

Hot Weather Response Plan Update

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To:	Board of Health
From:	Medical Officer of Health
Wards:	All Wards
Reference Number:	

SUMMARY

This report provides an update on the City of Toronto Hot Weather Response Plan and the experience of summer 2008. The report also includes updates on several recommendations made at the April 16, 2007 Board of Health meeting and outlines specific initiatives being undertaken to improve the Hot Weather Response Plan.

Financial Impact

There is no financial impact stemming from this report.

DECISION HISTORY

At its April 16, 2007 meeting, the Board of Health requested that the Medical Officer of Health (MOH) implement a more intensive and long-term heat response planning process and that the Hot Weather Response (HWR) Plan be linked to the City of Toronto's broader environmental and climate change agenda. In addition, the Board of Health directed the MOH to survey community agencies that are participating in the coordinated HWR Plan to determine the number of vulnerable clients being contacted during alerts and identify any gaps in outreach.

ISSUE BACKGROUND

Extreme heat affects people in different ways depending on their age, underlying medical conditions and ability to acclimatize to hot weather conditions. Prolonged exposure to heat over several days without cooling intervals (which typically occur at night) substantially increases heat risks. Socially isolated seniors are at highest risk of heat-related morbidity and mortality. Other at-risk groups include people with chronic and pre-existing illnesses, children, and people who are marginally housed or homeless.

In addition to demographic factors, regional characteristics can also contribute to an increase in heat-related risks. Those who live in areas with irregular but intense heat waves (like Toronto) and/or who experience the urban heat island effect are most affected by oppressive hot weather.

Climate change is expected to bring higher temperatures to Toronto. Environment Canada predicts that the number of days with temperatures over 30 degrees Celsius in Toronto will more than triple from about fifteen days per year between 1961-1990 to about 65 days per year by 2080-2100.

In 1999, Toronto Public Health (TPH) implemented a heat warning system that used a one day humidex forecast of over 40 degrees Celsius. Because humidex levels change rapidly and are difficult to predict, in 2001 TPH adopted the Heat Health Alert System (a spatial synoptic classification system) as the basis for declaring Heat and Extreme Heat Alerts. A Heat Alert is issued when an oppressive air mass is forecast and the likelihood of excess weather-related mortality exceeds 65 percent. An Extreme Heat Alert is issued when the likelihood of excess weather-related mortality exceeds 90 percent.

Declaration of a Heat Alert or Extreme Heat Alert by Toronto's MOH activates the HWR Plan. In collaboration with the Hot Weather Response Committee, TPH reviews and updates the HWR Plan on an annual basis and reports yearly on its implementation and revisions, if any, for the upcoming season.

COMMENTS

The Experience of Summer 2008:

In the summer of 2008, TPH called a Heat Alert or Extreme Heat Alert on a total of nine days, in three clusters. Three Heat Alerts and six Extreme Heat Alerts were issued. The first Heat Alert was issued on June 8. In one of the three clusters, the Heat Alert was followed by an Extreme Heat Alert.

In the eight years since the implementation of the Heat Health Alert System, the average annual number of Heat Alert days has been 7.0 days and Extreme Heat Alert 5.6 days, for a total average of 12.6 days.

The Hot Weather Response Committee chaired by TPH held its pre-season meeting on April 8, 2008 to confirm the coordination and implementation of the HWR Plan and met on October 9, 2008 to debrief on the season's activities.

Public Education and Outreach:

In 2008, TPH and its partners provided public and targeted education on the risks of extreme heat and on precautions to prevent heat-related illness and death. TPH distributed over 143,000 heat-related brochures, provided nine presentations and two displays to community agencies. Over 600 Hot Weather Protection Plan packages were delivered to landlords in the boarding and rooming house sector and 104 assessments were made during Extreme Heat Alerts. TPH also handled 32 media requests relating to heat and recorded over 37,500 visits to the Heat Alert website.

At the April 16, 2007 Board of Health meeting, the MOH was asked to survey community agencies participating in the coordinated HWR Plan. The purpose of the survey was to determine the number of vulnerable clients being contacted during Heat Alerts and to identify any gaps in outreach. In October 2007, TPH invited 453 community agencies receiving Heat Alert notifications to participate in the survey. One hundred and twenty-nine agencies responded for a 28.5% response rate. Survey results revealed 69% of the responding agencies do make contact with clients at-risk of heat-related illness during Alerts, with 60% identifying no service gaps related to outreach. Some of the gaps that were identified include lack of funding, limited agency hours and language barriers.

In 2009, TPH will continue its public and targeted education to seniors, agencies that work with or have contact with seniors or vulnerable adults, and to landlords of boarding homes and rooming houses. In addition, TPH will continue its campaign to encourage the public to call or visit family, friends and neighbours, especially isolated adults and seniors during Alerts.

