Durham Climate and Health Scenario Planning Workshop

Date: Wednesday, June 22, 2022
Time: 9:30am - 12:00pm (Eastern time)
Location: Microsoft Teams

AGENDA

Item	Length	Lead
Welcome and Introductions	10 minutes	TRCA
Part 1 – Climate Change and Human Health • Presentation by Sendi Struna, Manager, Health Protection, Durham Region Health Department about the challenges and opportunities posed by climate change on human health and the region's health vulnerability assessment	15 minutes	Durham Region Health Department
Part 2 – Introduction to Scenario Planning • Presentation by TRCA on what is scenario planning, the scenarios that will be used, and how the interactive activity will unfold	15 minutes	TRCA
Q&A	10 minutes	TRCA
Scenario Planning Activity • 3-part scenario, approximately 25 minutes each	75 minutes	TRCA
Collective Discussion • Based on today's discussions, what are the key management concerns and health vulnerabilities within the region in the face of extreme temperatures and compounding events? • What actions and investments are needed in addition to current policies and programs to help the region prepare for and reduce the health impacts of climate change?	20 minutes	TRCA
Wrap-up and Closing Remarks	5 minutes	TRCA and Durham Region Health Department

SCENARIO DESCRIPTIONS

Part One (25 minutes)

It is 2060. Durham Region and much of southern Ontario is experiencing an extended heatwave that is expected to last another 2-3 days. The Region's extended heat warning has been in effect for the past 5 days as Environment and Climate Change Canada reports maximum temperatures of 36°C with humidex values of up to 45°C. There is little relief at night, with elevated overnight temperatures above 20°C each night, increasing the risk of heat-related illnesses. In urban areas, the urban heat island effect makes day and nighttime temperatures feel even hotter.

The Region has issued the following tips for keeping cool:

- Drink plenty of cool liquids, especially water, before feeling thirsty.
- Ask your doctor or pharmacist to learn how your medications could increase your risk to heat.
- Wear loose-fitting, light-coloured clothing made of breathable fabric.
- Take cool showers or baths until you feel refreshed.
- Take a break from the heat by spending a few hours in a cool place.
- Block out the sun by opening awnings, and closing curtains or blinds during the day.
- Avoid sun exposure. Shade yourself by wearing a wide-brimmed, breathable hat or using an umbrella. Use a broad-spectrum sunscreen with SPF 30 or higher on exposed skin and an SPF 30 lip balm, and reapply often.
- Reschedule or plan outdoor activities during cooler parts of the day.
- Never leave people or pets in your care inside a parked vehicle or in direct sunlight.
- Regularly check on older adults, children and others for signs of heat-related illness, and make sure they are keeping cool and drinking plenty of fluids.
- Check on those who are unable to leave their homes and people with emotional or mental-health challenges whose judgment may be impaired.

Municipalities have opened cooling centres and extended operating hours for splash pads until sundown. However, due to a novel strain of airborne coronavirus, physical distancing is in place, cutting capacity of cooling centres by 50%. Moreover, many people are afraid to go to indoor cooling centres for fear of infection. Library staff have been calling senior library users with many noting a lack of mobility and an increased sense of isolation.

Discussion 1

- What challenges does this scenario pose to people's health within the region and who are you most concerned about? (*5 min*)
- How would this affect the capacity of your organization or other organizations and systems (e.g. infrastructure and community services) that support community health and well-being? (*10 min*)
- Apart from the actions noted in the scenario, ideally what more can be done to help address health vulnerabilities (including health inequities) and reduce impact? (*7 min*)
    - Think before, during, and after the event (or the ability to anticipate, respond, cope, recover, and adapt)
    - Think of urban, suburban, and rural settings
    - Think of systemic barriers and differential needs

Part Two (25 minutes)

