Communities Adapting to Climate Change: Emerging Public Health Strategies

Hannah Moffatt\(^1\), Dr. Tim Takaro, & Dr. Kate Bassil
Faculty of Health Sciences, Simon Fraser University

Introduction

Mitigating greenhouse gases (GHG) emissions is essential to reduce the long term impacts of climate change. However, regardless of the success of mitigation efforts, the impact of climate change will continue into the future (Lemmen et al., 2008). The harmful human health effects of climate change require the process of adaptation at the national, regional and community level (Ebi & Semenza, 2008).

In Canada, municipal organizations have become the fundamental units for climate change mitigation and adaptation strategies. Many Canadian municipalities are currently not preparing for climate change; however, leaders in mitigation and adaptation strategies have emerged. Due to the interdisciplinary nature of climate change policy, local governments include a range of stakeholders. The inclusion of the health field is a potential strategy to protect the health of community members while adapting to climate change.

Background

The aim of this study is to address the question, "How do health promotion and public health practice influence the municipal climate change adaptation?"

Methods

This project utilizes a case-based approach to review local government leaders in climate change adaptation. Materials from eight Canadian and two American local governments were reviewed and open-ended structured telephone interviews were conducted with staff members. Two health authorities were then selected to provide a health field perspective on climate change adaptation. Interviews were conducted between October 2008 and February 2009. Interview data was analyzed using an iterative process that included multiple reviews of the data for content and themes, as described by Newman (2006). This research was approved by the Simon Fraser University Research Ethics Board.

Local Governments Interviewed

This table summarizes the local governments reviewed and their current strategies and stages of the adaptation decision making process.

<table>
<thead>
<tr>
<th>Local Governments</th>
<th>Current Stage in Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>King County, WA</td>
<td>Comprehensive plan developed &amp; implementation</td>
</tr>
<tr>
<td>City of Kenne, NH</td>
<td>Comprehensive plan developed &amp; efforts to implement</td>
</tr>
<tr>
<td>City of Toronto, ON</td>
<td>Comprehensive plan developed &amp; implementation</td>
</tr>
<tr>
<td>Corporation of Delta, BC</td>
<td>Sea level rise &amp; flood management planning &amp; implementation; sustainable development planning</td>
</tr>
<tr>
<td>Halifax Regional Municipality, NS</td>
<td>Emergency response planning &amp; implementation</td>
</tr>
<tr>
<td>City of Vancouver, BC</td>
<td>Internal planning &amp; implementation</td>
</tr>
<tr>
<td>City of Dawson, YK</td>
<td>Partnership to develop future comprehensive adaptation plan</td>
</tr>
<tr>
<td>City of Edmonton, AB</td>
<td>Ongoing thought about internal planning process</td>
</tr>
<tr>
<td>City of Yellowknife, NWT</td>
<td>Partnership to develop adaptation strategy</td>
</tr>
<tr>
<td>City of St. John’s, NL</td>
<td>Pilot project participant</td>
</tr>
</tbody>
</table>

Findings

Local Governments

• There is no common best practice framework employed by local governments preparing for the impacts of climate change.
• Local governments have partnered with other levels of government, non-governmental organizations, academics and industry partners during the adaptation process.
• Many municipal staff members implied that citizen health was not a municipal issue but a provincial jurisdiction. Other municipal staff members recognized their policies and strategies had an impact on citizen health.
• The association between climate change and health was described as topical to community health.
• Governments with comprehensive plans described partnering with their local health authority while planning adaptation strategies; other local governments described not working with their health authority.

Health Authorities

• Toronto Public Health (TPH) was involved in the core steering group working on the City of Toronto adaptation plan. TPH is within the City of Toronto’s governance structure.
• The linked current and future health concerns associated with climate change to ongoing programs and services. The programs and policies reduce climate vulnerability regardless of their association with climate change planning.
• The Vancouver Coastal Health (VCH) participant described how the health authority and the provincial government were currently focusing on GHG mitigation strategies.
• The VCH participant was optimistic about the potential for climate change adaptation strategies with the City of Vancouver.
• The VCH participant described the potential to use the new BC Public Health Act to collaborate with other levels of government for a healthier community.

Discussion

How do health promotion and public health practice influence municipal climate change adaptation?

• Public health is involved in climate change adaptation through the provision of research and expertise to identify community adaptation priorities.
• There is potential for health promotion involvement in community organizations, partnership and messaging strategies.

There are a number of barriers to climate change adaptation:

• The need to be proactive and to take preventative action while also being practical and cost effective.
• The requirement for specific climate and population data and expertise at the local level.

A lack of communication and a disconnect between health authorities and municipal staff members was obvious in many of the case studies. Many municipal staff members also failed to recognize the co-benefits of adaptation. Recognizing the health and wellbeing benefits of adaptation and mitigation has the potential to advance local climate change policies.

Implications

The Community-Based Climate Change Adaptation Framework (Figure 1) focuses on locally implemented strategies that empower community members and strengthen social capital.

Potential additions to this framework include defining leadership roles of municipalities in Canada and taking action to create strong partnerships with health authorities.

Limitations

This case approach comprised a small purposeful sample of interviews. The review focused on adaptation leaders and does not reflect wider perspectives from governments, particularly those not preparing for climate change. Participants may have felt it was socially desirable to respond with information that reflected their adaptation strategy as positive.

Conclusions & Recommendations

How can local governments be preventative and take proactive action?

Further research is required to understand how communication messages can be stated to advance climate policy. Ebi & Semenza (2008) suggest using ‘storylines’ to describe the possible local health risk of climate change in compelling narratives.

As health is topical to community members, describing community-based adaptation as improving community health and wellbeing is one potential strategy to increase involvement of decision makers and the public.

Summary of Recommendations

Short Term Actions

Utilize a community-based adaptation framework when developing local governments’ climate policies.

Appoint a person or organization to be the leader of community adaptation strategies.

Ensure partners share a goal, vision and objectives and are clear on their role and contribution to the adaptation process.

Increase dialogue between municipalities and local health authorities to define the impacts local climate change will have on individual and on community health.

Long Term Actions

Prioritize climate change adaptation at the federal government level in Canada.

Facilitate learning between local governments currently adapting to climate change.

References

