

Population size estimates for key populations at risk of HIV and HCV in BC



October 26, 2016

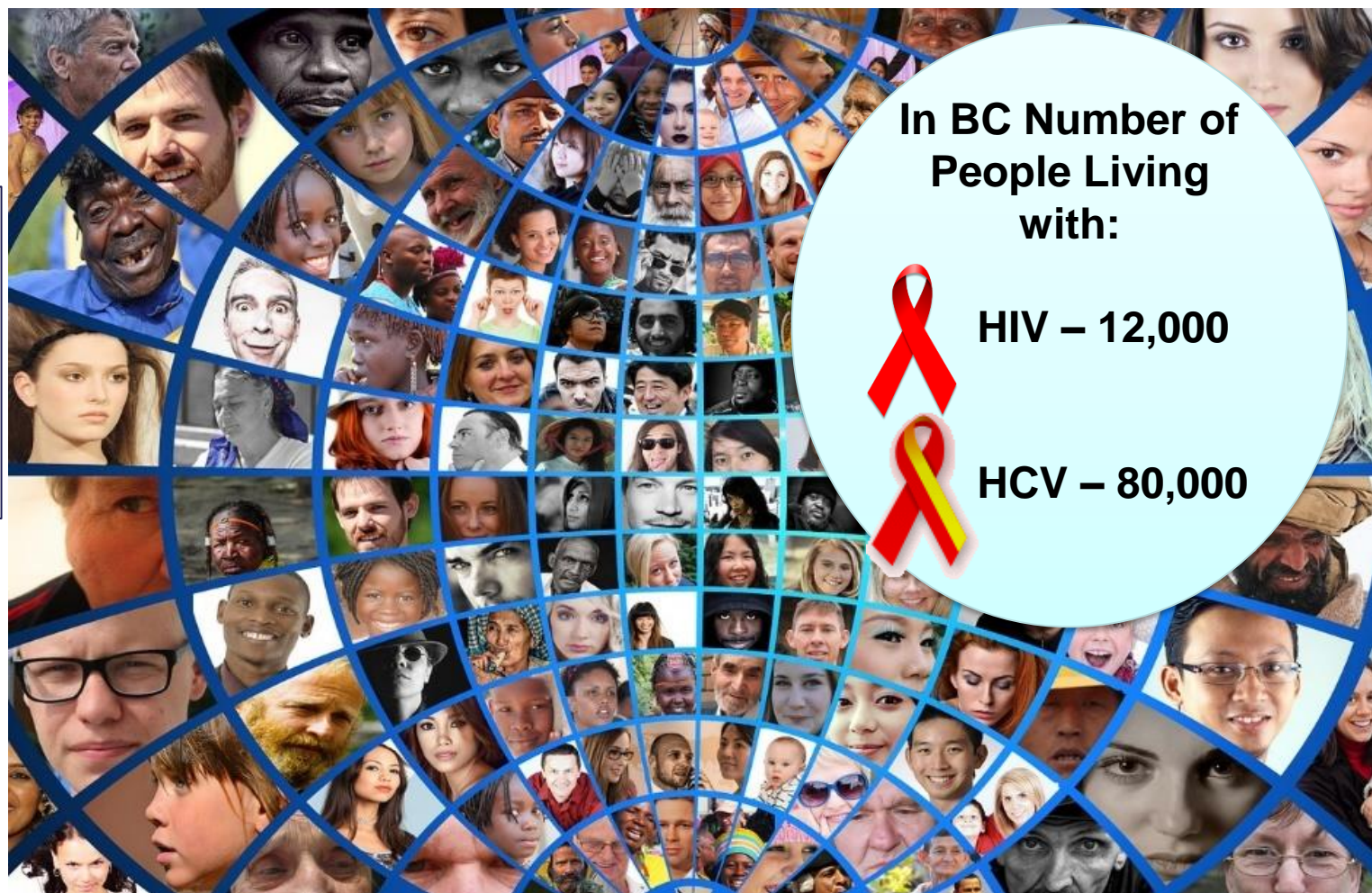
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What are Population Size Estimates?

Total size of a population – the total number of people of a priority population or the total number of people “at risk” of contracting HIV or HCV

Total number
of people “at
risk” of HIV
or HCV in BC
= ???



Why are Population Size Estimates Important?

