Understanding the Health Impacts of Weather on People Experiencing Homelessness: Using Research to Inform Healthy Public Policy

March 1, 2018
11 am-12 pm CT
Disclaimer

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Presenter

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Webinar Objectives

• To understand how weather affects the health of people experiencing homelessness;

• To gain knowledge about a qualitative study that examined the health impacts of weather;

• To explore how research can inform healthy public policy and service planning considerations.
Climate change and health

- Air quality
- Extreme weather events
- Impact of water and food contamination
- Vector-borne diseases
- Temperature extremes

“Climate change…the defining issue for public health during this century”
Dr. Margaret Chan, Director General, WHO, 2007
Most vulnerable at greatest risk

- Children, elderly, low socioeconomic status, pre-existing illness
- People experiencing homelessness – greater environmental exposure
- Extreme events & ongoing, persistent climate-related threats
- Cumulative stresses
Temperature and health: heat

- Europe, 2003: > 70,000 excess deaths
- Historical analysis of Canadian cities:
  - Toronto: 120 annual heat-related deaths
  - Projected that in the future these values will more than double by 2050 and triple by 2080

Natural Resources Canada
http://adaptation.nrcan.gc.ca/perspective/health
Health impacts of weather

• Both cold and hot weather can result in adverse health impacts

• Cold weather-related injuries:
  • Hypothermia; Frost nip → frost bite; Trench foot

• Hot weather health impacts:
  • Heat-related illnesses
  • Worsening of conditions (cardiovascular and respiratory)
Toronto Street Needs Assessment, 2013

- Point-in-time count of people experiencing homelessness in Toronto, 2013
- Most surveys completed between 7pm and 1am
- Total people experiencing homelessness: 5,253
  - Shelters: 82%
  - Health/justice: 9%
  - Outdoors: 9%
Extreme weather plans: need for evidence

• In 2013/2014, Toronto experienced its coldest winter in over 20 years

• Board of Health/Council recommended the Medical Officer of Health:
  • Assume responsibility for issuing Extreme Cold Weather Alerts
  • Develop a Cold Weather Response Plan
  • Review the health evidence for cold weather impacts, and the current alert processes
Extreme Cold Weather Alerts

• Issued during the winter season, November 15-April 15

• During that time, alerts were issued when temperature forecast -15°C or colder

• Services focus on people experiencing homelessness
Number of Extreme Cold Weather Alerts in Toronto

<table>
<thead>
<tr>
<th>Winter Season</th>
<th>Number of Alerts</th>
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<tbody>
<tr>
<td>2004-05</td>
<td>23</td>
</tr>
<tr>
<td>2005-06</td>
<td>9</td>
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<td>2006-07</td>
<td>18</td>
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<tr>
<td>2007-08</td>
<td>13</td>
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<td>2008-09</td>
<td>27</td>
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<td>2009-10</td>
<td>7</td>
</tr>
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<td>2010-11</td>
<td>10</td>
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<tr>
<td>2011-12</td>
<td>7</td>
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<tr>
<td>2012-13</td>
<td>9</td>
</tr>
<tr>
<td>2013-14</td>
<td>36</td>
</tr>
<tr>
<td>2014-15</td>
<td>39</td>
</tr>
<tr>
<td>2015-16</td>
<td>12</td>
</tr>
<tr>
<td>2016-17</td>
<td>22</td>
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Available Health Evidence?

• Limited
• General population versus vulnerable groups
• Health outcomes: mortality versus morbidity
• Varying climates – need for local data
Research Collaborations with C-UHS and SSHA

• Literature review on the health impacts and temperature thresholds
• Descriptive analysis of emergency department visits for cold-related injuries
• Qualitative research with clients of drop-in services
• Scan of cold weather response in other jurisdictions
## Qualitative study team members and partners

<table>
<thead>
<tr>
<th>Centre for Urban Health Solutions, St. Michael’s Hospital</th>
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<tbody>
<tr>
<td>Dr. Stephen Hwang</td>
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<td>Evie Gogosis</td>
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<td>Nishi Kumar</td>
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<td>Indira Fernando</td>
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<td>Kate Francombe-Pridham</td>
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<th>Toronto Public Health</th>
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<td>Paul Coleman</td>
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<td>Stephanie Gower</td>
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<th>Shelter, Support and Housing Administration</th>
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<tr>
<td>Anabella Wainberg</td>
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<tr>
<td>Mark Kim</td>
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<td>Hillary Keirstead</td>
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<th>Drop-In Services</th>
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<tr>
<td>Brian Harris, St. Felix Centre</td>
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<tr>
<td>Talena Jackson-Martineau, Margaret’s Toronto East</td>
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<tr>
<td>Candace Klimuk, YMCA Vanauley</td>
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<td>Cheryl Laliberte, Fred Victor Centre</td>
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Qualitative Study: Methods

• Semi-structured interviews conducted in 4 City-funded drop-in services between March and May 2016:
  • 40 people that currently were or had experienced homelessness
  • 8 service providers
  • Interviews lasted between 30-60 minutes

• Service users were asked about their personal experiences with extreme weather:
  • Experience of health impacts
  • Knowledge of weather alerts
  • Response and services accessed during extreme weather

• Service users received a $20 voucher and two transit tokens
Participation by Drop-In Location (service users)
Participants reflected a diversity of age groups. Overall, half of survey participants identified as male.

