Population Size Estimates Summary

Size estimates of populations affected by HIV and HCV in BC

The Setting

In British Columbia (BC) the number of new HIV and HCV injections have been steadily declining. Similarly to what has been reported Canada-wide, new diagnoses are predominantly through exposure categories of men who have sex with men (MSM), heterosexual contact, and injection drug use. A population size estimate (PSE) project was initiated by the BC Centre for Disease Control to better understand how many people in BC are part of these priority populations, regardless of HIV or HCV status.

Purpose

Understanding more about the populations most at risk of acquiring HIV and HCV, and the total number of people in each of these populations is important to strategically and effectively design prevention and care programs. Additionally, understanding the underlying population sizes is key factor in reliably evaluating the impact of said programs, and appropriately distributing resources.

Objectives	
1. Review the work conducted on estimating the size of key populations at risk for acquiring HIV and HCV, including PWID, MSM and SW in BC	2. Based on the review, develop size estimates for the key populations at risk for acquiring HIV and HCV in the five health authorities in BC
3. Conduct critical analysis of the size estimation approaches used in BC to date, and highlight the limitations of the key population size estimates	4. Provide recommendations for approaches with primary data collection to develop more robust size estimates for key populations in BC

Approach

This project was undertaken in two phases. Phase I involved reviewing existing resources with information about size estimates of three key populations: MSM, people who use injection drugs (PWID), and sex workers (SW). The team consulted key informants in BC to collect published literature and non-published grey literature (internal reports, memos, presentations etc.) that provide information about how many people representing these populations are living in BC.

Activities in Phase I of this project also informed an interview guide for Phase II; consultations with key informants from health authorities and community-based organizations that serve these three populations. Key informants were interviewed about how they currently evaluate programs in the absence of readily available size estimates, as well as what other information would be helpful for program planning, delivery and evaluation.

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These case studies were prepared as part of the BC Population Size Estimates Project. For more information please contact David Moore - David.Moore@bccdc.ca or visit www.pacificaidsnetwork.org
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Results

Work completed in Phase I was able to provide estimates of the number of MSM and PWID in BC but identified a lack of available information about the number of people engaged in sex work.

Geographic Area	2015 Total Population Size (≥ 15 years)			Estimated Population Size of			
				PWID			MSM
	Total	Male	Female	Total	Male	Female	
British Columbia	4,000,845	1,972,170	2,028,675	42,200	25,200	17,000	50,900
Vancouver Coastal HA	1,013,719	494,171	519,548	12,900	8,300	4,600	26,100
Vancouver	-	-	-	-	-	-	20,700
Fraser HA	1,455,534	719,930	735,604	13,300	8,200	5,100	11,800
Vancouver Island HA	666,343	325,016	341,327	6,800	3,800	3,000	5,500
Interior HA	636,297	314,677	321,620	5,600	3,000	2,600	5,300
Northern HA	228,952	118,376	110,576	3,300	1,700	1,600	2,200

Many key informants in Phase II had difficulty verifying the estimates, but agreed that based on the percent composition by general population (1% PWID, 2% MSM) estimates for MSM and PWID in BC appeared correct. After review of recent HIV diagnoses in BC and discussion with key informants, the team acknowledged that male and female SW, with no exposure to other risk factors, may not represent key populations for HIV and HCV prevention in BC.

Most informants interviewed in Phase II agreed that size estimates for key populations from a trusted source would be helpful to their work in program planning, implementation and evaluation, research, and advocacy and proposal writing for program resources and funding. Other important topics that came up included how it would be helpful to better understand risk factors within these three key populations as well as the spaces in which these take place. Understanding migration in and out of areas and how movement changes the risks that people experience was also brought up as a way to adjust programs and resources to be most effective.

Outcomes

This project identified available information on population sizes of PWID and MSM in most health authorities in BC, and the lack thereof for SW.

Recommendations
1. More clearly define risk within each population, acknowledging that HIV/HCV acquisition is not the same for all PWID, MSM, or SW.
2. Although some limitations do exist, size estimation methodologies based on the BC Hepatitis Testers Cohort and the Canadian Community Health Survey (with noted adjusts, please see full reprort) are able to provide high-level information on population sizes of PWID and MSM.
3. The size estimates for PWID and MSM should be used in the planning and evaluation of HIV and HCV prevention, treatment and care programs. And practical guidelines for application of these PSEs should be developed to ensure consistency across BC.
4. Mapping and enumeration should be considered as a way of expanding on the existing size estimates as well as providing more information about where risk activities take place.
5. Efforts should be undertaken to work with community organizations to better understand risks that exist for SW, to define a priority population based on behaviour and contexts that impose risk and to develop PSE that may help inform planning of programs to address structural barriers and other issues that affect health.

Why are population size estimates important?

Certain groups of people are often more affected by health or social problems than the general population, as is the case with HIV and Hepatitis C (HCV). It is often known which groups experience more risk of acquiring HIV/HCV, but the total number of people within these risk categories are often unknown.

Since we do not know the total population sizes across the province (regardless of HIV/HCV status) or where people live within different regions and cities, it is difficult to adequately respond and plan services, programs, policy, and laws.

For many reasons including stigma and legal issues, the total number of people are often underestimated. This can lead to under-resourcing or misallocation of resources.

Supporting the Development of Services

Knowing how many people there are, and where they live, supports clinical and social service planning and ensures we are correctly responding to needs. It can help decide where to put new services such as testing, primary health care for these populations, and prevention services.

Understanding Incidence

If we know the total size of these populations, we can use information about new infections to determine if our assumptions about priority populations are correct.

Other ways PSE can be used by planners, service providers, and community-based organizations

1. Development of new HIV and HCV programming
2. Planning, implementation, and evaluation of interventions
3. More understanding of broad social determinants of health
4. Anti-stigma work
5. Policy and law revisions, supporting work around criminalization of sex work, HIV non-disclosure, harm reduction

PSEs are essential to understand the scope of the problem, set targets, estimate resource needs, plan appropriate interventions, and evaluate their effectiveness

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