

# Alcohol and Other-Drug Related Harms in BC's Island Health Region

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In this Bulletin, we present findings on alcohol and other-drug related harms in the Island Health Region of BC (i.e. Vancouver Island and some adjacent coastal communities). These findings include:

1. Trends over time in alcohol and other-drug related hospitalizations by Health Service Delivery Areas,
2. Estimates of the number of residents with alcohol dependence by Local Health Area, and
3. Estimates of different levels of substance related treatment needs for five Health Authorities.

This information was gathered by researchers at the Centre for Addictions Research of BC. At the end of this Bulletin, we describe how you can get additional information on substance use issues.

## 1. Alcohol and Illicit Drug-Related Morbidity in the Island Health Region

Alcohol and drug related morbidity (illnesses) in the Island Health Region are likely the most valid and reliable measures of the underlying substance use disease-related harms at a population level. Hospital morbidity related to alcohol and other drugs for 2002 to 2012 was calculated using the alcohol-attributed fraction (i.e. proportion) method and is presented in age and sex standardized rates. From these fractions, the estimated rates of diseases due to alcohol or drug use can be calculated. Age/sex-standardized rates are presented that adjust for differences in the population distributions by both age and sex simultaneously so that direct comparisons can be made assuming each geographic region has a similar age and sex structure.

Figures 1 and 2 show age and sex standardized rates of hospital morbidity for alcohol and illicit drugs in the three Health Service Delivery Areas of Island Health and BC as a whole from 2002 to 2012. With respect to morbidity attributable to alcohol (Figure 1), several observations are noted. First, alcohol morbidity has been gradually increasing since 2002 for South Vancouver Island, Central Vancouver Island and BC as a whole. Rates in North Vancouver Island have been declining over time, but remain high.

Figure 2 shows morbidity attributable to illicit drugs, which peaked in 2005.

Figure 1: Alcohol Hospitalization Trends, BC and Island Health

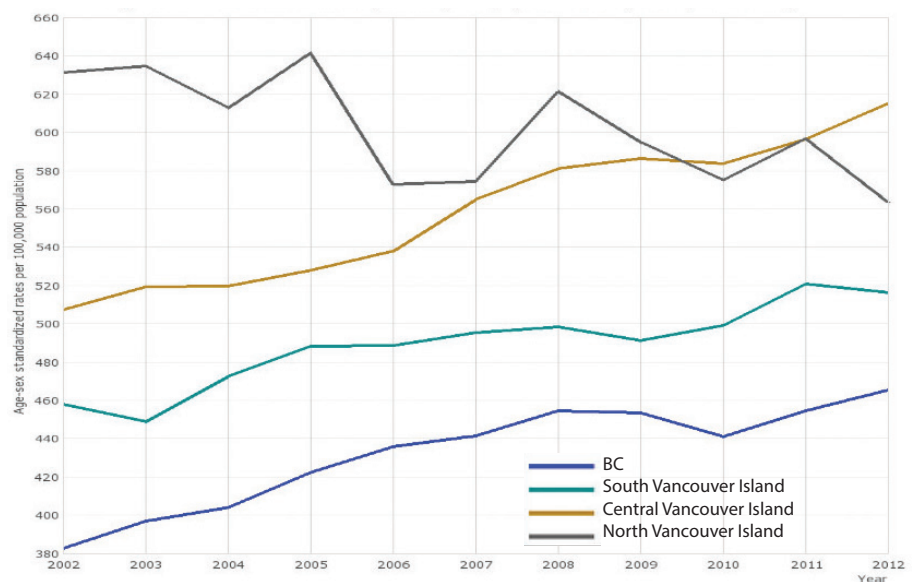
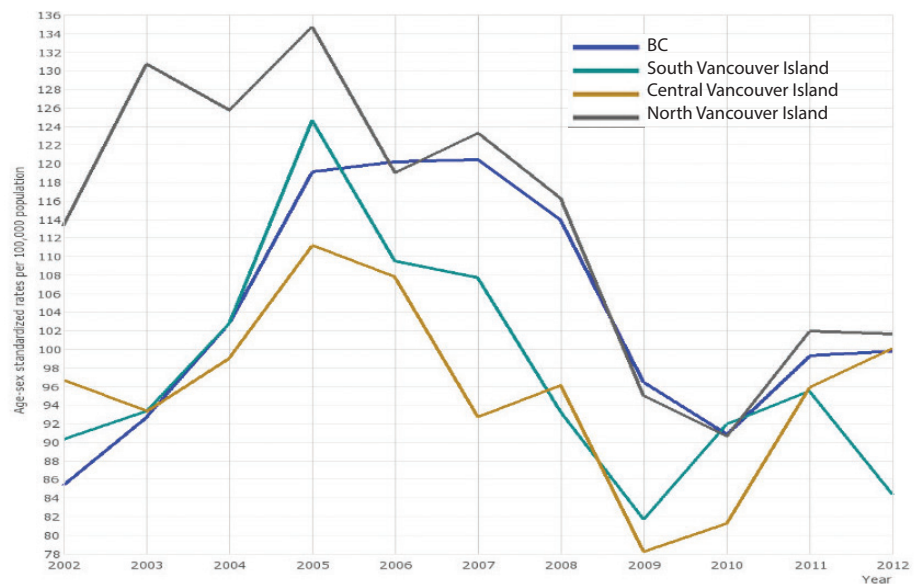


