

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's Hot Weather Response Plan, including the experience of Summer 2007.

The primary challenge in implementing the Hot Weather Response Plan continues to be reaching those who are most vulnerable and at-risk. In 2008, Toronto Public Health will intensify its public education campaign that encourages family, friends and neighbours to check on isolated adults and seniors. Toronto Public Health will continue to work collaboratively with community agencies and organizations serving vulnerable populations, educate landlords that provide housing to at-risk groups and provide outreach to vulnerable clients through the collective efforts of the Hot Weather Response partnership during alerts.

Financial Impact

There are no financial impacts resulting from this report.

DECISION HISTORY

At the April 16, 2007 meeting of the Board of Health, the Medical Officer of Health was asked to report to the Board of Health on the activities undertaken as part of the 2007 Hot Weather Response Plan. The report was also to include information on options for regulating health conditions in private sector housing for vulnerable adults particularly, the elderly; and information on a survey of those community agencies participating in the Hot Weather Response Plan to determine the number of vulnerable clients being contacted during Heat Alerts and to identify any service gaps related to outreach.

ISSUE BACKGROUND

Heat and its Health Effects:

Extreme heat impacts different people in different ways, depending on their age, underlying medical conditions and how well they acclimatize to hot conditions. Exposure to extreme heat over prolonged periods of time, without access to cooling intervals (such as typically occur at night), makes it hard for the human body to maintain a consistent internal threshold. This stress can result in a rise of internal temperature and/or increased stress on respiratory and circulatory systems. Either circumstance can result in illness or death. Even a short break of two or three hours from extreme heat helps to reduce this stress. The best defence against heat-related illness is prevention: staying cool, drinking fluids, moderating physical activities and wearing loose, light weight, light coloured clothing.

Over the summer, the human body responds differently to the same climatic conditions. In early summer, people are just beginning to become acclimatized to high temperatures and humidity, and are therefore more sensitive to hot weather conditions. The same set of conditions at the end of the summer has less impact on health, as the body becomes accustomed to the heat. People who live in areas which experience irregular but intense heat waves, like Toronto, are most affected by oppressive hot weather. Socially isolated seniors are at higher risk of heat-related morbidity and mortality. Other at-risk groups include people with chronic illness including mental illness, children and people who have poor housing or are homeless.

Heat Warning Systems and Hot Weather Response:

Toronto has had a heat warning system since 1999. The first heat warning system used a threshold of a one-day forecast of Humidex over 40 degrees Celsius. However, Humidex levels change rapidly and are very difficult to predict. Therefore, in 2000 and 2001, Toronto Public Health collaborated with the Toronto Atmospheric Fund and the University of Delaware to develop a heat health alert system expressly for Toronto, based on a complex synoptic system. A synoptic system involves historical analysis of regional air masses that are associated with elevated mortality, while taking into account regional differences in population vulnerability to heat.

The synoptic method has provided an evidence-based tool with acceptable predictive value in forecasting periods of heat-related mortality. A Heat Alert is called when a hot air mass is forecast and the likelihood of excess deaths is more than 65 per cent. An Extreme Heat Alert is issued when the likelihood of excess deaths is more than 90 per cent.

Toronto Public Health and its partners provide a coordinated hot weather response during heat alerts. Toronto's Hot Weather Response Plan is activated through the Heat Warning System, and is intended to alert those most at-risk of heat-related illness that hot weather conditions are either imminent or currently exist, and to take appropriate precautions.

Toronto Public Health reports yearly on the Hot Weather Response Plan implementation and recommended revisions for the next summer.

COMMENTS

The Experience of Summer 2007:

This past summer, Toronto Public Health called a Heat Alert or Extreme Heat Alert on a total of 15 days, in seven clusters. Ten Heat Alerts and five Extreme Heat Alerts were issued. The first Heat Alert was issued on May 24, 2007. In two of the seven clusters the Heat Alerts were followed by Extreme Heat Alerts. In the summer of 2006, nine Heat Alerts and eight Extreme Heat Alerts were called for a total of 17 days. Both 2007 and 2006 are considered moderate in comparison to 2005 when eight Heat Alerts and eighteen Extreme Heat Alerts were called for a total of 26 days.

In 2001, when Toronto Public Health launched its new Heat Health Alert System to help forecast heat alert days, the expected average number of heat alert and extreme heat alert days was 4.5 per year (heat alert: 3.1 days; extreme heat alert: 1.4 days). This estimate was based on the 46 years of meteorological data used to create the heat health alert system. In the seven years since the implementation of the heat health alert system, the average number of heat alerts has been 7.6 days and extreme heat alerts 5.6 days, for a total average of 13.1 days. This higher number of heat alert days per year far exceeds the number of previously anticipated heat events, and it has been a challenge for Toronto Public Health and its partners to carry out the Hot Weather Response Plan within existing resources.

