step ensures that the weights agree with the population estimates based on sex and age distributions and compensates for potential biases, such as those due to non-respondents. The post-stratification weights for the 2008 and 2009 CADUMS surveys are based on 160 population classes by sex and 5 age groups (15-29, 30-39, 40-49, 50-64 and 65+) in each HSDA. The expansion weights ( $EW$ ) weighting to population size for each group is:

$EW = \frac{P_{rga}}{S_{rga}}$ , where  $rga$  represents region-gender-age group,  $P_{rga}$  = the population in each region-gender-age group and  $S_{rga}$  = the number of respondents in each region-gender-age group.

The relative weights ( $RW$ ) weighting to sample size for each group is:  $RW = \frac{PR_{rga}}{SR_{rga}}$ , where  $rga$  represents region-gender-age group,  $PR_{rga}$  = the proportion of population in each region-gender-age group and  $SR_{rga}$  = the proportion of respondents in each region-gender-age group.

The relative weights allow the tests of statistical significance to be based on the number of respondents from which the sample estimates being examined were actually derived.

Procedures were implemented to aggregate some LHAs together in situation where the unweighted sample sizes were less than 30 cases. In these situations, the LHA was combined with an adjacent LHA that was within the same HSDA. For weighted estimates based on sample sizes of 30 or more, the coefficient of variation (CV) was used to determine whether the estimates should be suppressed. The estimates are reported if the CV was below 33.3. Estimates between 0 and 16.5 are considered as stable and estimates between 16.6 and 33.3 have moderate sampling variability and should be interpreted with caution. Those estimates with larger 33.3 CVs are considered unstable and are suppressed.

Notice that the 2008 CADUMS did not examine lifetime illicit drug use and thus the estimate of lifetime illicit drug use was based on the 2009 CADUMS.

### **3. Results**

#### **3.1. Prevalence of alcohol and illicit drug use in the province**

Table 1 presents percents of BC residents using alcohol and illicit drug over different periods of time. In 2008 and 2009, 89% reported drinking alcohol lifetime, 76% in the past year and 62.6% in the past 30 days. The prevalence of lifetime cannabis use was 48.7%, past year use was 13.4%, past three months use was 11.1% and past 30 day use was 9.1%. Approximately 21% reported using other illicit drug in their lifetime, 3.4% reported being a past year user of other illicit drug and 1% reported being a past 30 day user of other illicit drug.

Table 1. Percent using alcohol and illicit drug in British Columbia in 2008-2009				
Alcohol illicit drug use	N †	% ‡	95% CI	
<b>Alcohol use</b>				
Alcohol use lifetime	6,487	89.03	88.14	89.93
Alcohol use past 12 months	5,432	76.01	74.86	77.15
Alcohol use past 30 days	4,482	62.61	61.31	63.91
<b>Cannabis use</b>				
Cannabis use lifetime	3,218	48.54	47.20	49.89
Cannabis use past 12 months	708	13.41	12.39	14.42
Cannabis use past 3 months	586	11.11	10.17	12.05
Cannabis use past 30 days	486	9.08	8.22	9.93
<b>Hallucinogen use</b>				
Hallucinogen use in lifetime ▲	501	15.79	14.39	17.20
Hallucinogens use past 12 months	73	1.69	1.28	2.10
Hallucinogens use past 30 days	20	0.46	0.24	0.67
<b>Cocaine use</b>				
Cocaine use lifetime ▲	346	10.67	9.50	11.84
Cocaine use in past 12 months	75	1.52	1.15	1.89
Cocaine use in past 30 days	25	0.53	0.30	0.75
<b>Speed use</b>				
Speed use in lifetime ▲	132	1.86	1.52	2.21
Speed use past 12 months	15	3.72	3.04	4.40
Speed use past 30 days				
<b>Methamphetamine use</b>				
Methamphetamine use in lifetime ▲	26	1.13	0.67	1.59
Methamphetamine use past 12 months				
<b>Ecstasy use</b>				
Ecstasy use in lifetime ▲	147	6.01	4.98	7.05
Ecstasy use past 12 months	62	1.48	1.09	1.87
Ecstasy use past 30 days	17	0.39	0.19	0.59
<b>Heroin use</b>				
Heroin use in lifetime ▲	30	0.90	0.56	1.23
Heroin use past 12 months	13	0.23	0.08	0.38
<b>Inhalant use</b>				
Inhalant use in lifetime ▲	35	1.05	0.67	1.43
Inhalant use past 12 months	11	0.27	0.10	0.45
<b>Salvia use</b>				
Salvia use in lifetime ▲	27	1.27	0.77	1.76
Salvia use in past 12 months				
<b>Illicit drug use</b>				
Illicit drug use in lifetime ▲	636	20.22	18.66	21.77
Illicit drug use past 12 months	159	3.42	2.86	3.99
Illicit drug use past 30 days	46	1.02	0.70	1.34

Note: ▲ Lifetime illicit drug use was examined only in 2009. † Unweighted sample of users. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. The estimates with CV of 33.3 or larger have been suppressed.

### 3.2. Prevalence of alcohol use in health regions

### 3.2.1. Lifetime alcohol use

The prevalence of alcohol use was estimated for HAs, HSDAs and LHAs. Table 2 presents the prevalence of alcohol use for five HAs, 16 HSDAs and 63 combined LHAs. Among five HAs, the prevalence of lifetime alcohol use was highest in Northern HA and lowest in Fraser and Vancouver Coastal, being 93.3% and 86.8%, respectively. Among 16 HSDAs (also see Figure 1), the prevalence of lifetime alcohol use was highest in Kootenay Boundary (94.7%) and lowest in Richmond (83.9%). The prevalence of lifetime alcohol by LHA showed more variation. For example, approximately 99% of adults were drunk lifetime alcohol users in Nelson but only 68% in Vancouver South.