Figure 2: Illicit Drug Hospitalization Trends, BC and Island Health



## 2. Estimated rate, number of persons with alcohol dependence by Local Health Area, Island Health

We have also estimated the number and rate of persons with alcohol dependence at Island Health for each local health area (see Table 1). This data is estimated from alcohol-sales data in each geographic region. Details of the methods for these estimates can be found in a more comprehensive report (Macdonald et al., 2015). Estimated rates of alcohol dependence are highest in North Vancouver Island and lowest in South Vancouver Island. Caution should be taken when interpreting small geographic areas, such as Cowichan Lake, which has a very high percentage estimate, likely highly exaggerated due to summer tourism.

Table 1: Estimated Number of People with Alcohol Dependence by Regions of Island Health (2012)

LHA/HSDA	Population 15+	Proportion of drinkers	Number of drinkers	Per adult consumption	Per drinker consumption	Estimated percent with alcohol dependence	Estimated number of people with alcohol dependence
61 Greater Victoria	197,212	76.0%	149,881	9.3	12.3	3.3%	4,871
62 Sooke	60,122	76.0%	45,693	10.4	13.7	3.8%	1,718
63 Saanich	56,668	76.0%	43,068	11.2	14.7	4.2%	1,787
64 Gulf Islands	14,623	76.0%	11,113	12.2	16.1	4.7%	525
<b>41 South Vancouver Island</b>	<b>328,625</b>	<b>76.0%</b>	<b>249,755</b>	<b>10.0</b>	<b>13.1</b>	<b>3.5%</b>	<b>8,816</b>
65 Cowichan	48,979	79.8%	39,085	9.7	12.2	3.2%	1,259
66 Lake Cowichan	5,599	79.8%	4,468	25.0	31.3	12.7%	568
67 Ladysmith	16,581	79.8%	13,232	6.8	8.5	2.1%	271
68 Nanaimo	91,620	79.8%	73,113	10.0	12.6	3.4%	2,457
69 Qualicum	40,934	79.8%	32,665	8.3	10.4	2.6%	856
70 Alberni	26,715	79.8%	21,319	13.1	16.4	4.9%	1,034
<b>42 Central Vancouver Island</b>	<b>230,428</b>	<b>79.8%</b>	<b>183,882</b>	<b>10.1</b>	<b>12.7</b>	<b>3.4%</b>	<b>6,234</b>
71 Courtenay	55,916	72.0%	40,260	10.2	14.2	3.9%	1,586
72 Campbell River	35,661	72.0%	25,676	12.7	17.6	5.4%	1,381
84 Vancouver Island West	1,962	72.0%	1,413	10.8	15.0	4.3%	60
85 Vancouver Island North	9,920	72.0%	7,142	14.4	20.0	6.5%	466
<b>43 North Vancouver Island</b>	<b>103,459</b>	<b>72.0%</b>	<b>74,490</b>	<b>11.5</b>	<b>15.9</b>	<b>4.6%</b>	<b>3,456</b>
<b>Island Health</b>	<b>662,512</b>	<b>76.7%</b>	<b>508,127</b>	<b>10.3</b>	<b>13.4</b>	<b>3.7%</b>	<b>18,506</b>

## 3. Estimates of Substance-related Treatment Needs in Five Tiers of Need by Health Authority

The proportion of the British Columbia population that may require substance-use treatment services by 'need' category is estimated based on an adaption of methods recommended by Rush et al. (2013), where estimates have been made for the Canadian population (see Figure 3). In this model, population-level treatment need is conceptualized in relation to five tiers that are stratified by problem severity. The tiered model draws on the culmination of research and practice from several countries, including the United States, Australia and the United Kingdom; and has recently been endorsed by the Canadian National Treatment Strategy Working Group (2008). This material is summarized from Macdonald et al (2015).

In order to ensure an adequate sample size for Island Health, we analyzed aggregated data from the 2009 and 2010 Canadian Alcohol and Drug Use Survey (CADUMS). The CADUMS was designed as a cross-sectional population survey with a sample of 4,000 participants for each year in BC. A postal code translation file was used by Health Canada to classify each respondent's place of residence. We estimated the number of people in each tier using weighted data by sex and gender.

The five tiers of treatment need were created with the CADUMS data to approximate Rush et al.'s approach (see Macdonald et al., 2015 and Rush et al., 2013 (p. 102-107) for specific details of this approach and limitations). The distribution of the BC population forms a pyramid, with about 78% of the population having non-problematic substance use. The distribution of residents in need of services for Island Health closely approximates that of BC, as well as resembles the proportions in Figure 3.