Since 2000, the Hot Weather Response Committee chaired by Toronto Public Health has developed, monitored and improved the Hot Weather Response Plan for Toronto. Committee members consist mainly of key partners who provide direct services under the Hot Weather Response Plan. Each year, the Committee has a pre-season meeting to confirm the coordination and implementation of the Hot Weather Response Plan and a post-season de-briefing to review the effectiveness of the response during heat/extreme heat alerts and to revise the plan as appropriate. The pre-season and post-season meetings were held on April 23 and October 22, 2007 respectively. Attempts to hold a mid-season meeting as requested by the Board of Health were unsuccessful since a quorum could not be attained.

Public Education and Outreach:

Toronto Public Health and its partners provided extensive public education at the beginning of the hot weather season. Groups targeted included seniors, child care providers, school boards, managers of hospital emergency rooms and landlords of rooming houses and boarding homes.

Toronto Public Health invited 222 agencies and organizations that work with or have contact with seniors or vulnerable adults to training sessions on summer safety tips and hot weather precautions. Forty-four organizations attended the sessions which were

facilitated by Public Health Nurses. A total of 212 resource packages were distributed to agencies either at the sessions or forwarded by mail. Toronto Public Health also provided Toronto Community Housing Corporation with resource packages and information posters for display in their buildings. With continued efforts to educate vulnerable seniors on how to avoid heat-related illness, Toronto Public Health developed a Heat Information Tear-Off Pad specifically for this at-risk group. Three hundred and sixty six tear-off pads were distributed to agencies and organizations that provide services to seniors such as Meals on Wheels.

In 2006, Public Health Nurses made 41 telephone contacts with vulnerable clients and conducted 23 home visits to known clients at-risk during heat/extreme heat alerts. In 2007, Public Health Nurses made 82 telephone contacts and conducted 17 home visits, as well as distributed 1500 Beat the Heat brochures directly to vulnerable clients.

Public Health Inspectors disseminated Hot Weather Protection Plan packages to 626 landlords in the rooming house and boarding home sector. From assessments completed, 213 premises had either a cooling room and/or air-conditioning in place.

Due to financial constraints, the Toronto Emergency Medical Services community medicine team could not provide home assessments or transportation to a cooling centre for people who called the Heat Information Line as they had in previous years. Education and outreach activities previously provided by Toronto Emergency Medical Services were also scaled back. As a result, Toronto Public Health disseminated resource packages to hospitals this past season. Emergency room managers were requested to display various Beat the Heat brochures in the emergency room area and to distribute brochures to patients subsequently discharged for heat-related illness.

Because timely and effective communication to the public and partner agencies is critical when a heat alert is called, Toronto Public Health issued media releases to advise the public of heat alerts and precautions to take during hot weather and responded to media calls related to hot weather and health, when alerts were issued. In addition, Toronto Public Health also up-dated the Heat Alert website and in July began posting declared alerts to the website on weekends and statutory holidays. The total number of visits to the heat alert website from June 1 to September 30, 2007 was 29,995.

Cooling Places and Cooling Centres:

This past summer, Shelter Support and Housing Administration increased funding to enhance the summer hours drop-in program. Ten air-conditioned drop-in centres across the City of Toronto provided services every Saturday, Sunday and statutory holiday from 11:00 a.m. to 4:00 p.m. from June 2 to September 3, 2007.

Toronto Public Health increased the number of TTC tokens from 2,400 to 4,100 tokens available to Shelter Support and Housing Administration for drop-in client use. From the 4,100 tokens allocated to Shelter Support and Housing Administration, 1,800 tokens were distributed to 28 drop-ins throughout the city in May. A total of 813 tokens were issued to individuals in need of transportation to a cool place during a Heat Alert or Extreme

Heat Alert. Additional tokens were made available to those drop-ins that distributed their initial allotment. Remaining tokens from this past season will be used for the summer of 2008.

In addition to the over 190 local library branches and neighbourhood community centres which serve as places to cool off, five cooling centres were opened across the city during extreme heat alerts (at Metro Hall, East York, Etobicoke, North York and Scarborough Civic Centres). Metro Hall was opened on a 24-hour basis while the remaining locations operated from 11:00 a.m. to 7:00 p.m. The Scarborough Civic Centre site was utilized in response to the Board of Health's recommendation to better accommodate the needs of vulnerable people in the east end of the city. A total of 2,497 individuals visited one of the five cooling centres this year. However, similar to last year, people who visited the cooling centres this summer generally did so because they were in the building or happened to pass by. The average stay by individuals in cooling centres was fifteen (15) minutes. It continues to be a challenge to get those who are isolated and at-risk, to come to the cooling centres.