Health Authority Structure – HA code - HSDA – LHA					N †	% ‡	95% CI	
1	11	East Kootenay	1	Fernie	42	87.0	71.9	100.0
			2	Cranbrook	59	91.3	83.9	98.7
			3/5	Kimberley/Creston	35	85.0	73.1	96.9
			4/18	Windermere/Golden	41	97.0	92.8	100.0
			East Kootenay Total			177	90.2	84.5
	12	Kootenay Boundary	6/9/10	Kootenay Lake/Castlegar/Arrow Lakes	43	95.2	88.0	100.0
			7	Nelson	57	98.8	96.4	100.0
			11	Trail	52	91.4	81.3	100.0
			12/13	Grand Forks/Kettle Valley	26	92.3	83.7	100.0
	Kootenay Boundary Total			178	94.7	90.8	98.6	
	13	Okanagan	14	Southern Okanagan	46	86.6	75.1	98.1
			15	Penticton	67	88.7	80.6	96.7
			16/17	Keremeos/Princeton/Summerland	47	92.5	86.0	99.0
			21/78	Armstrong-Spallumcheen/Enderby	40	84.8	73.9	95.7
			22	Vernon	111	94.3	89.6	99.0
			23	Central Okanagan	309	91.9	89.1	94.7
	Okanagan Total			620	91.1	88.9	93.3	
	14	Thompson Cariboo Shuswap	19/20	Revelstoke/Salmon Arm	95	93.0	86.5	99.6
			24	Kamloops	200	92.7	88.4	96.9
			25/26	100 Mile House/North Thompson	45	97.3	93.5	100.0
			27	Cariboo-Chilcotin	45	94.9	87.7	100.0
			29/30/31	Lillooet/South Cariboo/Merritt	45	96.9	92.7	100.0
	Thompson Cariboo Shuswap Total			430	93.9	91.2	96.6	
Interior Health Authority				1,405	92.2	90.7	93.8	

Table 2. Percentage of lifetime alcohol users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

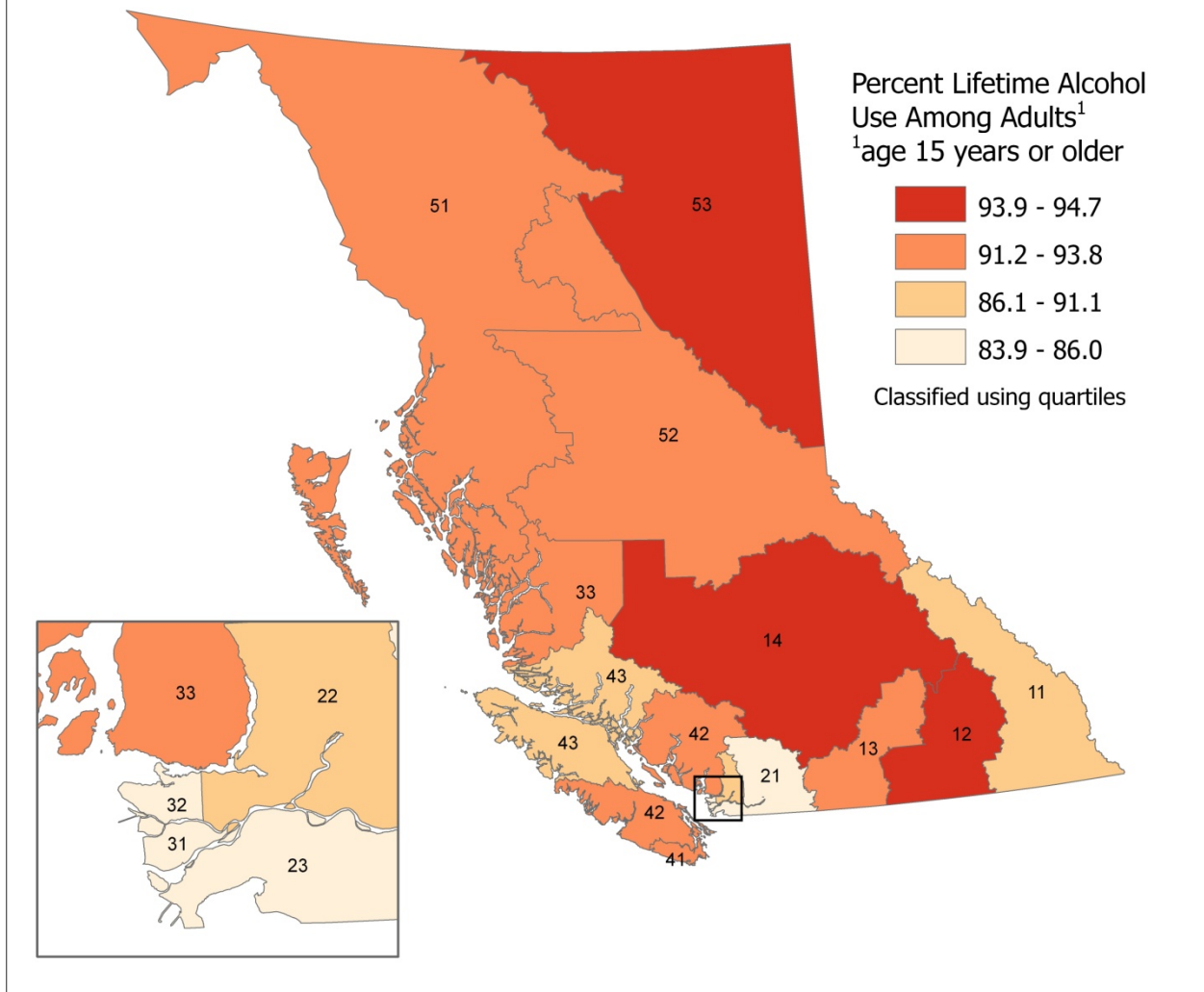
Health Authority Structure – HA code - HSDA – LHA					N †	% ‡	95% CI		
2	21	Fraser East	32/76	Hope/Agassiz-Harrison	26	90.1	80.6	99.6	
			33	Chilliwack	128	92.8	87.5	98.0	
			34	Abbotsford	154	81.0	74.5	87.4	
			75	Mission	50	83.4	72.4	94.5	
	Fraser East Total					358	85.7	81.7	89.6
	22	Fraser North	40	New Westminster	66	85.4	75.5	95.3	
			41	Burnaby	209	84.9	79.6	90.2	
			42	Maple Ridge	131	93.4	89.4	97.3	
			43	Coquitlam	272	89.4	85.4	93.3	
	Fraser North Total					678	88.5	85.8	91.1
	23	Fraser South	35	Langley	182	91.6	87.4	95.7	
			37	Delta	150	86.0	79.9	92.0	
			201	Surrey	336	80.6	76.3	84.9	
			202	South Surrey/White Rock	159	95.7	92.4	98.9	
	Fraser South Total					827	86.0	83.4	88.5
Fraser Health Authority					1,863	86.8	85.2	88.5	
3	31	Richmond	38	Richmond	154	83.9	78.4	89.4	
			Richmond Total					154	83.9
	32	Vancouver	161	Vancouver-City Centre	139	95.6	92.4	98.9	
			162	Vancouver-Downtown Eastside	50	88.8	78.9	98.7	
			163	Vancouver-North East	65	80.9	71.2	90.6	
			164	Vancouver-Westside	173	86.3	80.5	92.1	
			165	Vancouver-Midtown	79	90.6	83.7	97.5	
			166	Vancouver-South	74	68.1	58.2	77.9	
	Vancouver Total					580	85.2	82.1	88.3
	33	North Shore/Coast Garibaldi	44	North Vancouver	213	91.1	86.7	95.6	
			45	West Vancouver-Bowen Island	81	88.6	79.8	97.4	
			46	Sunshine Coast	82	97.1	92.5	100.0	
			47/49/83	Powell River/Bella Coola Valley/Central Coast	46	95.8	90.8	100.0	
			48	Howe Sound	51	95.8	89.9	100.0	
	North Shore/Coast Garibaldi Total					473	92.8	90.0	95.5
Vancouver Coastal Health Authority					1,207	86.8	84.7	89.0	
4	41	South Vancouver Island	61	Greater Victoria	379	90.7	87.0	94.3	
			62	Sooke	105	91.1	84.9	97.3	
			63	Saanich	127	94.6	90.0	99.3	
			64	Gulf Islands	52	96.5	91.7	100.0	
	South Vancouver Island Total					663	91.8	89.2	94.4
	42	Central Vancouver Island	65	Cowichan	103	89.1	81.6	96.6	
			66/67	Lake Cowichan/Ladysmith	58	96.9	92.4	100.0	
			68	Nanaimo	219	93.6	89.8	97.4	
			69	Qualicum	104	98.0	95.6	100.0	
			70	Alberni	78	93.9	88.4	99.3	
	Central Vancouver Island Total					562	93.8	91.4	96.2
	43	North Vancouver Island	71	Courtenay	141	86.6	80.1	93.1	
			72/84/85	Campbell River/Island West/North	129	91.9	86.8	97.0	
	North Vancouver Island Total					270	89.1	84.8	93.3
	Vancouver Island Health Authority					1,495	92.1	90.4	93.7