- If the total number of people in these priority populations is unknown
- Makes it difficult to adequately respond and plan



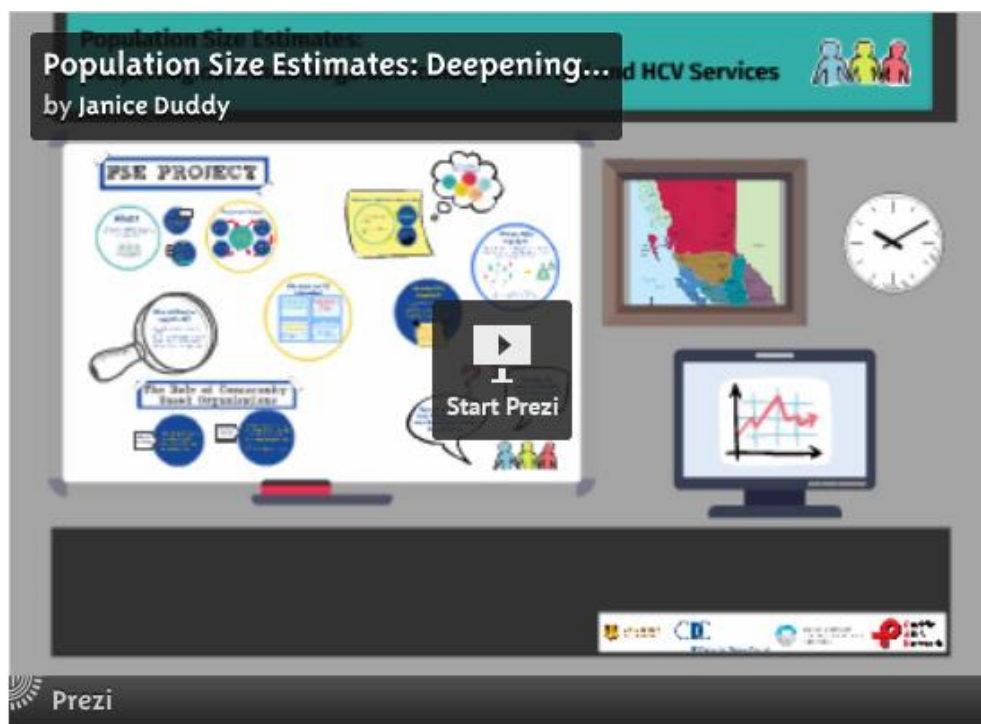
How can we use PSEs?



Essential to:

- Understand the scope of the issue
- Set targets
- Estimate resource needs
- Plan appropriate interventions
- Evaluate their effectiveness

Learn more about PSEs...



Head to PAN's website and listen to narrated Prezi:

<http://pacificaidnetwork.org/programs-projects/evaluation-and-program-science/evaluation-pan/population-size-estimates-project/>

Background

- HIV diagnoses continue to occur predominately in MSM, PWID as well as among heterosexuals who engage in behaviours that increase their risk of acquiring the virus
- Most new HCV diagnoses occur in PWID and MSM
- However, developing effective programs to prevent and treat HIV and HCV is hampered by lack of reliable population-size estimates for these key populations
- Especially true outside of Metro Vancouver

BC's PSE Project

Beginning in August 2015, **BCCDC**, partnered with provincial stakeholders — including the ***Pacific AIDS Network and the BC BC-CfE*** — and contracted the ***Centre for Global Public Health (CGPH) at the University of Manitoba***



Project Objectives:

1. Review the work conducted on estimating the size of key populations at risk for acquiring HIV and HCV, including PWID, MSM and sex workers (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.

Two phases

- **Phase I:** Literature search was performed to identify published peer-reviewed scientific journal articles containing information on size estimations of the three key populations.
- **Phase II:** Key informant interviews with representatives from health authorities and community-based organizations (CBOs) serving the three key populations to solicit feedback on PS estimates and gaps in regional health authorities

Results

Of over 80 items reviewed,

- 6 peer-reviewed scientific journal articles;
- 7 unpublished data, manuscripts, research theses and conference abstracts, poster and presentations; and
- 8 articles from grey literature

were found to contain information on size estimations of the three key populations in BC.

