Title: Health status and risk factors for chronic disease in the homeless population, Metro Vancouver 2013-2014

Authors: Maritia Gully (Vancouver Coastal Health Authority), Eleni Kefalas (Vancouver Coastal Health Authority), Rahul Chhokar (Fraser Health Authority), James Lu (Vancouver Coastal Health Authority), Victoria Lee (Fraser Health Authority), Jat Sandhu (Vancouver Coastal Health Authority)

Background:
The My Health My Community (MHMC) survey was developed to fill a gap in information on health status and local-level population needs, and to better understand how lifestyle, environment and neighbourhood characteristics affect community health and well-being.

Objectives:
To examine differences in health status and chronic disease risk factors between the homeless population in Metro Vancouver (MV) and MV residents overall.

Methods:
The MHMC survey, administered online and through community outreach, surveyed 28,320 MV residents aged 18+ years. Of these, 147 identified as homeless. The response frequencies for the homeless subset were compared to frequencies for MV overall. Differences were considered to be statistically significant if 95% confidence intervals were non-overlapping.

Results:
Compared to MV overall, homeless respondents were 2.5 times more likely to report poor/fair general health, twice as likely to report fair/poor mental health, 4 times more likely to report declining health and twice as likely to report that a physical/mental health condition stopped them from making health improvements over the past year. Homeless respondents were 3 times more likely to report mood/anxiety disorder. Smoking was almost 6-fold higher in homeless respondents and reported binge drinking 1+ times per month was twice as high as MV overall. There were no differences in those reporting 150+ weekly minutes of physical activity or eating 5+ servings of fruits/vegetables per day, although homeless respondents were more than twice as likely to report regular sugary beverage consumption versus MV overall.

Conclusions:
While response frequencies of most chronic diseases did not vary significantly between the homeless subset and MV overall, the differences in self-perceived health and underlying risk factors for chronic disease were quite striking.

What are the implications of your research on practice or policy?
These findings shed light on some upstream opportunities to improve the health of our MV homeless population, namely a focus on smoking, alcohol consumption and access to healthy foods.
Health status and risk factors for chronic disease in the homeless population, Metro Vancouver 2013-14

Canadian Public Health Association Conference 2015

Maritia Gully MSc, Regional Epidemiologist, Public Health Surveillance Unit, Vancouver Coastal Health Authority

Co-authors: Kefalas E, Chhokar R, Lu J, Lee V, Daly P, Sandhu J
Homelessness and health

- Metro Vancouver homeless count 2014: 2,689 adults
- Homeless at increased risk of...
  - Premature morbidity and mortality
  - Variety of chronic conditions
  - Infectious diseases
- Mental illness and substance use
- Barriers to health services


Hwang SW. Homelessness and Health. CMAJ. 164 (2), 229-233.
WHAT MAKES CANADIANS SICK?

50% YOUR LIFE
- Income
- Early childhood development
- Disability
- Education
- Social exclusion
- Social safety net
- Gender
- Employment/working conditions
- Race
- Aboriginal status
- Safe and nutritious food
- Housing/homelessness
- Community belonging

25% YOUR HEALTH CARE
- Access to health care
- Health care system wait times

15% YOUR BIOLOGY
- Biology
- Genetics

10% YOUR ENVIRONMENT
- Air quality
- Civic infrastructure

These are Canada’s social determinants of health #SDOH

Source: Canadian Medical Association - healthcaretransformation.ca
Analysis objective

To examine differences in health status and chronic disease risk factors between the homeless population in Metro Vancouver (MV) and MV residents overall.
Methods

• Analyzed data from Metro Vancouver residents that responded to the My Health My Community survey
• Homeless defined as responses indicating:
  – Homeless
  – No permanent dwelling
  – Live in shelter
• Statistically significant differences between MV homeless and MV overall determined by non-overlapping 95% CIs
my Health
my Community

It’s time to see the big picture.

Help shape your community.

Get involved today!