Table 2. Percentage of lifetime alcohol users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

Health Authority Structure – HA code - HSDA – LHA					N †	% ‡	95% CI		
5	51	Northwest	50/80	Queen Charlotte/Kitimat	30	93.9	87.0	100.0	
			51/52/53/87/92/94	Snow Country/Prince Rupert/Upper Skeena//Stikine/Terrace/Nisga's	39	92.6	85.3	99.8	
			54	Smithers	40	88.9	77.2	100.0	
			88	Terrace	48	90.8	82.3	99.3	
	<b>Northwest Total</b>					<b>157</b>	<b>91.3</b>	<b>86.7</b>	<b>96.0</b>
	52	Northern Interior	28	Quesnel	58	94.9	88.7	100.0	
			55/56	Burns Lake/Nechako	37	98.6	95.7	100.0	
			57	Prince George	163	92.4	88.2	96.6	
	<b>Northern Interior Total</b>					<b>258</b>	<b>93.8</b>	<b>90.8</b>	<b>96.9</b>
	53	Northeast	59	Peace River South	46	91.9	82.2	100.0	
			60/81	Peace River North/Fort Nelson	56	96.3	92.6	100.0	
	<b>Northeast Total</b>					<b>102</b>	<b>94.5</b>	<b>89.8</b>	<b>99.1</b>
	<b>Northern Health Authority</b>					<b>517</b>	<b>93.3</b>	<b>91.1</b>	<b>95.6</b>
	<b>BC</b>					<b>6,487</b>	<b>89.0</b>	<b>88.1</b>	<b>89.9</b>

Note: † N=number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. The estimates with CV of 33.3 or larger have been suppressed.

Figure 1: Percentage of Lifetime Alcohol Users by HSDA, 2008-2009



### 3.2.2. Past year alcohol use

Table 3 presents the percentage of past year alcohol users among adults aged 15 years and older by HA, HSDA and LHA in BC in 2008-2009. The prevalence of past year alcohol use was highest in Northern HA (79.8%) and lowest in Fraser HA (74.4%). By HSDA, past year alcohol use was highest in North Shore/Coast Garibaldi where 82.2% of adults reported drinking

alcohol in the past year and lowest in East Kootenay where only 69.8% reported drinking alcohol in the past year. Among LHAs, past year alcohol use was highest in Howe Sound (91.0%) and lowest in Vancouver South (55.1%).

Health Authority Structure – HA code - HSDA - LHA					N †	% ‡	95% CI		
1	11	East Kootenay	1	Fernie	33	59.1	40.0	78.3	
			2	Cranbrook	50	79.4	68.9	89.8	
			3/5	Kimberley/Creston	28	66.6	50.7	82.5	
			4/18	Windermere/Golden	33	72.7	53.9	91.5	
	East Kootenay Total					144	69.8	61.1	78.4
	12	Kootenay Boundary	6/9/10	Kootenay Lake/Castlegar/Arrow Lakes	34	78.0	65.1	90.9	
			7	Nelson	47	85.6	77.3	93.9	
			11	Trail	46	80.5	68.1	93.0	
			12/13	Grand Forks/Kettle Valley	21	72.6	55.1	90.2	
	Kootenay Boundary Total					148	80.3	74.1	86.5
	13	Okanagan	14	Southern Okanagan	38	72.6	59.2	85.9	
			15	Penticton	59	77.5	66.9	88.2	
			16/17	Keremeos/Princeton/Summerland	36	72.0	59.2	84.9	
			21/78	Armstrong-Spallumcheen/Enderby	33	74.3	61.5	87.0	
			22	Vernon	94	83.3	76.5	90.0	
			23	Central Okanagan	256	78.4	74.0	82.9	
	Okanagan Total					516	78.0	74.8	81.2
	14	Thompson Cariboo Shuswap	19/20	Revelstoke/Salmon Arm	73	74.4	65.1	83.8	
			24	Kamloops	163	75.6	69.1	82.0	
			25/26	100 Mile House/North Thompson	32	68.9	54.5	83.3	
			27	Cariboo-Chilcotin	33	69.7	55.3	84.0	
			29/30/31	Lillooet/South Cariboo/Merritt	37	78.5	65.7	91.4	
	Thompson Cariboo Shuswap Total					338	74.4	70.0	78.8
Interior Health Authority					1,146	76.3	73.9	78.6	
2	21	Fraser East	32/76	Hope/Agassiz-Harrison	22	80.3	67.2	93.4	
			33	Chilliwack	100	74.9	67.1	82.8	
			34	Abbotsford	123	68.7	61.5	75.9	
			75	Mission	43	73.1	60.4	85.7	
	Fraser East Total					288	72.1	67.4	76.7
	22	Fraser North	40	New Westminster	54	72.4	61.1	83.6	
			41	Burnaby	172	71.7	65.4	77.9	
			42	Maple Ridge	111	78.6	71.1	86.0	
			43	Coquitlam	231	78.0	73.1	83.0	
	Fraser North Total					568	75.6	72.3	78.9
	23	Fraser South	35	Langley	154	78.7	72.7	84.7	
			37	Delta	128	74.6	67.4	81.9	
			201	Surrey	285	69.6	64.7	74.5	
			202	South Surrey/White Rock	133	82.8	77.1	88.5	
	Fraser South Total					700	74.2	71.2	77.3
	Fraser Health Authority					1,556	74.4	72.4	76.4

