Lessons Learned from Health Canada on Building Resiliency to Extreme Heat

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Purpose

To provide a summary of Health Canada’s Heat Resiliency Initiative and share some key lessons learned.

1. Why is heat a health risk in Canada?

2. How is Health Canada building heat resiliency among individuals and communities in Canada?

3. Examples of identified needs and gaps to enhance resiliency
Heat is a Health Risk in Canada

• In 2007, Natural Resources Canada published a comprehensive assessment of climate change impacts and adaptation options in Canada.

• In 2008, Health Canada published an assessment report of human health impacts from a changing climate. The report identified a range of health vulnerabilities and impacts from a changing climate and actions to increase resiliency.

• The two reports identified extreme heat as a significant weather related hazard with important risks to human health. These two reports were drivers for Health Canada’s Heat Resiliency Initiative.

• An update to the Natural Resources Canada assessment report, including a health chapter, is expected to be completed in early 2014.
Number of Extreme Heat Days Projected to Increase

Federal Government’s Role in Adaptation

1. Generating and sharing knowledge.

2. Building capacity and helping Canadians take action.

3. Considering climate change into the mainstream of decision-making
Health Canada’s Heat Resiliency Initiative

In 2008, HC received $7.9M over three years to enhance resiliency to extreme heat in individuals and communities.

In 2011, HC’s Heat Resiliency Initiative was renewed for $8.5M over five years.

1. **Heat-Health Science**: address critical knowledge gaps.

2. **Clinical training**: enable health professionals to better advise, diagnose and treat their clients.


4. **Heat-health messaging**: help to promote awareness and support personal adaptation.

5. **Partnerships and networks**: support information sharing on adaptation.
Data Needs and Gaps: Example 1

Harmonisation of Heat Alert and Response Protocols in Ontario

Purpose:
• To establish a consistent and evidence-based approach to calling heat alerts and communicating heat-health impacts across the Province

Needs:
• Understanding the burden of illness of heat in Ontario (urban vs. rural)
• Developing user-friendly tools to visualise/analyse multiple sources of information
• Increasing data sharing between organisations

Challenges:
• Capacity of rural/smaller public health units
• Data accessibility (health outcomes, climate indices, heat health vulnerability indices, etc.)
• Regional, municipal and public health administrative structure in Ontario
Data Needs and Gaps: Example 2

Heat Health Vulnerability Assessment

Purpose:
• To assess heat-health vulnerabilities within a community or region and promote action to reduce individual and community risks

Needs:
• Identifying appropriate community-based health indicators
• Identifying current vulnerabilities and assessing future health risks

Challenges:
• Local health data availability
• Capacity of communities to address identified vulnerabilities
• Methods to analyse and synthesize data
• Engaging stakeholders
The Urban Heat Island Effect in Canada

Purpose:
- To localise urban heat islands (hot spots) within a community and suggest options for adaptation and mitigation of the UHI effect

Needs:
- Identifying hot spots using satellite imagery and other sources of information (e.g. from air temperature models)
- Mapping the level of socio-economic deprivation in UHI areas
- Mapping green spaces and tree canopy (vegetation cover)

Challenges:
- Surface temperature from satellite imagery does not reflect urban air temperatures
- Availability of data related to indoor thermal conditions and building characteristics
- Quantifying health risks in highly deprived urbanised areas
- Costs of mitigation/adaptation measures for Canadian communities
Considerations for Future Research Activities

• Expand understanding of health impacts of heat and UHI impact in urban environments in Canada

• Development of user-friendly tools and guidelines for decision makers to support interventions during extreme heat events

• Integrated monitoring and surveillance systems that capture multiple sources of information (climate, socio-economic deprivation, health risks, etc.)

• Promotion of information sharing and knowledge translation
HC’s Heat-Health Publications

Thank you!

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