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NUMBER 3

ISSN 1920-2709

FEBRUARY 2011

Climate Change and Health Adaptation Bulletin

Understanding Community Resilience to Extreme Heat Through Table-top Exercises

Extreme Heat as a Health Risk

Extreme Heat events, also known as heat waves, pose a growing public health risk in Canada as a result of a changing climate. A number of local health authorities and their partners are currently developing Heat Alert and Response Systems (HARS) to reduce the vulnerability of citizens to heat-related illnesses and death. Information is needed about the ability of health authorities to plan for and respond to extreme heat events.



Courtesy of The Red Cross

an extreme heat event in an informal, low stress environment. It involved a series of worsening extreme heat event scenarios. Scenarios ranged from stresses to the system due to an influx of tourism, power outages and additional extreme weather events that compounded the 3–5 days of extreme heat. A list of questions to discuss the situation was presented and a debrief was conducted immediately following the exercise to determine what went well, what could be improved and what lessons were learned.

Participants included health and social service providers, first responders, emergency response personnel and others from governmental and non-governmental organizations having a role to play in planning for and responding to an extreme heat event.

Extreme Heat Event Table-top Exercises

With support from Health Canada, four communities piloted HARS during the summer of 2009 and 2010: Fredericton (New Brunswick), Windsor (Ontario), Winnipeg (Manitoba) and the Assiniboine Regional Health Authority (Manitoba). To identify and address gaps in existing HARS plans each community completed a one-day table-top exercise. The table-top exercises provided each community with valuable insights regarding strengthening their HARS.

Each exercise involved a discussion-based, facilitated group analysis of the activities to be undertaken during

A table-top exercise simulates an emergency situation in an informal environment. The participants, usually people on a decision-making level, gather around a table to discuss general problems and procedures in the context of an identified emergency scenario. The focus is on training and familiarization with roles, procedures, or responsibilities.

(Emergency Management Institute [EMI], Federal Emergency Management Agency [FEMA] <http://training.fema.gov/EMIweb/downloads/is139Unit5.doc>)

Recommendations From the Table-top Exercises

The scenarios used in each exercise were specific to the participating community, yet the post-exercise debrief did reveal a number of recurring themes that may be relevant to other Canadian communities. These recommendations will be incorporated into Health Canada's "Best Practices Guidebook on Heat Alert and Response Systems", which is scheduled to be released in 2011.



These recommendations include:

Roles and Responsibilities

- Establish a "lead" for planning and responding to extreme heat events and ensure that all organizations are aware of existing roles and responsibilities.
- Ensure that the role of first responders and their interaction with health care professionals is understood.

Planning

- Organizations should have an all-hazards Business Continuity Plan or Emergency Response plan in place and should include an extreme heat event scenario in their hazard assessments and planning activities.
- Various plans should be coordinated and include a wide cross section of stakeholders in their development. Additional groups that can benefit the planning process include: mental health workers, school boards, public health inspectors, chambers of commerce, city planners, faith-based organizations, child care workers, animal services, First Nations, multi-cultural groups, the transportation sector, industry and labour groups as well as elected officials.



- Identify populations vulnerable to extreme heat and develop clear plans for providing assistance to these people (for example, access to cooling centres) during an extreme heat event.
- Identify resources that will be required during an extreme heat event and develop plans for meeting expected water, fuel, generator and food needs.

Declaration of Heat Emergency

- All communities should develop clear triggers and actions associated with each level of the heat event alert declaration.

Communications, Education and Training

- Distribute heat-health publications early in the year and continue to educate throughout the summer (for example, identify actions to be taken by the public



with respect to power and water consumption in the event of low supply). Include channels of communications available for providing information to the public prior to and during the event so that they can take protective actions during periods of extreme heat, particularly populations vulnerable to extreme heat.

To Improve Future Table-top Exercises

- Wherever possible, include brief presentations on local heat alert and response system activity before the exercise
- Ensure balanced representation of officials from emergency preparedness, first responders, and public health organizations
- Move individuals between breakout groups during the exercise to allow participants to meet more stakeholders and get varying points of view

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