Table 3. Percentage of past year alcohol users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

Health Authority Structure – HA code - HSDA - LHA					N †	% ‡	95% CI		
3	31	Richmond	38	Richmond	132	73.4	66.7	80.1	
	Richmond Total				132	73.4	66.7	80.1	
	32	Vancouver	161	Vancouver-City Centre	117	81.6	75.2	88.0	
			162	Vancouver-Downtown Eastside	47	84.0	73.1	94.9	
			163	Vancouver-North East	49	61.2	49.3	73.1	
			164	Vancouver-Westside	148	73.1	65.9	80.2	
			165	Vancouver-Midtown	70	82.8	74.3	91.3	
			166	Vancouver-South	60	55.1	44.7	65.6	
	Vancouver Total				491	72.7	68.9	76.4	
	33	North Shore/Coast Garibaldi	44	North Vancouver	188	81.9	76.3	87.6	
			45	West Vancouver-Bowen Island	69	73.9	62.8	85.1	
			46	Sunshine Coast	71	85.0	76.1	94.0	
			47/49/83	Powell River/Bella Coola Valley/Central Coast	36	79.2	67.7	90.6	
			48	Howe Sound	49	91.0	82.0	99.9	
North Shore/Coast Garibaldi Total				413	82.2	78.3	86.0		
<b>Vancouver Coastal Health Authority</b>					<b>1,036</b>	<b>75.1</b>	<b>72.5</b>	<b>77.8</b>	
4	41	South Vancouver Island	61	Greater Victoria	318	78.3	73.7	82.9	
			62	Sooke	86	76.3	67.5	85.1	
			63	Saanich	112	85.0	77.9	92.1	
			64	Gulf Islands	41	76.6	65.1	88.2	
	South Vancouver Island Total				557	79.1	75.6	82.5	
	42	Central Vancouver Island	65	Cowichan	81	70.8	61.4	80.3	
			66/67	Lake Cowichan/Ladysmith	47	77.7	65.2	90.1	
			68	Nanaimo	190	82.4	76.8	87.9	
			69	Qualicum	93	90.2	85.1	95.3	
			70	Alberni	72	86.0	77.3	94.6	
	Central Vancouver Island Total				483	81.6	78.1	85.1	
	43	North Vancouver Island	71	Courtenay	118	71.1	62.8	79.4	
			72/84/85	Campbell River/Island West/North	102	74.6	66.8	82.4	
	North Vancouver Island Total				220	72.7	67.0	78.5	
<b>Vancouver Island Health Authority</b>					<b>1,260</b>	<b>78.9</b>	<b>76.7</b>	<b>81.2</b>	
5	51	Northwest	50/80	Queen Charlotte/Kitimat	28	88.0	77.6	98.4	
			51/52/53/87/92/94	Snow Country/Prince Rupert/Upper Skeena//Stikine/Terrace/Nisga's	30	75.5	62.9	88.2	
			54	Smithers	34	77.0	62.8	91.1	
			88	Terrace	43	83.5	73.2	93.8	
	Northwest Total				135	80.9	74.7	87.0	
	52	Northern Interior	28	Quesnel	47	78.3	67.0	89.6	
			55/56	Burns Lake/Nechako	28	73.6	58.3	89.0	
			57	Prince George	139	79.5	73.0	86.0	
	Northern Interior Total				214	78.4	73.1	83.7	
	53	Northeast	59	Peace River South	35	71.5	56.7	86.4	
			60/81	Peace River North/Fort Nelson	50	88.7	81.2	96.2	
	Northeast Total				85	81.6	73.7	89.5	
	<b>Northern Health Authority</b>					<b>434</b>	<b>79.8</b>	<b>76.2</b>	<b>83.4</b>
	<b>BC</b>					<b>5,432</b>	<b>76.0</b>	<b>74.9</b>	<b>77.2</b>

Note: † N=number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. The estimates with CV of 33.3 or larger have been suppressed.

### 3.2.3. Past 30 day alcohol use

Table 4 presents the percentage of past 30 day alcohol users by three levels of health regions in BC in 2008-2009. Among the HAs, the prevalence of past 30 day alcohol use was largest in Vancouver Island (65.4%) and lowest in Fraser (60.3%) and among 16 HSDAs, past 30 day alcohol varied greatly. In North Shore/Coast Garibaldi, over 72% of adults reported drinking alcohol in the past 30 days whereas less than 55% of adults in East Kootenay reported drinking alcohol in the past 30 days.

There are substantial differences in the past 30 day alcohol use among LHAs. In Queen Charlotte/Kitimat, 83.6% reported drinking alcohol in the past 30 days but only 40.3% reported drinking alcohol in the past 30 days in Vancouver South.

