



MEMO / NOTE DE SERVICE

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TO: Board of Health for the City of Ottawa Health Unit

DESTINATAIRE : Conseil de santé de la circonscription sanitaire de la ville d'Ottawa

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FILE NUMBER: ACS2022-OPH-HIS-0002

SUBJECT: UPDATE ON OTTAWA PUBLIC HEALTH (OPH) CLIMATE CHANGE
HEALTH VULNERABILITY ASSESSMENT FOR EXTREME HEAT TO IMPROVE
COMMUNITY RESILIENCE

OBJET : MISE À JOUR DE L'ÉVALUATION DE LA VULNÉRABILITÉ DE LA SANTÉ
AUX CHANGEMENTS CLIMATIQUES DE SANTÉ PUBLIQUE OTTAWA (SPO) EN
MATIÈRE DE CHALEUR EXTRÊME AFIN D'AMÉLIORER LA RÉSILIENCE DE LA
COMMUNAUTÉ

PURPOSE

The purpose of this memo is to inform the Board of Health about the Climate Change Health Vulnerability Assessment (CCHVA) for extreme heat being conducted by Ottawa Public Health (OPH). This information will be used by the City of Ottawa's Extreme Heat, Cold and Smog Planning Committee to improve community resilience by developing new or enhancing existing adaptation measures.

BACKGROUND

For the most part, residents of the City of Ottawa acclimatize to hot and humid summer conditions, with an average of 13 extreme heat days each summer. The 2020 climate projections for the City of Ottawa and information from the Climate Atlas of Canada indicate that by the year 2050 Ottawa summers will start two weeks earlier, extend three weeks later, and have four times more excessively hot days, with longer and more intense heat events.

The devastation, seen in Canada and around the world when extreme heat events occur, is worrying. The heat dome that impacted British Columbia in the summer of 2021 made Canadians aware of how severe an extreme heat event could be in this country. It resulted in over 500 deaths, overwhelmed emergency responses and hospitals, had devastating social impacts, and contributed to wildfires that destroyed homes and the community of Lytton.

Residents use cooling strategies such as air conditioning, seeking out cool spaces and adapting their behaviours to cope with hot weather. Many businesses, workplaces, and community spaces are equipped with cooling systems and Statistics Canada reported that in 2019, 81 percent of households in Ottawa had some form of air conditioning. There are many free or low-cost locations to cool down in Ottawa, including public libraries, community buildings, shelters for people experiencing homelessness, common areas in apartment buildings, movie theatres, shopping centres, restaurants, splash pads, wading and swimming pools, parks, and beaches. As a result of provincial COVID-19 measures, many of these sources of refuge from heat had restricted access during the summers of 2020 and 2021. In these extraordinary circumstances, the City of Ottawa opened emergency cooling centres and City partners conducted door-to-door visits to priority populations. The Beat the Heat information on the OPH [website](#) provides up-to-date information on where and how to cool down in Ottawa.

Although extreme heat can affect everyone, Health Canada recently updated their information on risk factors. The following list summarizes the complex exposure and sensitivity factors that can individually and together increase a person's risk to heat:

- age (older adults and young children)
- sex, gender, ethnicity, race, and being a member of Indigenous populations
- mental health and chronic diseases
- pregnancy
- medication use and substance misuse
- occupational exposure
- exposure to urban heat islands
- material and social deprivation (including the social determinates of health)
- people experiencing homelessness
- social isolation, living alone
- perceived safety and security of one's environments

Many Canadians are concerned about climate change. An [Engage Ottawa survey](#) conducted in 2021 found that the increase in the number of heatwaves and hot days was the top climate change concern identified. Assessing local health impacts of climate change is a requirement of the Ontario Public Health Standards, with a goal to reduce exposure to health hazards and promote the development and/or preservation of healthy built and natural environments that support health and mitigate existing and emerging risks, including the impacts of a changing climate. Extreme heat is the first of several vulnerability assessments planned by OPH to address climate risks. Vector borne diseases and air quality are other issues that will be addressed in the future.

In 2019, the Board of Health received an overview of OPH's [activities in support of climate action](#). Since 2004, OPH has chaired an interagency planning committee on extreme heat, cold and smog that is made up of City departments and community partners (The Salvation Army Outreach Services, Canadian Red Cross, and Ottawa Community Housing Authority). This committee oversees and updates the Extreme Heat, Cold and Smog Plan for the City of Ottawa, which includes supporting heat health resiliency today and for the future.