Cooling Places and Cooling Centres:

1. Cooling Places

During Heat Alerts people are encouraged to use air conditioned services and facilities that already exist in the neighbourhood as cooling places. This includes libraries, community centres, drop-in centres and shopping malls.

In 2008, Shelter, Support and Housing Administration (SSHA) continued to fund the Summer Hours Drop-in Program. In addition, to the regular weekly drop-in services that are available, eight air conditioned drop-in centres across the city provided services every Saturday, Sunday and statutory holiday from May 24 to September 1, 2008 between the hours of 11:00 a.m. and 4:00 p.m.

Subject to the approval of the 2009 Operating Budgets of the Shelter Support and Housing Administration Division and the Community Partnership Initiatives Program, extended operating hours will be funded at nine drop-in centres beginning May 1, 2009, which includes additional weekend and statutory holidays.

During Alerts, drop-in centres also assist clients with transportation to cool places. TPH provided tokens to SSHA for use at drop-ins during extreme heat alerts. A total of 1,214 tokens were issued by drop-in centres to individuals in need of transportation to a cool place during Alerts.

2. Cooling Centres

In addition to promoting the use of air conditioned shopping malls, local libraries and neighbourhood community centres as places to cool off, and the availability of drop-in centres as noted above, cooling centres were open during Extreme Heat Alerts.

In 2008, the City increased the number of cooling centres from five to seven. In response to the Board of Health request at its April 16, 2007 meeting to establish ward-based cooling centres in City operated community centres, four of the seven cooling centres were opened in

neighbourhood community centres - the Centennial Recreation Centre (Ward 38) and Heron Park Community Centre (Ward 44) in the Scarborough District; the Driftwood Community Centre (Ward 8) in the North York District; and the Etobicoke Olympium (Ward 3) in the Etobicoke District. The three remaining cooling centre locations included North York Civic Centre, East York Civic Centre and the 24-hour site Metro Hall. A total of 1,969 individuals and 7 pets visited one of the seven cooling centres with an average stay of 15 minutes. In 2009, the City will continue to utilize neighbourhood based community centres as cooling centre locations during Extreme Heat Alerts and will assess other facilities for suitability as cooling centres.

3. 24-hour Cooling Centre

Metro Hall, which is designated as the 24-hour cooling centre location, had 644 visitors, of which 46 were overnight. At its April 16, 2007 meeting, the Board of Health recommended that the General Manager, SSHA be requested to search for a more acceptable and appropriate cooling centre to replace Metro Hall as the 24-hour site. Efforts to find an alternate site to replace Metro Hall as the 24 hour cooling site have been ongoing. SSHA has been working with Facilities and Real Estate to consider locations that are leased as well as City owned. Because of the unique needs of the 24-hour cooling centre a suitable alternative has not yet been located. As a result, Metro Hall will remain the 24-hour cooling centre for 2009.

Tracking Heat Related Deaths:

In June 2008, TPH met with the Office of the Chief Coroner to review existing protocols for reporting deaths where heat may be a contributing factor (possible heat-related deaths) to TPH. The Office of the Chief Coroner agreed to contact TPH to report possible heat-related deaths identified during routine investigations within one business day. For 2008, TPH did not receive any reports of possible heat-related deaths from the Office of the Chief Coroner.

Maximum Heat Standard:

At its November 10, 2008 meeting, the City's Executive Committee received a report on the Regulatory Strategy for Multi-Residential Apartment Buildings from the Executive Director, Municipal Licensing and Standards (ML&S).

The Multi-Residential Apartment Building (MRAB) report outlined a proposed audit and enforcement program that was subsequently launched on December 1, 2008. The report also provided an overview of potential regulatory options and a summary analysis of each option. The report refers to the possibility of including a maximum heat standard in any multi-residential apartment building strategy that may be adopted in the future. After one full year of implementation of the MRAB audit and enforcement program, ML&S will report back to the Executive Committee on a Regulatory Strategy for MRABs. TPH will continue to work with ML&S on the inclusion of a maximum heat standard and will report back to the Board of Health upon finalization of the regulatory strategy.

Heat Registry:

In 2008, SSHA provided \$16,000 from the Provincial Consolidated Homelessness Prevention Program (CHPP) to Parkdale Activity Recreation Centre (PARC) to design and pilot a community heat registry to monitor marginally housed people at-risk during Heat Alerts in the summer of 2008.

PARC formed a steering committee to design and pilot a community based heat registry. Members included SSHA, TPH, St. Joseph's Health Centre, the Centre for Addiction and Mental Health, Habitat Services, Toronto Community Housing, Parkdale Community Health Centre, the Rooming House Working Group and the West End Community Care Access Centre. Clients who self-identified as vulnerable to heat were, with the help of peers, able to register using a questionnaire that assessed their personal level of risk.