Health Authority Structure – HA code - HSDA - LHA					n †	% ‡	95% CI	
1	11	East Kootenay	1	Fernie	27	48.4	30.7	66.1
			2	Cranbrook	34	58.3	45.0	71.7
			3/5	Kimberley/Creston	23	55.0	38.5	71.4
			4/18	Windermere/Golden	26	58.2	39.7	76.6
			<b>East Kootenay Total</b>			<b>110</b>	<b>54.8</b>	<b>46.3</b>
	12	Kootenay Boundary	6/9/10	Kootenay Lake/Castlegar/Arrow Lakes	28	65.6	50.6	80.6
			7	Nelson	39	71.8	59.5	84.1
			11	Trail	37	68.2	54.6	81.8
			12/13	Grand Forks/Kettle Valley	18	62.2	43.2	81.2
	<b>Kootenay Boundary Total</b>			<b>122</b>	<b>67.8</b>	<b>60.5</b>	<b>75.0</b>	
	13	Okanagan	14	Southern Okanagan	35	67.9	54.2	81.6
			15	Penticton	48	64.9	53.2	76.5
			16/17	Keremeos/Princeton/Summerland	30	60.2	45.8	74.6
			21/78	Armstrong-Spallumcheen/Enderby	28	60.9	45.9	76.0
			22	Vernon	82	72.7	64.1	81.3
			23	Central Okanagan	221	68.4	63.1	73.6
	<b>Okanagan Total</b>			<b>444</b>	<b>67.5</b>	<b>63.8</b>	<b>71.3</b>	
	14	Thompson Cariboo Shuswap	19/20	Revelstoke/Salmon Arm	59	61.8	51.4	72.2
			24	Kamloops	142	66.9	60.0	73.8
			25/26	100 Mile House/North Thompson	25	56.7	41.4	72.0
27			Cariboo-Chilcotin	27	56.8	41.2	72.3	
29/30/31			Lillooet/South Cariboo/Merritt	28	60.7	45.6	75.8	
<b>Thompson Cariboo Shuswap Total</b>			<b>281</b>	<b>63.1</b>	<b>58.2</b>	<b>67.9</b>		

Table 4. Percentage of past 30days alcohol users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

Health Authority Structure – HA code - HSDA - LHA					n †	% ‡	95% CI		
<b>Interior Health Authority</b>					<b>957</b>	<b>64.8</b>	<b>62.2</b>	<b>67.5</b>	
2	21	Fraser East	32/76	Hope/Agassiz-Harrison	15	59.4	41.2	77.5	
			33	Chilliwack	76	56.1	47.1	65.2	
			34	Abbotsford	97	53.1	45.2	60.9	
			75	Mission	36	60.9	47.2	74.5	
	Fraser East Total					224	55.6	50.3	60.8
	22	Fraser North	40	New Westminster	46	59.4	47.0	71.7	
			41	Burnaby	142	57.9	51.0	64.7	
			42	Maple Ridge	92	67.9	59.7	76.1	
			43	Coquitlam	190	63.2	57.3	69.2	
	Fraser North Total					470	62.1	58.3	65.9
	23	Fraser South	35	Langley	126	66.1	59.1	73.1	
			37	Delta	114	65.6	57.6	73.5	
			201	Surrey	221	53.7	48.4	59.0	
			202	South Surrey/White Rock	109	69.3	62.1	76.5	
	Fraser South Total					570	60.6	57.2	64.0
<b>Fraser Health Authority</b>					<b>1,264</b>	<b>60.3</b>	<b>58.0</b>	<b>62.6</b>	
3	31	Richmond	38	Richmond	102	56.9	49.1	64.7	
			Richmond Total					102	56.9
	32	Vancouver	161	Vancouver-City Centre	98	68.3	60.2	76.3	
			162	Vancouver-Downtown Eastside	43	75.3	62.3	88.3	
			163	Vancouver-North East	36	42.7	30.7	54.7	
			164	Vancouver-Westside	126	62.9	55.2	70.5	
			165	Vancouver-Midtown	58	67.5	56.6	78.4	
			166	Vancouver-South	46	40.3	30.2	50.4	
	Vancouver Total					407	59.5	55.4	63.7
	33	North Shore/Coast Garibaldi	44	North Vancouver	168	74.7	68.5	80.9	
			45	West Vancouver-Bowen Island	62	67.4	55.9	78.9	
			46	Sunshine Coast	57	70.1	58.9	81.2	
			47/49/83	Powell River/Bella Coola Valley/Central Coast	30	60.7	44.8	76.5	
			48	Howe Sound	44	81.3	69.5	93.1	
	North Shore/Coast Garibaldi Total					361	72.4	68.0	76.9
<b>Vancouver Coastal Health Authority</b>					<b>870</b>	<b>62.2</b>	<b>59.3</b>	<b>65.2</b>	
4	41	South Vancouver Island	61	Greater Victoria	267	66.4	61.2	71.7	
			62	Sooke	72	62.2	52.0	72.5	
			63	Saanich	98	73.1	64.0	82.3	
			64	Gulf Islands	35	61.9	47.1	76.6	
	South Vancouver Island Total					472	66.6	62.6	70.7
	42	Central Vancouver Island	65	Cowichan	63	58.7	48.7	68.7	
			66/67	Lake Cowichan/Ladysmith	40	68.6	55.4	81.8	
			68	Nanaimo	144	60.4	53.3	67.6	
			69	Qualicum	83	78.9	70.7	87.2	
			70	Alberni	57	70.3	59.7	80.9	
	Central Vancouver Island Total					387	65.2	60.9	69.5
	43	North Vancouver Island	71	Courtenay	105	63.1	54.5	71.7	
			72/84/85	Campbell River/Island West/North	83	60.1	51.2	68.9	
	North Vancouver Island Total					188	61.7	55.6	67.9
	<b>Vancouver Island Health Authority</b>					<b>1,047</b>	<b>65.4</b>	<b>62.7</b>	<b>68.0</b>

Table 4. Percentage of past 30days alcohol users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

Health Authority Structure – HA code - HSDA - LHA					n †	% ‡	95% CI		
5	51	Northwest	50/80	Queen Charlotte/Kitimat	26	83.6	71.7	95.4	
			51/52/53/87/92/94	Snow Country/Prince Rupert/Upper Skeena//Stikine/Terrace/Nisga's	25	64.9	50.5	79.3	
			54	Smithers	31	67.8	52.2	83.5	
			88	Terrace	33	63.1	49.0	77.2	
	Northwest Total					115	69.0	61.7	76.4
	52	Northern Interior	28	Quesnel	38	64.3	51.2	77.5	
			55/56	Burns Lake/Nechako	18	49.1	31.7	66.6	
			57	Prince George	111	63.5	55.7	71.3	
	Northern Interior Total					167	61.7	55.4	68.0
	53	Northeast	59	Peace River South	22	46.3	29.9	62.7	
			60/81	Peace River North/Fort Nelson	40	71.3	58.5	84.1	
	Northeast Total					62	61.0	50.5	71.5
	Northern Health Authority					344	63.5	59.0	67.9
	BC					4,482	62.6	61.3	63.9

Note: † N=number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. The estimates with CV of 33.3 or larger have been suppressed.