In 2021, OPH initiated a Climate Change Health Vulnerability Assessment (CCHVA) for extreme heat, as an update to a 2013 community heat health vulnerability assessment, to better characterize priority populations that will be disproportionately impacted by heat in the future. The CCHVA will contribute to discussions about what adaptation strategies are needed to ensure community resilience to climate change. This will inform and respond to the City of Ottawa's Climate Vulnerability and Risk Assessment (CVRA), which will be presented to the Standing Committee on Environmental Protection, Water and Waste Management in June 2022, and to the adaptation planning

that is underway as part of the Climate Change Master Plan and Climate Emergency declaration of 2019. The CCHVA for extreme heat is comprised of four parts:

- A risk assessment tool that examined hot weather exposure risks at home, work, in the community and when in transit, under current and future climate projections. The relevant social determinants of health (SDOH) and access to air conditioning were also considered for each exposure scenario (completed October 2021).
- An external review of the risk assessment tool and draft findings by a panel of subject matter experts (completed November 2021).
- Updating our current knowledge on heat health vulnerability and adaptive strategies to climate change based on new information from [Health Canada](#) and others (completed March 2022).
- Consultation with key partners and stakeholders on the draft findings to ensure Ottawa-specific issues and concerns are captured. This will be done through surveys, focus group sessions and key informant interviews. It will also provide an opportunity to look at current adaptive strategies for heat and identify gaps and opportunities (planned for May and June 2022).

DISCUSSION

Every day, new reports and studies provide a better understanding of how climate change is impacting vulnerability to hot weather and other climate risks. This information and advice from subject matter experts is being used to inform OPH's CCHVA for extreme heat. While a person's exposure and sensitivity factors can compound their heat health risks, their adaptive capacity also determines if and how they will be impacted. For example, someone who doesn't have air conditioning at home and has a chronic health condition may be considered to be at high risk for heat related illnesses, but if a family member or friend is able to help them get access to air conditioning during a heat wave, their adaptive capacity could prevent adverse health impacts. As such, there will always be various levels of vulnerability to hot weather in our community.

The SDOH also influence a person's vulnerability to heat. It is well established that people with higher incomes have better health and lower rates of disease and disability overall and, as such, in addition to better access to air conditioning, have better resiliency to heat. Conversely, people with lower incomes and states of inequity generally have poorer health, higher rates of disease and disability, and as such, in

addition to poor access to air conditioning, have worse individual resiliency during hot weather.

The CCHVA is exploring how access to air conditioning and the SDOH can impact people's vulnerability to hot weather in different exposure scenarios (i.e., at work, at home, inside institutions, in the community and in transit). A full range of adaptive measures that address extreme heat will be reviewed and include:

- Individual actions such as using air conditioning and fans, postponing outdoor activities, and choosing not to use a dryer or oven on a hot day;
- Heat alert and response systems that include public notification when heat health thresholds occur, and the development of heat response plans that include prevention and preparedness, monitoring and syndromic surveillance, and evaluation components;
- Occupational health and safety measures; and
- Aspects of the built environment, such as green neighbourhoods, building code requirements, reflectivity of built environment surface materials (reflecting or absorbing heat), urbanization, and community infrastructure.

There is a need to continue to advocate for improving individual and community adaptation strategies to increase community resilience and minimize adverse health outcomes, especially for priority populations.

NEXT STEPS

OPH's next steps are to engage and seek input from community partners and agencies providing services to priority populations to ensure the CCHVA captures local vulnerabilities and provides an opportunity to review current and planned adaptive strategies that improve community resilience to hot weather. The final findings of the CCHVA will be shared in a report with the Board of Health and others.

Informed by the CCHVA and CRVA, the Extreme Heat, Cold and Smog Planning Committee for the City of Ottawa will oversee the development and implementation of workplans addressing heat health risks in Ottawa for 2022 and beyond. These efforts will ensure coordinated short-, medium- and long-term prevention, preparedness and adaptation plans that include new initiatives and new partners. By improving adaptation and resilience, the goal is to ensure our community is prepared for hot weather events that do not automatically escalate to emergency response situations.

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