

OTTAWA

Evaluating the City's Heat Alert and Response System

By Peter Berry

THE SCIENCE

To be effective, Heat Alert and Response Systems need to be evaluated with the participation of a broad range of community partners. Evaluations can be formal or informal and can examine Heat Alert and Response System processes and/or outcomes. *Process evaluations* analyze the performance of key alert, response and communications mechanisms and activities (e.g. sending of alerts, outreach to key service providers of vulnerable populations, and the dissemination of heat-health messages that underpin the Heat Alert and Response System in a community). *Outcome evaluations* gauge whether the Heat Alert Response System has actually resulted in a reduction in morbidity and/or mortality over time.

Heat-health vulnerability in Canadian communities changes with time and place. People may become acclimatized to increased temperatures, access to air conditioning may change, there may be changes to the urban environment (e.g. greening) that alter levels of exposure, and demographic shifts may increase or decrease the numbers of people at higher risk of heat illness and death. In addition, urban environments are often hotter than rural environments due to the urban heat island effect. Consequently, Heat Alert and Response System evaluations should be conducted regularly to consider changes in these or other factors that might necessitate changes to the system. A number of communities in Canada hold pre- and post-heat season meetings with stakeholders to evaluate their Heat Alert Response System and plan for future extreme heat events. During these meetings, information is exchanged on new vulnerable populations, changes to communications approaches and technology, challenges in delivering key Heat Alert and Response System activities, and opportunities for making the system more effective.

THE TRIGGER

In 2002, the City of Ottawa established an Extreme Weather Committee to increase public awareness of the health implications of extreme heat and cold, establish baseline data on health outcomes related to heat, cold and air pollution for the region, and evaluate existing activities and policies in order to plan for the future. The Hot Weather Response Plan in Ottawa originated with a Heat and Smog Action Plan in 2004. Growing evidence that people living in the city were at increasing risk from heat and smog, and that heat mitigation plans being implemented in other Canadian and U.S. jurisdictions where successfully protecting health motivated city officials to develop a Heat Alert and Response System. The Hot Weather Response Plan includes weather, ultraviolet radiation, and air quality monitoring, a communications strategy with a major roll-out with the first extreme heat event, coordination of the community response with community providers through an Outreach to Vulnerable People Strategy and ongoing research and policy development related to the system.

THE APPROACH

The City of Ottawa undertakes a number of activities toward continual improvement of its Hot Weather Response Plan. These have included mapping the extent of the



Figure 12: In Ottawa, working with community partners is key to evaluating and improving the Heat Alert and Response System. (Source: Peter Berry)

urban heat islands in the city and the location of its most vulnerable populations, conducting a hot weather vulnerability assessment workshop with key service providers, evaluating the effectiveness of key components of the Response Plan and planning a mock heat emergency exercise. In addition, internal and external partners meet twice annually to discuss and improve the extreme weather response provided to city residents.

In November 2013, Ottawa Public Health hosted a Heat and Health Vulnerability Assessment Workshop with the objectives of (1) Discussing and providing information on how Canadian communities are vulnerable to the health impacts from extreme heat events and what might be needed to improve adaptive capacity to impacts from heat in the City of Ottawa; (2) Identifying vulnerable populations and discussing opportunities for collaboration among stakeholders, service providers and volunteers to reduce the health risks associated with an extreme heat event; and, (3) Introducing available information and tools for addressing these risks. Participants at the workshop included officials from groups such as Emergency Preparedness, Social and Housing services, municipal childcare centres, the Salvation Army, the Ottawa Farm Safety Association, and pharmacy professionals.

Participants completed a pre-workshop survey and received a workshop handbook before the meeting. Facilitated discussions examined the people currently identified as being vulnerable to extreme heat in Ottawa, including the subgroups that are most at risk and the characteristics that make each group vulnerable to heat.

THE OUTCOME

The key findings of the Heat and Health Vulnerability Assessment Workshop revealed that:

- 1) There are strong networks in place in Ottawa that assist identified vulnerable populations (i.e. church and social groups for older adults, new parents as well as day care and child drop-in centre professionals for young children, and street outreach and emergency shelter staff for the homeless). These networks are part of extreme weather outreach activities and are efficient and effective at reaching vulnerable groups.
- 2) Service providers develop effective strategies to deal with extreme heat events as a result of phone calls with their clients. This feedback has resulted in important changes to policies and procedures to build organizational capacity.
- 3) Rooming house residents and isolated seniors remain at risk during extreme heat events due to social isolation and lack of air conditioning. There is a need for fans and air conditioning for low-income renters.
- 4) Young outdoor workers may need more awareness of heat risk factors so they come to work adequately hydrated and protected from the sun and heat.
- 5) Policies, procedures and resources need to be in place and shared within an organization well in advance of hot weather events. The summer is prime vacation time and back-up and replacement staff need to know what to do and feel confident in adapting programming if they are to be effective.

Based on workshop findings, the City of Ottawa Interagency Extreme Weather Committee has been working to address these findings by reaching out to service providers of newly identified at-risk populations. It also followed up with a tabletop exercise (sessions where different stakeholders meet to discuss and define their roles during an emergency response) in 2015 with five pre-existing service provider networks and is updating the Hot Weather Response Plan. Finally, the Committee is offering to assist community agencies with developing and updating extreme weather policies.

A WORD FROM OTTAWA

“Every extreme weather event provides the City and our community partners a chance to learn and improve. We have gained a deeper understanding of community needs and capacity through face-to-face encounters with service providers at events such as the Vulnerability Assessment Workshop and tabletop exercises. Start small if needed, but get people together if you really want to find out how to build and harness community capacity. Face-to-face meetings are key to building trust and meaningful relationships,” said Martha Robinson, Extreme Weather Lead for Ottawa Public Health.