### 3.3. Illicit drug use in health regions

#### 3.3.1. Cannabis use

Table 5 presents the percentage of past 3 month cannabis users by HA and HSDA in BC in 2008-2009. Among five HAs, the prevalence was highest in Northern (14.3%) and lowest in Fraser (9.6%). Among HSDAs, Kootenay Boundary had highest prevalence of past 3 month cannabis use (19.8%) and Fraser East had lowest (8.8%).

Health Authority (HA)		Health Service Delivery Area (HSDA)		N †	% ‡	95% CI	
1	Interior	11	East Kootenay				
		12	Kootenay Boundary	24	19.8	12.3	27.2
		13	Okanagan	58	11.6	8.6	14.7
		14	Thompson Cariboo Shuswap	35	10.1	6.7	13.5
Interior Health Authority				127	11.6	9.6	13.7
2	Fraser	21	Fraser East	27	8.8	5.5	12.1
		22	Fraser North	55	10.0	7.3	12.6
		23	Fraser South	59	9.6	7.2	12.0
Fraser Health Authority				141	9.6	8.0	11.1
3	Vancouver Coastal	31	Richmond				
		32	Vancouver	63	11.3	8.4	14.1
		33	North Shore/Coast Garibaldi	44	12.5	8.8	16.1
Vancouver Health Authority				114	10.7	8.6	12.7
4	Vancouver Island	41	South Vancouver Island	66	14.6	11.1	18.1
		42	Central Vancouver Island	52	12.3	9.0	15.6
		43	North Vancouver Island	26	11.1	6.8	15.4
Vancouver Health Authority				144	13.2	11.0	15.4
5	Northern	51	Northwest	21	14.3	8.4	20.3
		52	Northern Interior	27	12.9	8.1	17.7
		53	Northeast	12	17.4	8.0	26.8
Northern Health Authority				60	14.3	10.6	17.9
BC				586	11.1	10.2	12.0

Note: † N= number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. ■ The estimates with CV of 33.3 or larger have been suppressed.

Table 6 presents the percentage of past 30 day cannabis users by HA and HSDA in BC in 2008-2009. Among five HAs, the prevalence was highest in Northern (12.3%) and lowest in Fraser (7.2%). Among HSDAs, Kootenay Boundary had highest prevalence of past 3 month cannabis use (15.4%) and Fraser East had lowest (6.4%).

Health Authority (HA)	Health Service Delivery Area (HSDA)		N †	% ‡	95% CI		
1	Interior	11	East Kootenay				
		12	Kootenay Boundary	19	15.4	8.6	22.2
		13	Okanagan	46	9.1	6.4	11.8
		14	Thompson Cariboo Shuswap	32	9.5	6.2	12.8
Interior Health Authority			107	9.8	7.8	11.7	
2	Fraser	21	Fraser East	21	6.4	3.6	9.2
		22	Fraser North	47	8.6	6.1	11.1
		23	Fraser South	43	6.9	4.8	9.0
Fraser Health Authority			111	7.4	6.0	8.8	
3	Vancouver Coastal	31	Richmond				
		32	Vancouver	47	8.6	6.1	11.2
		33	North Shore/Coast Garibaldi	40	11.4	7.8	14.9
Vancouver Health Authority			93	8.6	6.8	10.5	
4	Vancouver Island	41	South Vancouver Island	54	11.8	8.6	15.0
		42	Central Vancouver Island	46	10.9	7.7	14.1
		43	North Vancouver Island	23	10.4	6.2	14.6
Vancouver Health Authority			123	11.2	9.2	13.3	
5	Northern	51	Northwest	20	13.9	7.9	19.8
		52	Northern Interior	23	11.4	6.8	16.0
		53	Northeast	9	12.9	4.5	21.3
Northern Health Authority			52	12.3	8.9	15.7	
BC			486	9.1	8.2	9.9	

Note: † N= number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. ■ The estimates with CV of 33.3 or larger have been suppressed.

Table 7 presents the percentage of lifetime cannabis users by LHA, HSDA and HA in BC in 2008-2009. Among five HAs, the prevalence of lifetime cannabis use was largest in Vancouver Island (59.0%) and lowest in Fraser (44.5%). Among the HSDAs, the prevalence of lifetime cannabis use varied greatly (also see Figure 2). In Kootenay Boundary, 62% of adults reported using cannabis in lifetime whereas less than 34% in Richmond reported using cannabis in lifetime.

There are substantial differences in lifetime cannabis use among LHAs. In Kootenay Lake/Castlegar/Arrow Lakes, 79.4% reported using cannabis in lifetime but only 34.0% reported using cannabis in lifetime in Cranbrook.

Table 7. Percentage of lifetime cannabis users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