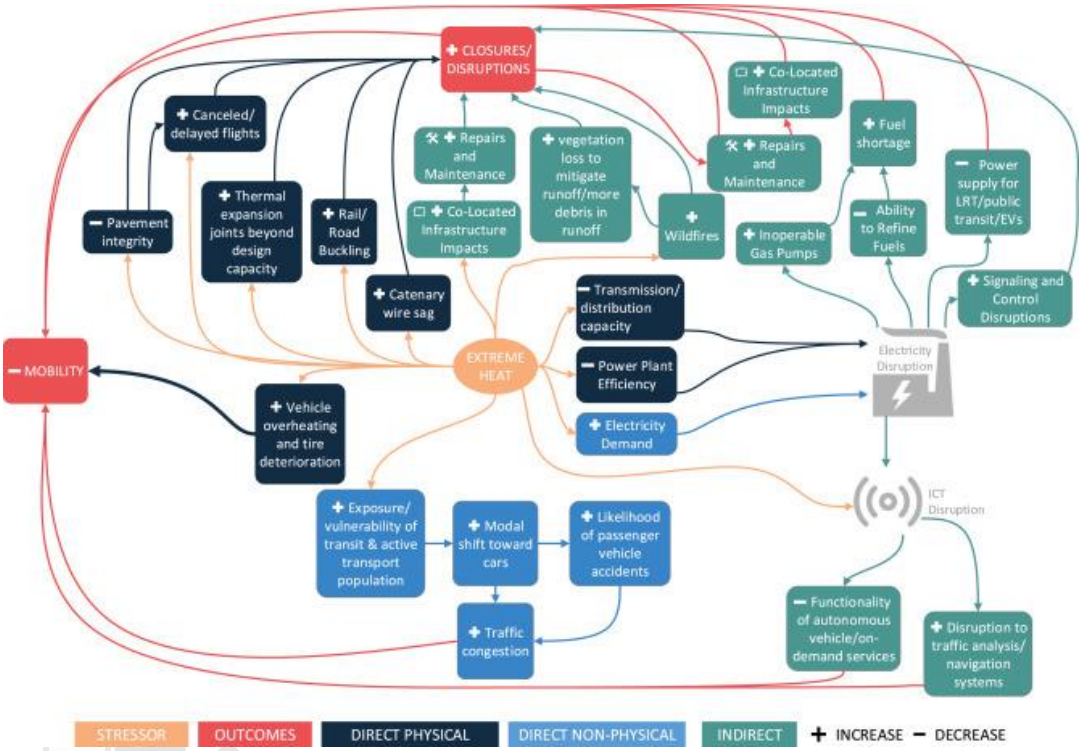
Schools have remained open during this period and have been following extreme weather guidelines. Frequent announcements were made throughout the day to remind staff and students to stay hydrated. Windows and doors were kept open to improve air circulation and portable fans were used where available. Outdoor recess has moved indoors as playgrounds with little shade baked in the sun and reached temperatures so high that they could cause burns.

However, as the extreme heat persisted and with most schools lacking air conditioning, indoor temperatures have reached sweltering levels for students and staff. The difficult decision of closing schools and associated childcare facilities had to be made, leaving thousands of parents scrambling for childcare, including health care workers (e.g. hospital workers and long-term care workers) and first responders. Many daycare centres that also don't have air conditioning are facing the same challenges with maintaining indoor temperatures, resulting in sporadic and last-minute closures.

The extended heatwave has also led to a threefold increase in emergency call volume. Paramedics are struggling to keep up and hospitals are warning of lengthy wait times as capacity was already under strain due to the novel coronavirus. Reports of hostility and aggressive behaviour have also increased.

Discussion 2

- How would this affect the capacity of your organization or other organizations and systems (e.g. infrastructure and community services) that support community health and well-being? (*7 min*)
- What other cross-sector, interdependent functional disruptions would likely occur under such a scenario? (*5 min*)



Source: Markolf et al. 2019

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Part Three (25 minutes)

Environment and Climate Change Canada has just issued several severe thunderstorm warnings and watches across southern Ontario, including Durham region, warning that conditions are favourable for the development of dangerous thunderstorms that may be capable of producing damaging wind gusts in excess of 100 km/h and localized heavy downpours. The sweltering heat and humidity has been a major contributing factor although such severe weather events have been happening more frequently.

Over the course of the late afternoon and evening, a severe thunderstorm did develop and pounded Durham region, leaving behind downed trees and wires, flooded roads and basements, and power outages in parts of the region. Thousands of urban and rural residents were without power. Hundreds of emergency calls were received in the short span of three hours as residents called about damaged trees and wires, stalled vehicles and elevators, and flooded basements.

At the same time, the heat warning is still in effect. The power outage left residents in some multi-unit residential buildings without air conditioning, water, and elevator service. Some municipal cooling centres and shelters were also affected as they did not have backup power to remain open. Splashpads were closed due to the inclement weather and some parks were temporarily closed due to rapidly rising river water levels and unstable banks.

Hospitals are equipped with backup power and continue to be operational. However, their already strained capacity is further affected by this latest severe weather event. Some critical medical supplies, including personal protective equipment (PPE), that were running low and were waiting to be restocked are now facing delays due to the storm. Flooded roads and transit delays are also affecting the ability of staff to report to work.

Discussion 3

- How would this affect the capacity of your organization or other organizations and systems (e.g. infrastructure, community services) that support community health and well-being? (*5 min*)
- What other cross-sector, interdependent functional disruptions would likely occur under such a scenario? (*7 min*)
- What more can be done to address health vulnerabilities, reduce impact, and speed recovery? (*10 min*)
    - Think before, during, and after the event (or the ability to anticipate, respond, cope, recover, and adapt)
    - Think of urban, suburban, and rural settings
    - Think of systemic barriers and differential needs
    - Think of data, processes, and governance

Collective Discussion (20 minutes)

- Based on today's discussions, what health vulnerabilities and impacts are you most concerned about within the region in the face of extreme temperatures and compounding events? (*10 min*)
- What actions and investments (and by whom) are needed in addition to current policies and programs to help the region prepare for and reduce the impacts of climate change on human health? (*10 min*)

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With examples shared by Paddy Enright (Health Canada)