<table>
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<tr>
<th>Age</th>
<th>Percentage</th>
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<tr>
<td>16-24</td>
<td>13%</td>
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<tr>
<td>25-34</td>
<td>20%</td>
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<tr>
<td>35-44</td>
<td>23%</td>
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<tr>
<td>45-54</td>
<td>23%</td>
</tr>
<tr>
<td>55+</td>
<td>20%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>3%</td>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Female</td>
<td>33%</td>
</tr>
<tr>
<td>Male</td>
<td>53%</td>
</tr>
<tr>
<td>Transgender</td>
<td>5%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>10%</td>
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The housing circumstances of the majority of participants were unstable over the last two years.

88% of participants stayed at a combination of places over the last 2 years.

Most participants moved often between various locations including shelters, drop-ins, outdoors, their own home, and homes of friends or family.
The majority of participants reported personal experiences when weather had adversely impacted their health.

- Viral or bacterial (flu, pneumonia) 38%
- Musculoskeletal conditions... 30%
- Cold weather-related injury 28%
- Respiratory conditions (asthma) 28%
- Heat illness 15%
- Mental health issues 15%
- Skin conditions 10%
- Sleep deprivation 5%

88% of participants identified that weather had a negative impact on their health.
Thematic map

Adverse impact on health
- Worsening of pre-existing conditions
  - Dehydration
  - Arthritis
- Sleep deprivation
- Stress, panic, PTSD
- Depression
- Anger and frustration

Importance of support and access to care
- Hygiene
  - Nutrition & hydration
- Libraries
  - Support from service providers
- Need for stable housing
- Use of drop ins/shelters
- Access to dry, clean clothing

Stressors
- Challenges to travel
- Sudden temperature changes
- Frequent moves
- Competing needs
- Cold, wet weather
- Fears...freezing to death
- Violence and safety concerns
- Barriers to accessing services
- Overcrowding: “not enough beds”

Approaches to coping
- Pharmacies, CHCs
- Preparation and planning
- Seeking refuge
- Resourceful
- Resilience
- Survival mode
- Lived experience
- Making changes to routine
- Substance use
- Sense of urgency; “act fast”
- Line ups
- Boredom
- Desire to maintain independence & privacy
Respondents experienced different impacts on their health in summer vs winter.

- **Summer**
  - Dehydration
  - Fatigue, listlessness, immobility
  - Breathing problems
  - Sunburn
  - Heat stroke, fainting
  - Crime, violence, safety concerns
  - Irritability
  - Seizures

- **Winter**
  - Frostbite, hypothermia, trench foot
  - “Freezing to death”
  - Depression
  - Stress
  - Isolation
  - Cold, flu
  - Pneumonia
About 60% of participants noted they alter their daily routine during extreme weather.

- Quickly plan for shelter - get to drop-ins, libraries, malls, 24-hr fast food establishments, ride the TTC.
  - “I always go somewhere I feel comfortable like a drop-in or library”; library as a “haven”.
- Seek dry clothes, boots, keep feet clean and dry;
- Reschedule appointments;
- During the summer: stay by the water, access water to drink and cool off with, take showers, keep a fan.
Summary of Study Findings

• Extreme weather exacerbates existing struggles with health, activities of daily living, social isolation, and stigma in people experiencing homelessness.

• There are many direct and indirect health impacts.

• Extreme weather results in a shift in priorities and competing needs.

• There are many services that meets needs, and actions that are working.

• There are many areas of opportunity for enhancements in assisting with the impacts of extreme weather.
What approach did the evidence support?

• Cold weather response in Toronto should have multiple components:
  • 24-hour continuous drop-in services during the period of greatest health risk for those most vulnerable
  • Alert-based response on extremely cold days as they occur
  • Messaging and actions to address health risks that persist throughout the winter
Evidence to inform healthy public policy

- Findings were used to support the implementation of 24-hour drop-in services during the winter season for people experiencing homelessness.

- For the 2017-2018 season:
  - 24-hour drop-in services are available for the duration of the winter season, November 15 to April 15.

- In 2018 City Council directed Shelter, Support and Housing Administration to “retain operations of the necessary respite centres, warming centres, and drop-in programs beyond the scheduled April 15, 2018 timeline to respond to the overcrowding in the shelter system.”
Extreme cold weather alerts are also still issued

- Extreme Cold Weather Alerts are issued by the Medical Officer of Health (MOH) when:
  - Environment Canada forecasts a temperature of -15°C or colder or a windchill of -20 or colder
  - The MOH can apply discretion in calling alerts (e.g. precipitation, sudden cold weather)

- Shelter, Support, and Housing Administration is responsible for coordinating response activities
  - 24 hour drop-in centres, token distribution, shelters, enhanced street outreach
Cold weather services - SSHA

- Drop-in services
  - Low-barrier, warm food and drinks, referrals to shelters and other support services
- Overnight street outreach
- Transit tokens made available at drop-ins
- Additional shelter spaces are opened
Acknowledgements

With thanks to the project participants who shared their views and experiences about extreme weather.

Support for the qualitative study was provided by a seed grant from the Healthier Cities and Communities Hub Seed Grant Initiative, a consortium of three funding partners: Toronto Public Health, the Wellesley Institute, and the Dalla Lana School of Public Health.

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Questions?

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