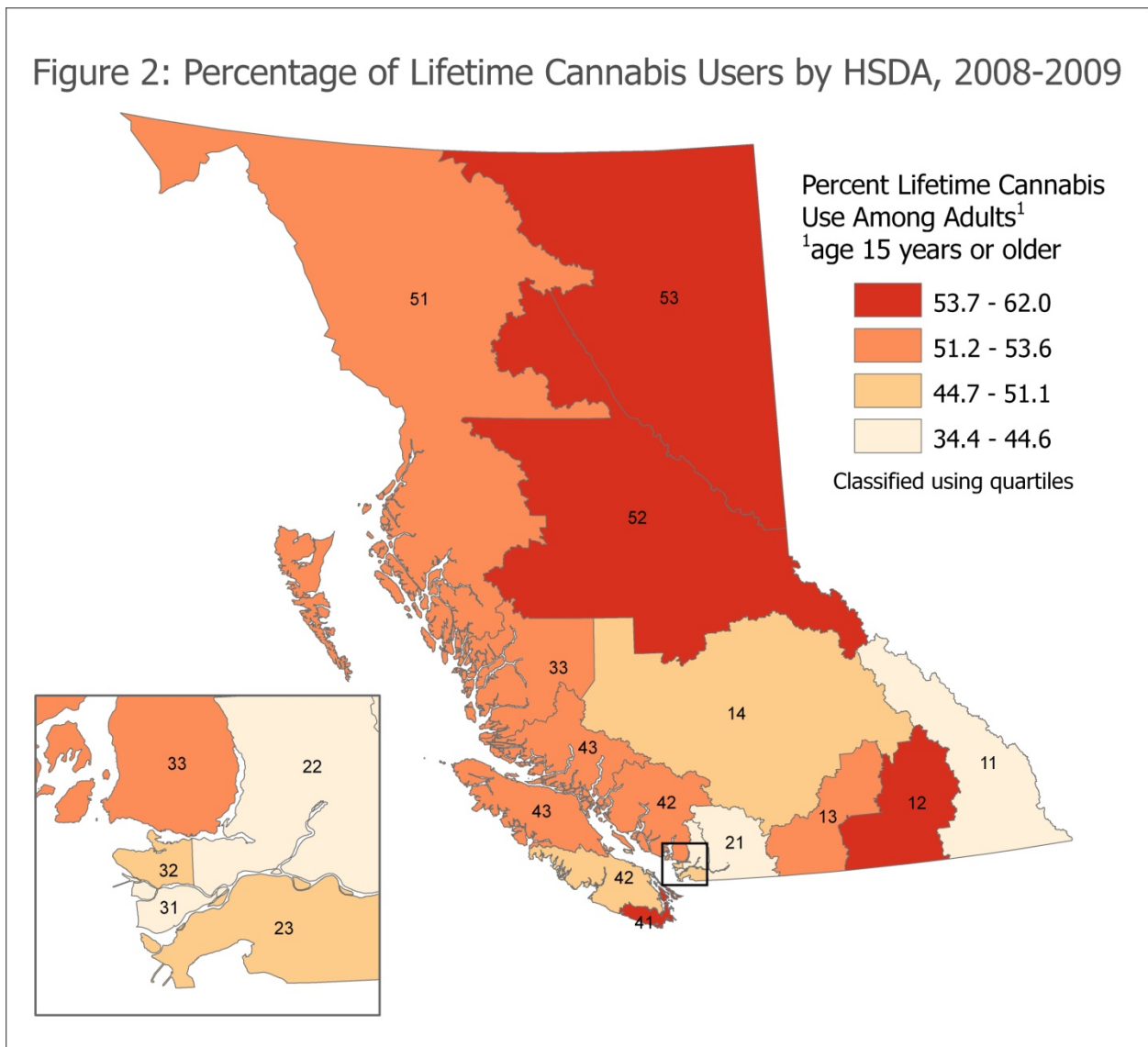
Health Authority Structure – HA code - HSDA - LHA					N †	% ‡	95% CI		
1	11	East Kootenay	1	Fernie	21	38.1	22.0	54.2	
			2	Cranbrook	18	34.0	19.4	48.6	
			3/5	Kimberley/Creston	14	37.5	21.2	53.8	
			4/18	Windermere/Golden	25	67.5	52.5	82.5	
			<b>East Kootenay Total</b>				<b>78</b>	<b>43.0</b>	<b>34.6</b>
	12	Kootenay Boundary	6/9/10	Kootenay Lake/Castlegar/Arrow Lakes	32	79.4	68.1	90.8	
			7	Nelson	33	61.8	48.3	75.2	
			11	Trail	24	51.4	36.8	66.1	
			12/13	Grand Forks/Kettle Valley	15	52.3	32.7	72.0	
	<b>Kootenay Boundary Total</b>				<b>104</b>	<b>62.0</b>	<b>54.6</b>	<b>69.5</b>	
	13	Okanagan	14	Southern Okanagan	16	35.1	21.1	49.0	
			15	Penticton	33	48.7	36.3	61.0	
			16/17	Keremeos/Princeton/Summerland	25	50.1	35.4	64.9	
			21/78	Armstrong-Spallumcheen/Enderby	23	61.0	46.0	76.0	
			22	Vernon	58	57.7	48.1	67.2	
			23	Central Okanagan	155	51.0	45.2	56.8	
	<b>Okanagan Total</b>				<b>310</b>	<b>51.6</b>	<b>47.5</b>	<b>55.7</b>	
	14	Thompson Cariboo Shuswap	19/20	Revelstoke/Salmon Arm	42	45.4	34.6	56.2	
			24	Kamloops	93	47.6	40.3	55.0	
			25/26	100 Mile House/North Thompson	21	50.1	34.3	65.9	
			27	Cariboo-Chilcotin	21	47.5	31.9	63.2	
			29/30/31	Lillooet/South Cariboo/Merritt	27	64.0	49.5	78.4	
	<b>Thompson Cariboo Shuswap Total</b>				<b>204</b>	<b>49.2</b>	<b>44.1</b>	<b>54.2</b>	
<b>Interior Health Authority</b>					<b>696</b>	<b>51.1</b>	<b>48.3</b>	<b>53.9</b>	
2	21	Fraser East	32/76	Hope/Agassiz-Harrison	13	50.1	30.8	69.4	
			33	Chilliwack	44	37.4	28.4	46.4	
			34	Abbotsford	63	39.2	31.4	47.0	
			75	Mission	29	53.5	39.7	67.4	
	<b>Fraser East Total</b>				<b>149</b>	<b>41.4</b>	<b>36.2</b>	<b>46.7</b>	
	22	Fraser North	40	New Westminster	36	51.8	39.3	64.2	
			41	Burnaby	87	38.3	31.6	45.1	
			42	Maple Ridge	66	49.2	40.2	58.3	
			43	Coquitlam	126	45.7	39.5	51.8	
	<b>Fraser North Total</b>				<b>315</b>	<b>44.6</b>	<b>40.7</b>	<b>48.5</b>	
	23	Fraser South	35	Langley	84	47.8	40.2	55.4	
			37	Delta	75	46.7	38.4	55.0	
			201	Surrey	168	43.6	38.3	48.8	
			202	South Surrey/White Rock	66	47.5	39.2	55.8	
	<b>Fraser South Total</b>				<b>393</b>	<b>45.6</b>	<b>42.0</b>	<b>49.1</b>	
	<b>Fraser Health Authority</b>					<b>857</b>	<b>44.5</b>	<b>42.1</b>	<b>46.8</b>

Table 7. Percentage of lifetime cannabis users among adults aged 15 years and older by HA, HSDA and LHA in British Columbia in 2008-2009