- Most were done at a single point in time, using a variety of methods
- Nearly all information on population size estimates pertains to PWID and MSM
- Clear lack of reliable information on the population size of SW

Results

- Through literature review, subsequent consultations and work with Advisory Group we have been able to come up with a reliable, first set of PSEs for two priority populations
 - People Who Inject Drugs (PWID)
 - Gay, Bi and other MSM

Summary Of Reliable Population Size Estimates – People Who Inject Drugs (PWID)

- For PWID the **BC Hepatitis Testers Cohort Study (BC-HTC)** can provide fairly reliable population size estimates likely down to the HSDA level
- **BC-HTC** includes individuals tested for HCV, HIV or reported as a case of HBV, HCV, HIV or active TB between 1990–2013 linked with data on their medical visits, hospitalizations, cancers, prescription drugs and mortality(anonymized data)
- To identify those likely to be PWID, medical visits or hospitalizations where diagnostic codes were recorded for illnesses or conditions which are associated for IDU
- Validated using HIV surveillance data where IDU-status was known

Summary of Reliable Population Size Estimates – Gay, Bi and other MSM

- For MSM the 2013-2014 the ***Canadian Community Health Survey***, can provide estimates for each regional health authority
- National cross-sectional survey sponsored by the Canadian Institute for Health Information, Statistics Canada and Health Canada that examines and tracks the health status, health care utilization and health determinants of Canadians.
- Since 2007, data for CCHS are collected annually from 65,000 Canadians
- Since 2003 has included questions on sexual orientation
- Because of the inherent limitations of these data sources, these estimates likely represent the lower limits of the true population size

Summary of PSE by regional health authority

2013 - 14

| Geographic Area | Estimated Population Size of: | | | |
|----------------------|-------------------------------|--------|--------|--------|
| | PWID | | | MSM |
| | Total | Male | Female | |
| British Columbia | 42,200 | 25,200 | 17,000 | 50,900 |
| Vancouver Coastal HA | 12,900 | 8,300 | 4,600 | 26,100 |
| Vancouver | - | - | - | 20,700 |
| Fraser HA | 13,300 | 8,200 | 5,100 | 11,800 |
| Vancouver Island HA | 6,800 | 3,800 | 3,000 | 5,500 |
| Interior HA | 5,600 | 3,000 | 2,600 | 5,300 |
| Northern HA | 3,300 | 1,700 | 1,600 | 2,200 |

1. PWID figures adjusted for 10% under-testing based on results from the I-Track Phase 3 (2010-2012) which reported that only about 90% of clients of I harm reduction distribution sites have ever tested for HCV
2. MSM figures in the table were adjusted for 30% under-reporting as per Sex Now survey responses

Sex Workers

- Sex workers were originally part of the scope of this project
- Virtually no reliable estimates for sex workers in BC
- Re-examined BC HIV surveillance data – sex work is becoming an increasingly rare reported risk factor for HIV among both men and women
- Perhaps sex work alone (without other risk exposures) may no longer be a priority population for HIV and HCV prevention
- However may be other reasons to consider developing PSE for sex workers in partnership with CBOs and people with lived experience.

Phase II – Consultations – Health Authorities

- STOP HIV Program Coordinators of all five health authorities (along with other representatives including Harm Reduction Coordinators and members of Surveillance Teams also participated)
- STBBI/Harm Reduction lead from First Nations Health Authority

Consultations – Community-Based Organizations

Key informant interviews with 18 CBOs from all 5 health authorities:

- 11 were AIDS Service Organizations (ASOs)
- 4 sex worker organizations
- 1 provincial HCV organization
- 1 provincial sexual health organization
- 1 drug users organization
- gay men's health organization.

Despite classification of some of these CBOs based on the priority population they serve, most organizations indeed have a diverse clientele whose members intersect multiple key populations and require comprehensive HIV/HCV and other health services

Key Themes:

- Urban and rural/remote difference in how open priority populations are and what services are available for these populations
- Overlap between the three priority populations in this project
- Recurring caution – need to establish clear definitions of the key populations and recognize that risk of infection is not homogenous across a population

Program Planning, Delivery and Evaluation

- Align targets with “From Hope to Health”
- Among CBOs target setting is varied –
 - set by funders
 - No specific targets – demand driven
 - Client/member driven
 - Budget and resource driven
- Evaluation – often based on service outputs with limited understanding of how programs impact these key populations
- Evaluation is also challenging because of the lack of information on the number of unique individuals in a key population
- It is also challenging to determine who in a particular population are accessing particular services consistently and regularly

PSEs Would be Useful

Most health authority and CBO informants agreed that size estimates for key populations from a trusted source **would be helpful** to their work

These themes emerged from the CBOs consultation:

| Theme | Frequency (n=) |
|--|-------------------|
| Yes, PSE would be helpful to my work | 12 |
| PSEs helpful to make service/programming/planning decisions | 9 |
| PSEs could help us reach more people, have a sense of how many people are not accessing services | 7 |
| PSEs would support proposal writing | 5 |
| PSE numbers need to be supported by programming/resources to respond | 3 |
| PSEs helpful, if accurate and from reliable source | 3 |
| PSEs not necessarily relevant -- it is more about who is accessing services | 2 |
| PSEs will support research | 1 |
| PSEs would support evaluation of programs | 1 |