Vancouver Coastal Health
Promoting wellness. Ensuring care.
fraserhealth
1. Socio-demographics
2. Health status
3. Health care access
4. Lifestyle
5. Built environment
6. Community resiliency
Data collection

- Online survey
- 18 years +
- Media and social media promotions

- Community partnerships
- Outreach
- Incentives
Ensuring a representative sample

- 2% population target overall
- Purposeful sampling
- Monitoring of progress
- Outreach
- Post-collection weighting
  - Age, gender, education and geography (municipality)
## Demographics

<table>
<thead>
<tr>
<th></th>
<th>Homeless n=159</th>
<th>Metro Vancouver n=28,128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>78.4%</td>
<td>47.7%</td>
</tr>
<tr>
<td>Aged 45-54 years</td>
<td>27.0%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Canadian born</td>
<td>84.6%</td>
<td>63.6%</td>
</tr>
<tr>
<td>Self-identified as Aboriginal</td>
<td>25.5%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Household income &gt;$40K</td>
<td>90.8%</td>
<td>31.7%</td>
</tr>
</tbody>
</table>
## Demographics cont’d

<table>
<thead>
<tr>
<th></th>
<th>Homeless n=159</th>
<th>Metro Vancouver n=28,128</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>41.6%</td>
<td>10.7%</td>
</tr>
<tr>
<td>University</td>
<td>4.7%</td>
<td>29.3%</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>39.4%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Unable to work due to sickness/disability</td>
<td>24.8%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>
Self-reported general health, Metro Vancouver homeless and MV overall, My Health My Community Survey, 2013-2014

Declining health

• MV homeless almost 3x more likely to report declining health in the past year (41.5% vs. 16.0%)
  – 2.5x more likely to report physical or mental health condition stopped them from making health improvements (34.5% vs. 13.6%)
Chronic disease
(self-report of physician diagnosis)

• Diabetes, high blood pressure, heart disease
  – No significant difference

• Chronic breathing condition
  – Higher (not statistically significant)

• Mood or anxiety disorder
  – Almost 2.5x higher (38.9% vs. 16.3%)
Risk Factors – Chronic Disease

- Smoking (daily or occasionally) **7 x higher (71.9% vs. 10.6%)**
- Alcohol consumption
  - Frequency of consumption no different
  - **Homeless report more “binge drinking”**
- Healthy eating
  - No significant difference in daily fruits & veg (average 3.4 servings)
  - **3+ sugary beverages per week 3x higher (42.6% vs. 14.1%)**
  - **3+ baked goods per week 2x higher (55.2% vs. 26.5%)**
- Physical activity 150+ minutes per week
  - 150+ minutes per week - no difference
  - **Walking for recreation or commute – 2x higher**
Regular Family Doctor

• Homeless: 48.5%
• MV: 83.1%
Conclusions

• Chronic disease freq. did not vary significantly
• Differences in self-perceived health & underlying risk factors for chronic disease striking
• Upstream opportunities for health improvements within our homeless population
  – Smoking, alcohol, access to healthy foods
• Useful and relevant data for health authorities, municipal gov’t, community organizations
Project Team (since 2013)

Andi Cuddington*, VCH
Belinda Boyd, VCH
Chae-Lyn Dopke, VCH/UBC
Chris Richardson, UBC
Christina Fung, FHA
Claire Gram, VCH
Eleni Kefalas, VCH
Elizabeth Stacy, UBC
Emily Laflamme*, VCH
Evelyn Derus*, UBC
Geoff Ramler, FHA
Helen Novak Lauscher (CI), UBC

Helena Swinkels, FHA
James Lu*, VCH
Jami Brown, FHA
Jat Sandhu (PI), VCH
Justyna Berzowska*, UBC
Katherine Tweedie, FHA
Kendall Ho (CI), UBC
Lisa Mu, FHA
Lisa Thibault, FHA
Maritia Gully*, VCH
Michael Lim*, UBC
Peter Chow, UBC

Paul Gustafson, UBC
Paul Martiquet, VCH
Peter Vlahos, VCH
Rahul Chhokar, FHA
Salman Klar, FHA
Sha Xiao, UBC
Stephanie Bale, FHA
Sophie Pasche, UBC
Tanya Lo, VCH
Tiffany Akins*, VCH
Victoria Lee (CI), FHA
Yumian Hu, VCH

PI – Principal Investigator  CI - Co-Investigator  * - Working Group Lead
Additional acknowledgements

• VCH and FH Medical Health Officers and other staff involved in the project
• Municipal partners
• Community organizations
• All of our survey respondents!