Efforts to find an alternate cooling centre to replace Metro Hall as the 24-hour cooling site have been on going. In June 2007, Shelter Support and Housing Administration resubmitted their request to Facilities and Real Estate to include locations that are leased as well as city owned. Unfortunately, the rental locations assessed by Shelter Support and Housing Administration were not considered suitable for the unique needs of a 24-hour cooling centre and no city owned space has been available. Shelter Support and Housing Administration is continuing to work with Facilities and Real Estate, to search for a cooling centre site to replace Metro Hall.

The Board of Health recommendation to establish ward based 'cooling centres' in City operated recreation/community centres was forwarded to the Parks and Environment Committee for consideration. The Committee received the Board of Health communication as information at its June 18, 2007 meeting. Parks, Forestry and Recreation in partnership with Toronto Public Health and Shelter, Support and Housing Administration will develop a possible implementation plan to establish ward based cooling centres in City operated recreation/community centres.

Heat-related Deaths:

In June 2007, Toronto Public Health met with the Office of the Chief Coroner to discuss a protocol for reporting deaths where heat may be a contributing factor (possible heat-related deaths) to Toronto Public Health. The Office of the Chief Coroner has agreed to contact Toronto Public Health to report possible heat-related deaths identified during routine investigations, within one business day. This past season, the Office of the Chief Coroner reported three possible heat-related deaths to Toronto Public Health. Toronto Public Health responded to all three reports by deploying Public Health Inspectors to the location where the person resided. Public Health Inspectors as part of their investigation provided a Hot Weather Protection Plan package to the landlord or superintendent of the building, conducted an environmental assessment of the common areas and units, where possible and distributed heat related information to tenants.

As mutually agreed, Toronto Public Health and the Office of the Chief Coroner will meet on an annual basis prior to the upcoming hot weather season to review existing protocols and key contact information regarding notification of possible heat-related deaths. As well, the Office of the Chief Coroner is now receiving heat alert notifications from Toronto Public Health.

Community Agency Survey:

In October 2007, Toronto Public Health invited over 450 community agencies that receive notification of Heat Alerts and Extreme Heat Alerts to participate in a survey to determine the number of vulnerable clients being contacted during heat alerts and to identify any gaps related to outreach to clients. At the time of this report, 123 completed surveys have been returned to Toronto Public Health. The results of the survey will be reported back to the Board of Health in the spring of 2008.

Maximum Heat Standard:

Municipal Licensing and Standards Division is responsible for developing a regulatory strategy for multi-occupancy residential buildings in Toronto and has been requested to consider a maximum heat standard as part of that requirement. A maximum heat standard can be more easily applied to new residential buildings. A preliminary assessment has indicated that it would be more difficult to apply the standard to older rooming houses/lodging homes/group homes in light of significant retrofitting costs that would need to be assumed by owners.

The Staff Report regarding the Regulatory Strategy for Multi-Residential Apartment Buildings will be forwarded to the Executive Committee for consideration on January 8, 2008. Toronto Public Health will continue to work with Municipal Licensing and Standards to address the inclusion of a maximum heat standard provision, and will report back to the Board of Health upon finalization of the regulatory strategy.

Regulating Private Sector Housing:

The City of Toronto has expressed a long standing concern regarding the lack of mandatory province-wide standards of care and service for tenants of retirement homes, the absence of clear accountability mechanisms and the need for consistent monitoring, inspection and enforcement. The City undertook a review and consultation process following widespread media reports of poor living conditions in Toronto retirement homes in 1999. More recently the Mayor's Office forwarded a letter to Minister George Smitherman (November 2005) relating to the concerns raised at the Mayor's Roundtable on Seniors regarding the experience of vulnerable seniors, particularly those of low income, living in rooming houses and retirement homes that provide personal care.

A cross-Divisional staff team from the City including Public Health, Homes for the Aged, Municipal Licensing and Standards, and Social Development Finance and Administration participated in the provincial government's formal consultations on Regulating Care in Ontario's Retirement Home Industry. In April 2007, the province released a summary report of the consultations. The need to develop provincial standards

governing hot weather and air temperature were identified in that report. Toronto Public Health in collaboration with other City divisions will continue to work closely with the Province in developing future legislation to regulate Ontario retirement homes and to further explore inclusion of standards related to hot weather.

Climate Change, Clean Air and Sustainable Energy Action Plan:

The City of Toronto’s Climate Change, Clean Air and Sustainable Energy Action Plan was approved by City Council on July 16, 2007. A Climate Change Adaptation Strategy is identified as a key component of implementing the Plan and improving Toronto's ability to cope with climate change. The Toronto Environment Office, in consultation with Toronto Public Health and other City Divisions, is developing the Climate Change Adaptation Strategy and hot weather response will be included as an important element. The Climate Change Adaptation Strategy staff report will be forwarded to the Parks and Environment Committee for consideration in Spring 2008.

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