Health Authority Structure – HA code - HSDA - LHA					N †	% ‡	95% CI	
3	31	Richmond	38	Richmond	58	34.4	26.5	42.3
	Richmond Total				58	34.4	26.5	42.3
	32	Vancouver	161	Vancouver-City Centre	81	59.5	50.9	68.1
			162	Vancouver-Downtown Eastside	41	72.7	59.4	86.0
			163	Vancouver-North East	35	46.6	34.3	58.8
			164	Vancouver-Westside	87	42.0	34.4	49.6
			165	Vancouver-Midtown	43	51.3	39.6	62.9
			166	Vancouver-South	24	20.8	12.6	28.9
	Vancouver Total				311	46.5	42.3	50.7
	33	North Shore/Coast Garibaldi	44	North Vancouver	90	42.9	35.7	50.1
			45	West Vancouver-Bowen Island	30	41.0	29.1	52.9
			46	Sunshine Coast	48	68.1	57.4	78.9
			47/49/83	Powell River/Bella Cooola Valley/Central Coast	27	65.1	51.0	79.2
			48	Howe Sound	35	70.0	57.1	83.0
North Shore/Coast Garibaldi Total				230	52.4	47.5	57.3	
<b>Vancouver Coastal Health Authority</b>					<b>599</b>	<b>45.9</b>	<b>42.9</b>	<b>49.0</b>
4	41	South Vancouver Island	61	Greater Victoria	197	53.9	48.4	59.5
			62	Sooke	68	64.7	54.9	74.6
			63	Saanich	65	58.8	49.3	68.3
			64	Gulf Islands	32	63.3	49.9	76.6
	South Vancouver Island Total				362	57.3	53.2	61.5
	42	Central Vancouver Island	65	Cowichan	48	47.8	37.6	58.1
			66/67	Lake Cowichan/Ladysmith	24	48.5	34.1	62.9
			68	Nanaimo	110	55.9	48.8	63.0
			69	Qualicum	39	45.2	34.4	56.0
			70	Alberni	36	48.7	36.9	60.6
	Central Vancouver Island Total				257	51.1	46.6	55.6
	43	North Vancouver Island	71	Courtenay	77	47.7	39.2	56.3
			72/84/85	Campbell River/Island West/North	74	58.8	50.0	67.6
	North Vancouver Island Total				151	52.8	46.6	59.1
<b>Vancouver Island Health Authority</b>					<b>770</b>	<b>54.5</b>	<b>51.7</b>	<b>57.2</b>
5	51	Northwest	50/80	Queen Charlotte/Kitimat	21	65.1	48.2	82.1
			51/52/53/87/92/94	Snow Country/Prince Rupert/Upper Skeena//Stikine/Terrace/Nisga's	22	54.5	38.8	70.2
			54	Smithers	17	38.9	23.3	54.5
			88	Terrace	29	58.1	43.9	72.3
	Northwest Total				89	53.6	45.6	61.6
	52	Northern Interior	28	Quesnel	32	59.8	46.6	72.9
			55/56	Burns Lake/Nechako	17	56.7	40.0	73.5
			57	Prince George	101	62.6	54.8	70.3
	Northern Interior Total				150	61.1	54.9	67.3
	53	Northeast	59	Peace River South	25	61.5	46.1	76.8
60/81			Peace River North/Fort Nelson	32	59.5	45.3	73.6	
Northeast Total				57	60.3	49.8	70.7	
<b>Northern Health Authority</b>					<b>296</b>	<b>59.0</b>	<b>54.5</b>	<b>63.5</b>
<b>BC</b>					<b>3,218</b>	<b>48.5</b>	<b>47.2</b>	<b>49.9</b>

Note: † N=number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. The estimates with CV of 33.3 or larger have been suppressed.

Figure 2: Percentage of Lifetime Cannabis Users by HSDA, 2008-2009



### 3.4. Prevalence of other illicit drug use in health authorities

Table 8 presents the prevalence of lifetime use of other illicit drug (excluding cannabis use) by HA in BC in 2009. While the prevalence of lifetime cocaine use and others including

methamphetamine, heroin, inhalants and salvia use shows a slight difference between HAs, there were substantial differences in speed, ecstasy and hallucinogens.

Table 8. Percentage of lifetime illicit drug users among adults aged 15 years and older by HA in British Columbia in 2009

Lifetime illicit drug use by Health Authority (HA)		N	%	95% CI	
Cocaine	1 Interior	65	9.94	7.50	12.40
	2 Fraser	102	10.15	8.20	12.10
	3 Vancouver Coastal	75	11.32	8.70	14.00
	4 Vancouver Island	75	11.02	8.40	13.60
	5 Northern	29	12.15	7.60	16.70
	BC	346	10.70	9.51	11.84
Speed	1 Interior	28	3.72	2.30	5.10
	2 Fraser	29	2.88	1.80	4.00
	3 Vancouver Coastal	29	4.13	2.60	5.70
	4 Vancouver Island	36	4.55	3.00	6.10
	5 Northern				
	BC	132	3.70	3.04	4.40
Ecstasy	1 Interior	29	5.70	3.50	7.90
	2 Fraser	36	4.76	3.10	6.40
	3 Vancouver Coastal	34	6.66	4.30	9.10
	4 Vancouver Island	30	6.36	4.00	8.80
	5 Northern	18	10.61	5.60	15.60
	BC	147	6.00	4.98	7.05
Hallucinogens	1 Interior	105	15.96	13.00	19.00
	2 Fraser	129	13.41	11.10	15.70
	3 Vancouver Coastal	97	15.92	12.80	19.10
	4 Vancouver Island	121	18.13	14.90	21.30
	5 Northern	49	22.24	16.20	28.30
	BC	501	15.80	14.39	17.19
Others: crystal methamphetamine, heroin, inhalants and salvia	1 Interior	24	4.12	2.40	5.80
	2 Fraser	22	2.73	1.50	3.90
	3 Vancouver Coastal	24	4.30	2.50	6.10
	4 Vancouver Island	18	2.95	1.40	4.50
	5 Northern				
	BC	97	3.60	2.79	4.32
All illicit drug	1 Interior	132	19.81	16.60	23.10
	2 Fraser	171	18.03	15.40	20.60
	3 Vancouver Coastal	128	20.93	17.40	24.50
	4 Vancouver Island	142	21.55	18.10	25.00
	5 Northern	63	27.44	21.10	33.80
	BC	636	20.20	18.66	21.77

Note: ▲ Lifetime illicit drug use was examined only in 2009. † N=number of alcohol users in the survey. ‡ The prevalence (%) and 95% confidence interval (CI) were estimated based on weighted sample. The estimates with CV of 33.3 or larger have been suppressed. ■ The estimates with CV of 33.3 or larger have been suppressed.

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