Sex Workers Recommendations for Future Work



- Some felt that “counting” sex workers may perpetuate the stigma and discrimination
- While many others felt that PSEs would be helpful for reasons beyond HIV and HCV work i.e. for social and community services, services addressing legal and human rights issues, advocacy, and even to build community and reduce social isolation
- It was recommended that developing PSEs for this population should be explored but in partnership with community-based organizations and sex workers from across the province

Recommendations from the Project –

1. Work to more clearly define the key populations – risk for acquiring HIV/HCV is not homogenous
2. Size estimation methodologies based on the *BC Hepatitis Testers Cohort* and the *Canadian Community Health Survey* for the PWID and MSM populations are helpful resources
3. Starting using the PSEs for MSM and PWIDs for planning and evaluation in this report
4. Think about next steps for refining PSEs in BC – consider mapping and enumeration
5. Work with CBOs and sex workers to discuss future PSEs work for the sex worker population

Acknowledgements

PSE Advisory Committee

| Organization | Name | Position |
|---|-----------------|---|
| BC Centre for Disease Control | Jane Buxton | Epidemiologist, Harm Reduction Lead |
| | David Moore | Physician Lead, PHSA HIV Program |
| | Naveed Janjua | Senior Scientist Hepatitis Program, Clinical Prevention Services |
| | Meaghan Thumath | Senior Practice Lead STOP HIV |
| | Mark Tyndall | Executive Medical Director |
| | Jason Wong | Physician Epidemiologist, Clinical Prevention Services |
| BC Centre for Excellence in HIV/AIDS | Kanna Hayashi | Research Scientist, Urban Health Research Initiative |
| | M-J Milloy | Research Scientist, Urban Health Research Initiative |
| BC Ministry of Health | Kenneth Tupper | Director, Problematic Substance Use Prevention |
| | Gina McGowan | Director, Blood Borne Pathogens |
| Pacific AIDS Network | Janice Duddy | Manager of Evaluation |
| | Andrea Langlois | Director of Community Based Research |
| The Centre for Global Public Health, University of Manitoba | Marissa Becker | Associate Professor |
| | Jamie Blanchard | Director and Professor |
| | Faran Emmanuel | Research Associate |
| | Robert Lorway | Associate Professor |

Acknowledgements – Health Authorities

Key Contacts from Health Authorities

| Organization | Name | Position |
|------------------------------------|----------------------|--|
| First Nations Health Authority | Janine Stevenson | CDC Nurse Specialist, STBBIs/Harm Reduction, Health Protection |
| Fraser Health Authority | Shannon Krell | HIV Program Coordinator |
| Interior Health Authority | Jennifer Frost | Public Health Epidemiologist |
| | Maja Karlsson | Program Coordinator, STOP HIV/AIDS |
| | Jennifer May-Hadford | Epidemiologist |
| Northern Health Authority | Fiann Crane | Regional Director, Preventive Public Health |
| | Kari Harder | Public Health Epidemiologist |
| | Ciro Panessa | Regional Director, Chronic Diseases |
| Vancouver Coastal Health Authority | Miranda Compton | Manager, HIV/AIDS Services |
| | Ellen Demlow | Regional Epidemiologist |
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| | Kassie Junek | Communicable Disease Nurse |
| | Sarah Levine | HIV Nurse Educator for First Nations Communities |
| | Afshan Nathoo | Regional Clinical Practice Leader |
| | Sara Young | Harm Reduction Program Coordinator |
| Vancouver Island Health Authority | Sophie Bannar-Martin | Program Coordinator, STOP HIV/AIDS |
| | Elizabeth Colangelo | Analyst, STOP HIV/AIDS |
| | Melanie Rusch | Regional Epidemiologist |

Acknowledgements – Key informant CBOs

Participating Community-Based Organizations *(that consented to be listed)*

Afro-Canadian Positive Network of BC
AIDS Vancouver Island
ANKORS
Health Initiative for Men
McLaren Housing Society of BC
Northern HIV and Health Education Society
Options for Sexual Health
PACE Society
Pacific Hepatitis C Network
PEERS
Positive Living Fraser Valley
Prince George New Hope Society
Surrey Area Network of Substance Users (SANSU)
Velvet Steele, Community Activist
YouthCo

Questions?

Thank you