HALIBURTON, KAWARTHA, PINE RIDGE DISTRICT HEALTH UNIT

Briefing Note

TITLE:	Climate Change and Public Health
TO:	City of Kawartha Lakes Council
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Overview

- The Ontario Public Health Standards Healthy Environments Program and the Healthy Environments and Climate Change Guideline directs boards of health to "…assess health impacts related to climate change" and "…monitor the impacts of climate change within their jurisdiction to inform local vulnerability plans…"
- A Climate Change Health Vulnerability Assessment has been completed for HKPR District Health Unit. It illustrates that climate change is already impacting the health of our residents, especially those most vulnerable.
- Protecting the health of people who are at greater risk from present and future climate hazards requires collaborative adaptation planning and action from HKPR District Health Unit and multiple sectors in the community. Development of an Adaptation Action Plan is underway.
- Public health has the skills and expertise to take a leadership role to address climate-health impacts.

Issue

Climate change has been identified as "the biggest global health threat of the 21st century" by the *Lancet* Climate Change Commission. (1) There is consensus that it is affecting our lives and health today. Climate change hazards that impact health include extreme temperatures, extreme weather events, vector-borne diseases, food- and water-borne illnesses, poor air quality and exposure to solar ultraviolet radiation.

Not everyone is affected equally. Climate change disproportionately affects the health of groups who experience vulnerabilities due individual, social and environmental conditions. The social determinants of health impact vulnerability; these include factors such as age, gender identify, sexual orientation, race, experience of colonization, disability, income, education, built environments and living and working conditions.

There is limited awareness of the link between climate change and health. Public health can centre health and equity in climate adaptation action. We can "connect the dots" between determinants of health, climate change and health impacts, and increase understanding of actions that build climate resilience. (2) We can convene, facilitate, and support multi-sectoral collaborations and help translate evidence into informed decision making and action to address the health impacts of climate change.

Background

The Executive Summary for the Climate Change Health Vulnerability Assessment for HKPR District Health Unit summarizes local climate change projections in relation to the climate hazards listed above, as well as current and future potential health impacts and who is most vulnerable. Some highlight points:

- Climate change can affect health in two main ways. It can change the severity or frequency of health problems that are already affected by climate or environmental factors and/or it can create new health problems or threats in places where they have not previously occurred. (3)
- Negative health outcomes associated with exposure to climate hazards include heat/cold related illness, cardiopulmonary and respiratory illness, food/water/vector-borne diseases, and mental health consequences. Vulnerable groups experience disproportionate and greater risks.
- All municipalities in HKPR district will experience about three times as many hot days (>30°C) by 2050 compared to 2019. This will increase the rate of heat-related emergency department visits, especially among vulnerable groups.
- More hot days also mean increased threats to water quality, food safety, air quality and risk of exposure to solar ultraviolet radiation.
- A longer warm season and warmer average temperatures will enable continued expansion of the geographic range of blacklegged ticks, leading to increased exposure to ticks and increased incidence of Lyme disease.
- By 2050, rainfall on extremely wet days may increase 50-60% over historical norms. This will increase risk of flooding, with potential negative impacts to physical and mental health.
- Many public health programs and services contribute to increasing adaptation to health impacts of climate change. Public health also needs to collaborate with community partners, including municipalities, on climate-health adaptation action.
- Adaptation actions need to:
    - Consider both physical and mental health impacts
    - Be developed in collaboration and partnership between public health, municipalities, community agencies and people who are impacted (e.g., people experiencing homelessness)
    - Address root causes of vulnerability such as income, food insecurity and transportation
    - Convey messages in accessible and meaningful ways (i.e., plain language, targeted outreach)
    - Engage Indigenous communities

Analysis

Many municipal responsibilities and initiatives contribute to climate change health adaptation. The chart below provides some examples, which also present opportunities to strengthen municipal – public health collaboration to achieve mutual objectives.

Municipal Responsibility	Examples of Municipal Initiative(s)	Climate Change hazard(s) addressed	Impacts on Health
Climate Change Planning	Develop, implement, and monitor climate change plan	All	Upstream impact reduces GHG emissions Addressing vulnerabilities
Land Use Planning and Community Design	Policies that require development to: Provide adequate shade Provide adequate and accessible parks and greenspace Reduce hard surfaces to reduce runoff Include active transportation options Tree planting programs Shoreline protection bylaws Flood plain mapping	Extreme heat Extreme weather Air quality Exposure to solar UVR Water Quality	Reduces risks of: heat-related illness worsened respiratory illness/disease waterborne illness developing skin cancer Provides mental health benefits
Emergency Planning and Response	Develop emergency response plans, hold mock exercises Designating cooling and warming centres Providing emergency evacuation centres Community Paramedicine wellness checks	Extreme heat and cold Extreme weather events, including power outages, floods, tornadoes	Reduces: Exposure to extreme heat/cold Exposure to unsafe food and water Isolation
Public Works	Maintenance standards such as snow clearing Parks maintenance e.g., brushing, ensuring no standing water	Extreme weather Vector borne diseases	Reduces risks of: injuries due to falls exposure to insects carrying diseases (Lyme, WNV)
Housing and Homelessness	Affordable housing built with climate resilience in mind, including air conditioning or heat pumps	Extreme temperatures and weather	Addresses root cause of vulnerability – poor housing
Transportation Planning	Reducing speed limits Active transportation planning EV charging stations Public transportation	Air quality	Reduces greenhouse gas emissions Reduces risk of road injury Builds more equitable transportation system Reduces risk of chronic diseases by encouraging physical activity

Conclusions

The City of Kawartha Lakes has demonstrated its commitment to addressing climate change through the development of its Healthy Environment Plan. HKPR District Health Unit staff look forward to working collaboratively to address climate change impacts on health. We hope that this briefing note provides council members with information that will support them acting as champions for climate change and health at their municipalities.

Additional Resources

Association of Local Public Health Agencies – Climate Change and Health Resources

Health of Canadians in a Changing Climate: Advancing our Knowledge for Action (2022)

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