November 13, 2007

To Brian McHattie

The Campaign for Adequate Welfare and Disability Benefits would like to send a delegation to speak to the Board of Health meeting in January. Would you please put this request as an agenda item at the council meeting on Monday, November 26th?

Given the well-documented links between conditions of poverty, aging, physical and mental handicaps, and chronic conditions related to thermoregulation, we can expect that the periods of heat, humidity and smog next summer and in the summers to come will put a great strain on a large population of our city.

One of the least recognized phenomenon related to heat distress, is the rapidity and relatively low temperatures at which dangerous symptoms may appear. Quoting from the Heat Wave Plan for England, “In contrast to deaths associated with cold snaps in winter, the rise in mortality as a result of very warm weather follows very sharply—within one or two days of the temperature rising. This means that: by the time a heat wave starts, the window of opportunity for effective action is very short indeed and, therefore; proper preparedness is of the essence.” They found that in the summer of 2006, there were an estimated 75 extra deaths per week for each degree of increase in temperature above the average.

Cities in southern Ontario have more likelihood of persons not dealing well with heat-related problems because there are wider swings in temperature so that the population does not have a chance to become acclimated to the heat. According to Joseph Rampulla, MS, APRN, BC, in speaking about healthy persons, “After seven to fourteen days of persistent heat exposure, the body becomes acclimated and adjusts to the heat through increased sweating, avid retention of salt by the kidneys and an increase in cardiac stroke volume.” (bold emphases are mine)

The same acclimation process does not take place in those most at risk from heat-related symptoms. Those risk factors include: skin conditions such as sunburn that interfere with sweating; dehydration; alcoholism; mental illness; cardiopulmonary disease; and age greater that 65. Children absorb more heat relative to their body mass and do not sweat as much as adults. Many medications affect heat dissipation such as beta-blockers, antipsychotics, tricyclic antidepressants, lithium, ethanol and diuretics.

People are generally very informed about the dangers of cold-related illnesses and there are numerous programs to help the homeless in the winter. However, the dangers of heat-related illnesses, which can become life-threatening in a very short time, are not well-known.

Our recommendation to the Board of Health is three-fold:
1. Very early in the spring begin to remind the public about the symptoms of heat disorders and the Heat Response Plan for the city. Ensure that the Heat Response Plan has built in features that will allow it to be implemented even when the Humidex is lower than specified if needed. In the summer of 1995, in Chicago, hundreds of bodies had already been brought to the morgue by the third day of extreme heat that triggered that city’s heat emergency plan.

2. Encourage people to become proactive about their safety in heat which might not trigger an alert but which can be dangerous to those at high-risk. Buses and bus shelters, newspapers, TV and radio can show that the key message for preventing heat-related illness and death is to keep cool.

Some of the best ways to do this are:

- Keep out of the sun between 11:00am and 3:00pm.
- If you have to go out in the heat, walk in the shade, apply sunscreen and wear a hat and light scarf.
- Avoid extreme physical exertion.
- Wear light, loose-fitting cotton clothes.
- Have plenty of cold drinks, but avoid caffeine and alcohol.
- Eat cold foods, particularly salads and fruit with a high water content.
- Take a cool shower, bath or body wash.
- Sprinkle water over the skin or clothing, or keep a damp cloth on the back of your neck.
- Keep windows and curtains that are exposed to the sun closed during the day, and open windows at night when the temperature has dropped.
- Consider putting up external shading outside windows.
- Turn off non-essential lights and electrical equipment—they generate heat.
- Grow trees and leafy plants near windows to act as natural air-conditioners.
- Keep indoor plants and bowls of water in the house as evaporation helps cool the air.
- If possible, move into a cooler room, especially for sleeping.

3. High-risk individuals should be contacted twice daily by family, friends or volunteer agencies. Temperatures inside buildings are often much higher than the published Humidex. A thermal hygrometer is a simple way to measure the temperature and relative humidity in an apartment or workplace. These should be widely available and encouraged. Landlords should be discouraged from charging extra for tenants use of air conditioners and those on OW or ODSP should be given funds to buy air conditioners and fans.

As citizens of Southern Ontario, and especially of Hamilton, with its large population of high risk individuals, we must become aware of the very real dangers of heat, humidity and smog. We need to become more educated and proactive about protecting ourselves and our neighbours.
We urge you and the members of the City Council to take these dangers very seriously by enacting emergency heat response measures in graded steps that react to even the small temperature changes that affect the most vulnerable of our citizens.

Yours truly,

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on behalf of the
Campaign for Adequate Welfare and Disability Benefits
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Arizona Heat Emergency Response Plan

The Department of Health Services has a Public Health Incident Management System. The PHIMS is a modular structure in that it can expand or contract depending upon the needs of the emergency. It is headed up by an Incident Commander.

