



FREDERICTON

Participatory approach to developing a
Heat Alert and Response System

By Jay Storfer

THE SCIENCE

Stakeholder engagement is a key element in the development and implementation of a community-based Heat Alert and Response System. A Heat Alert and Response System is most effective when public health organizations, municipal authorities, emergency preparedness officials, social services agencies and community outreach groups are actively engaged and working together to promote community-wide resiliency.

Establishing and maintaining good relationships with all interested partners is needed from the earliest stages of project development. Stronger relationships with partners over time will ensure that stakeholders play an important role as advocates and will ease conflict resolutions if any problems were to arise down the line. Maintaining stakeholder interest and contributions during the development of a Heat Alert and Response System can be challenging and resource intensive. However, regular interaction and face-to-face meetings with stakeholders can create an environment where their participatory involvement in the decision-making process ensures buy-in to the process and effective use of scarce resources.

THE TRIGGER

The City of Fredericton (population 56,224) is situated in the west-central portion of New Brunswick. This region has historically experienced a higher number of hot days than elsewhere in the Maritimes. Climate projections indicate that Fredericton can expect the number of hot days to almost double by mid-century, coupled with an increase in warmer nights. In spite of these projections, extreme heat as a public health risk remains an emerging issue for Fredericton and communities throughout Atlantic Canada.

Beginning in 2009, Health Canada partnered with the New Brunswick Department of Health to pilot a multi-year initiative to develop a community-based Heat Alert and Response System. As part of this initiative, Health Canada conducted a temperature-mortality analysis for the City of Fredericton, which found a sharp increase in mortality when the daily maximum temperature exceeded 30°C. Without further adaptation, heat-related health risks within this region may increase with a changing climate.

THE APPROACH

From the start of the pilot Heat Alert and Response System project, New Brunswick Health took a leadership role and quickly moved to develop partnerships with municipal authorities and local stakeholders. A program coordinator was identified whose responsibility it is to increase public awareness of heat-related health risks and behaviours through the production of information materials that promote the adoption of protective behaviours before and during an extreme heat event.

The Heat Alert and Response System Advisory Committee includes representatives from 12 organizations representing a broad range of government departments and



Figure 10: In Fredericton, the triggers were modified from using a varying series of adjectives to a plain-language tier of 'Heat Alert', 'High Heat Alert' and 'Extreme Heat Alert'. The Heat Alert and Response System also adopted a simple corresponding numbering system of level 1, 2 and 3. (Source: City of Fredericton)

non-government organizations. The role of this multi-stakeholder advisory committee is to increase the support from various agencies and organizations for at-risk populations and to identify best practices to communicate and share information between agencies at the onset of an extreme heat event.

New Brunswick Health's approach to building a Heat Alert and Response System through stakeholder engagement was two-fold. First, the structure of the advisory committee consists of a small core of stakeholders with extensive networking capacities. The membership is drawn from respected organizations within the community that serve as credible sources of information. Second, the committee has built on existing alert and response structures, thus reducing the challenges associated with building a new system. New Brunswick Health's proactive engagement with stakeholders has enabled all partners to draw on their experience in responding to other types of emergencies and to apply those lessons to the development of a Heat Alert and Response System.

THE OUTCOME

Prior to the Heat Alert and Response System pilot, only a press release from New Brunswick Health, derived from Environment Canada weather warnings, was used to inform the public of an extreme heat event. This notification system was based on a tiered range of Humidex values and used the terms 'advisory', 'warning', and 'alert' to describe the three levels of severity. During the Heat Alert and Response System development phase, New Brunswick Health was able to make refinements to the triggers based on key input from stakeholders. This resulted in a new wording reflecting the increasing intensity of risk that clarified and simplified the level of alert in both English and French. Thus, the triggers were modified from using the varying series of adjectives to a plain-language tier of 'Heat Alert', 'High Heat Alert' and 'Extreme Heat Alert'. The Heat Alert and Response System also adopted a simple corresponding numbering system of level 1, 2 and 3 (see Figure 10).

To support the roll-out of the City of Fredericton Heat Alert and Response System, two bilingual websites were launched that were specifically designed and built for the heat season. Stakeholders supplemented the awareness campaign by providing one-on-one training to their clients about heat-health risks and by distributing materials to at-risk populations. The city also included a heat-health information brochure in its spring municipal water utility bills. The feedback received during and after the first heat season indicated that the numbering system (Level 1, 2 and 3) had been easily adopted and used by Heat Alert and Response stakeholders, the media, and the public.

A WORD FROM FREDERICTON

When asked what kind of advice she would give to other communities considering a similar approach to the development or improvement of a Heat Alert and Response System, Karen White, Director of Healthy Environments Branch, said that “six years later, the Heat Alert and Response System program in Fredericton is doing well. The pilot program was successful because it started out small and leveraged the already established excellent network of community based non-government organizations thus avoiding the need to ‘reinvent the wheel’. It drew from existing structures and the experience and expertise of staff in departments at both the municipal and provincial level. Health Canada provided a wealth of materials and evidence-based information that were an immense help in moving the project in the right direction.” Although the Heat Alert and Response System pilot was a Fredericton specific project, the Office of the Chief Medical Officer of Health has used its coordinating role to disseminate education and promotional messages to all health regions in New Brunswick. By working first at the local level and delivering a proven product, the Office of the Chief Medical Officer of Health is exploring avenues to expand the Heat Alert and Response System concept to the rest of the province.