We next estimated the percentage of people that would be naturalistic help-seekers in each tier of need (see Table 2) based on assumptions by Rush et al, (2013).

Figure 3: Distribution of the Canadian population across the five tiers of severity

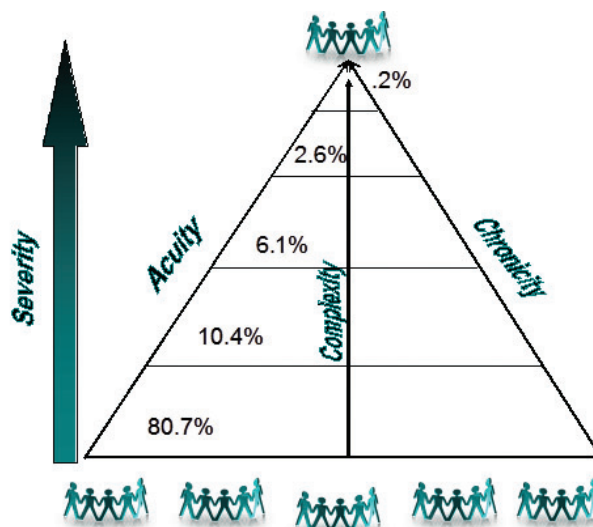


Table 2: Treatment Tier Needs by Number and Proportion of the Population by Health Authority

Tier	Interior	Fraser	VCH	Island Health	Northern	BC	
5*	2,007 0.3%	3,540 0.3%	2,465 0.2%	<b>1,804</b> <b>0.3%</b>	996 0.4%	10,900 0.3%	*Tier 5 = highly specialized care functions targeted to individuals with complex problems.
4*	26,057 4.1%	45,956 3.3%	31,999 3.1%	<b>23,416</b> <b>3.5%</b>	12,935 5.4%	141,503 3.6%	*Tier 4 = Specialized care functions targeted to people assessed as in need or more intensive care.
3*	61,143 9.7%	107,834 7.8%	75,085 7.3%	<b>54,944</b> <b>8.3%</b>	30,351 12.7%	332,030 8.4%	*Tier 3 = Treatment planning, risk/crisis management and support functions targeted to individuals with identified problems.
2*	57,574 9.1%	121,448 8.8%	102,382 10.0%	<b>68,901</b> <b>10.4%</b>	28,006 11.7%	361,254 9.2%	*Tier 2 = Early intervention and self-management functions targeted to people at risk.
1*	485,263 76.7%	1,102,694 79.9%	811,892 79.3%	<b>513,447</b> <b>77.5%</b>	167,077 69.8%	3,072,429 78.0%	*Tier 1 = population-based health promotion and prevention functions targeted at the general population.

Subsequently, these people were divided into withdrawal management services, community services, and residential services (Table 3).

Table 3: Estimated Number of Users per year by Service Category

Withdrawal Management Services	Required Capacity	Community Services and Supports	Required Capacity	Residential Services and Supports	Required Capacity
Home-based/Mobile	1386	Community Minimal	2637	Supported Recovery	891
Community/Medical Residential	1491	Community Moderate	4055	Residential Services	966
Hospital/Complexity Enhanced	534	Community Intensive	1613	Complexity Enhanced (Medical/Psychiatric)	499

In an upcoming research project, we are conducting a survey of treatment services in the Island Health Region in order to better understand the current treatment system and will be seeking input from treatment agencies. This survey will build on recommendations by Brian Rush and the Island Health team in a recent report (Virgo Consultants and Island Health, 2014), and help us to better understand the nature of services for those with substance use issues in the Island Health Region.

## CARBC Resources

CARBC is committed to conducting high quality research that increases our understanding of substance use, addiction and related harms in order to inform effective responses and promote health. The website at [carbc.ca](http://carbc.ca) has a wealth of information on different publications and resources related to substance use, including annual reports, active research projects, special blog series and over 300 publications, including posters and infographics. In this report, we focused on substance use harms in the Island Health Region. We presented data on trends of substance related hospitalizations, estimates of residents with alcohol dependence for each local health area, and estimates of substance users for different severity levels of need.

## How to create your own figures

The hospitalization figures are examples of the types of charts you can create with our morbidity and mortality “AOD trend analyzer tool” under “Facts and stats” and “Substance-related hospitalizations and deaths”: (<http://bit.ly/AODTrend>). See the brief instructional video on how to use the tool. You can see trends by Health Authorities and Health Service Delivery Areas; alcohol, illicit drugs and tobacco; health condition; and sex and age groups.

## References

Macdonald, S., Joordens, C., Slaunwhite, A., & Greer, A. (2015). Needs-based projections from substance related harms across British Columbia. (For the public copy, contact Chantele Joordens at [joordens@uvic.ca](mailto:joordens@uvic.ca).)

National Treatment Strategy Working Group. (2008). *A Systems Approach to Substance Use in Canada: Recommendations for a National Treatment Strategy*. Ottawa: National Framework for Action to Reduce the Harms Associated with Alcohol and Other Drugs and Substances in Canada.

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## Preferred citation

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