**Heat Advisory** – issued when the temperature is forecast to be unusually hot but not life-threatening

The Incident Commander or those he designates:
- Makes recommendations to review and update heat emergency response plans
- Makes recommendations regarding emergency actions for special healthcare needs populations
- Drafts heat health alert messages for the public
- Updates scripts for messages on the 24-hour information line
- Notifies the Department of Education to limit outdoor activities for students
- Identifies licensed facilities by type (behavioral living, assisted living, long-term care) to establish communication with those facilities or identify potential intake locations in the event that there is inadequate cooling for individuals
- Provides technical assistance to licensed providers by identifying nearby or unaffected facilities for emergency transfers and passing on public health information
- Sends heat and other health alerts to service providers and hospital emergency departments.

**Excessive Heat Watch** – issued when conditions are likely to result in a life-threatening heat emergency within the next 24-48 hours

*In addition to the above activities*
- Notifies local health and emergency management departments to implement their heat emergency response plans

**Excessive Heat Warning** – issued when a life-threatening heat emergency exists or is imminent

*In addition to the above activities*
- Notifies local health and emergency management departments to implement their heat emergency response plans and increase surveillance for heat related illness
- Advise area hospitals of the excessive heat warning and urge them to consider the extreme weather conditions when discharging patients
- Coordinates with local health and emergency management departments, Red Cross, Salvation Army and others to have trained Crisis Intervention Specialists provide behavioral health screening, coordination and crisis counseling at cooling stations, hydration centers, emergency shelters or other locations established as a result of the emergency
- Immediately coordinate when there are any reports of a licensed facility exceeding temperatures or experiencing air conditioning operational issues
- Instruct services providers to assist consumers and providers of health care and child care in licensed facilities during a response to extreme heat

In advance of excessive hot temperatures:
- Draft and release messages for the electronic, written and media outlets
- Create a brochure containing FAQ on taking necessary precautions during a heat wave including
  1. what portion of the population is at greatest risk
  2. how to recognize and prevent heat stroke
  3. the importance of receiving two to four hours of cooling per day during periods of heat
  4. the need to look out for neighbours and older adults
  5. heat-related risks to family pets
  6. medication-associated risks
  7. where to call for assistance
• create local heat related resource cards listing information such as locations of water stations, cooling stations and agencies providing extended hours of medical and shelter services for the homeless and who to contact for ‘well-watch’ services

It is the responsibility of the Heat Emergency Response Plan committee to ensure that the plan is reviewed and updated on an annual basis.

**Philadelphia Heat Warning Action (highest level)**

**Media Announcements**

Media coverage is crucial for increasing and maintaining public awareness of the dangers of heat waves.

**Promotion of the ‘Buddy System’**

Friends, family, neighbours, church members, and other volunteers make daily visits to elderly persons during hot weather to make certain they have sufficient fluids, proper ventilation and the amenities to cope with the heat.

**Activation of the ‘Heatline’**

The ‘heatline’ is open from 8:30am to midnight (including weekends). Callers are offered information on coping with the heat. Nurses are available to speak to callers who are suffering medical problems. Nurses may make referrals to field teams who make home visits.

**Home Visits**

At least one team is always available. The mobile teams operate from referrals make by the nurse at the ‘heatline’.

**Nursing and personal care boarding home intervention**

Dept of Public Health contacts these facilities to inform them of an impending high-risk heat situation and to offer advice on the protection of residents. The Health Dept has been successful in having an ordinance passed that requires mechanical cooling of each resident’s room at all of these facilities.

**Halt of utility service suspensions**

The local electric company will halt service suspensions during heat warning periods.

**Increased emergency medical service (EMS) staffing**

Increased staff is scheduled in anticipation of increased service demand.

**Daytime outreach to the homeless**

Homeless services are shifted from an evening activity to an intensive daytime outreach effort to assist the homeless on the street.

**Senior centre services**

Senior’s centres extend their hours of operation to evenings and weekends.

**Air-conditioned shelter capability**

The Dept of Public Health has the capacity to move persons at high risk out of dangerous living situations to an air-conditioned (overnight) shelter facility.

**American Journal of Public Health 2004; 94: 1520-2: Municipal heat wave response plans**

**Criteria for development of an effective heat response plan (HRP)**

1. Identify a lead agency and other participating agencies and nongovernmental organizations, describing roles and responsibilities in detail.
2. Review plans annually, before onset of warm weather, to review response protocols and confirm participation of lead personnel.
3. Identify activation and deactivation thresholds for the HRP (e.g., extremes in daytime high and nighttime low temperatures and deviation from local norms).
4. Before a heat emergency, use preexisting communication plans and public education tools to define a clear communications strategy and pathway from the lead agency to first responders, the public, and the media.
5. Define risk factors, populations at high risk, and methods to reach them (e.g., daily checks on the elderly by social service agency personnel and provision for transportation to air-conditioned public centers).
6. Establish a method to evaluate and revise the HRP, including post-emergency meetings with participating agencies to review response activities, activation and deactivation thresholds, communication plans, outreach activities, and the association between weather data and heat-related morbidity and mortality.