On Extreme Heat Alert days, peers contacted all individuals who had registered and were assessed at high or medium risk to make sure they were safe. Deliverables for the project include a final report and a draft heat registry manual containing templates for forms, policies and procedures. The manual is under development and when finalized will be available on the web and in disc format by summer 2009.

In 2008, one hundred individuals living in 75 properties in Parkdale were registered, assessed for risk and monitored by a team of eight peer workers during Extreme Heat Alerts. A survey of registrants found that 93% had experienced problems in the heat, 87% changed their behaviour in dealing with heat as a result of being on the registry, and 82% felt safer as a result of being on the heat registry. More development work is needed to test the application of the community based response and to ensure the manual is ready for use in other communities wishing to adopt this approach.

Further funding of \$16,000 from CHPP has been approved to continue the project and further develop and refine the Heat Registry model in 2009.

Subsidy Program for Air Conditioners:

At its February 27, 2006 meeting, the Board of Health adopted the MOH's recommendation that TPH work with Toronto Hydro and other stakeholders to determine the feasibility of establishing a subsidy program for low-income vulnerable people to own and operate air conditioners. To assess feasibility TPH met with Toronto Hydro and other internal stakeholders, conducted a small scan of other health departments and reviewed existing air conditioning programs.

Currently, clients of Ontario Works (OW) and Ontario Disability Support Program (ODSP) can apply to purchase and install an air conditioner. Applications must provide evidence of a medical need from a health professional to be eligible.

The Heat Registry project piloted by PARC in 2008 assisted tenants to apply for a subsidy to purchase a fan or air conditioner (up to \$375 for purchase and up to \$50 p/unit for installation). Applications from people in receipt of OW and the ODSP were submitted to the Toronto Employment and Social Services Special Needs Unit. As part of the Heat Registry project, PARC bulk purchased and installed the units. Seventy people were assisted in completing applications for air conditioners. These individuals were then categorized as "low-risk" once the air conditioning unit was installed. In 2009, a similar process will be followed to have air conditioners installed before the extreme hot weather begins.

In light of the funding available to OW and ODSP clients and the assistance being provided by the Heat Registry Pilot Project with applications, the establishment of a subsidy program for air conditioners is not recommended at this time, although options will continue to be explored by TPH.

Climate Change Adaptation Strategy:

At its May 21, 2008 meeting, Executive Committee adopted a Climate Change Adaptation Strategy for the City of Toronto. As a member of the Climate Change Adaptation Steering Group, TPH assisted in the development of the adaptation strategy.

Climate change adaptation is defined as actions that may minimize or prevent the negative impacts of climate change. In the Climate Adaptation Strategy Report, Toronto's HWR Plan was highlighted as an example of an existing climate change adaptation measure. Along with the Climate Adaptation Strategy report to Executive Committee, a report called *Ahead of the Storm* was created by the Toronto Environment Office to help members of the public and other stakeholders understand climate change and to think about how Toronto can prepare for its potential effects. The HWR Plan is highlighted in the report as an existing program that reduces vulnerability to climate change.

Heat-Related Vulnerability Assessment:

The Climate Change Adaptation Strategy identifies heat-related vulnerability assessment as a planned short-term adaptation action. TPH has initiated a project that will focus on mapping vulnerability to heat. Vulnerability to heat depends on individual characteristics such as age or existing illness as well as features of a person's physical and social environment, such as location and quality of housing, access to air conditioning or community support. The ability of TPH and community partners to effectively deliver scarce resources during a Heat Alert and Extreme Heat Alert would be improved by a spatial vulnerability assessment that relies on local data. TPH is now working on the first phase of a spatial, heat-related vulnerability assessment for Toronto. This work has several parts. To understand what types of methods are best for this work, TPH is scanning examples of heat-related vulnerability assessments that have been used in other places. TPH is also compiling a list of spatial and other data that exists for Toronto that might be useful for assessing vulnerability to heat. This information will form the basis of recommendations for the best way to carry out a heat-related vulnerability assessment in Toronto.

The first phase of this work should be complete by April 2009. Pending availability of funding, TPH will initiate Phase 2, which will be the implementation of a full, spatial heat-related vulnerability assessment.

In addition, at the request of TPH, ML&S has agreed to collect information regarding mechanically cooled apartment buildings, the availability of mechanically cooled common areas/rooms and air-conditioning inside individual tenant units, as part of the current MRAB audit. This information will assist TPH in assessing heat-related vulnerability.

Evaluation of Toronto's Heat Alert and Response System:

In November 2008, TPH and representatives from Health Canada's Climate Change and Health Office (CCHO) held a preliminary meeting to discuss a proposed evaluation of Toronto's Heat

Alert and Response System (HARS). In 2009, TPH will continue to collaborate with the CCHO on defining the scope and objectives for the proposed HARS evaluation, with the intent of assessing the effectiveness of the system and identifying best practices.

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