



HEAT REGISTRY MANUAL

A Heat Registry offers a way to track (through regularly updated documentation) and actively monitor people who might be at risk from suffering ill effects caused by extreme heat. It provides a system of checking in on, and checking up on (through outreach or some other effort), people who have voluntarily self-identified as being at risk and want to be on the Registry.

Dedication

The Heat Registry Manual is dedicated to the memory of Richard Howell, a member of the Parkdale Activity-Recreation Centre who died in the summer of 2005 from heat-related complications. His death helped spur the work at PARC to create a new Heat Registry and Heat Response model. He is missed, but his memory lives on through this legacy.

Writing Credits

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Definition

A Heat Registry offers a way to track (through regularly updated documentation) and actively monitor people who might be at risk from suffering ill effects caused by extreme heat. It provides a system of checking in on, and checking up on (through outreach or some other effort), people who have voluntarily self-identified as being at risk and want to be on the registry.

Introduction

This Heat Registry Manual presents detailed information on setting up and running a heat registry. It is designed to be transferable to all types of agency and community, although it is assumed that the work will be conducted by a community social service agency such as a drop-in, a supportive housing provider, a community health centre, a hostel or a seniors' centre.

The manual provides information, templates, and examples of what took place during the first two years of piloting the Heat Registry at the Parkdale Activity-Recreation Centre (PARC) during the summers of 2008 and 2009, and at Sistering through the summer of 2009. While the examples are Toronto-specific, the model is one that can be used for both large cities and smaller communities; in our case, it was based on a small geographic neighbourhood.

Overview

A heat registry can play a key role in the provision of options available to marginalized and vulnerable communities. Heat registries should be designed for the neighbourhood/community they are supporting. To be most effective, we encourage you to adapt the tools that this manual provides to your own specific needs. This is a living document intentionally supporting a heat registry model evolution.. Where feasible, a variety of options have been provided. Pick the one(s) that works best for you and your organization.

The goal of a heat registry is to prevent heat-related morbidity and mortality (illness and death), and to improve people's ability to live safer and healthier lives during hot weather conditions. Ideally, a heat registry should include a review of the policies and practices of community agencies and municipalities, including staff roles, during extreme hot weather. It should educate both staff and clients about the risks and dangers of heat, and outline clear methods of communicating heat emergencies. In our model, we also included information on access to fans, air conditioners and other cooling supports.

Through tailoring a heat registry to the specific needs of its users, the individualized response will improve the registry's ability to respond suitably to its clients. In general, a heat registry involves assessing clients' risks of suffering ill effects from the heat, based on a series of "risk-weighted" questions. These questions can be answered by a client directly, or by a staff member who is extremely familiar with that client's health and housing status.

When a heat alert is called (usually by the municipality), or on other days of extreme hot weather, various outreach activities are conducted to ensure that clients are safe. Multiple check-in and outreach methods must be used when working with vulnerability communities, as some of the issues (for example, language and literacy barriers, social isolation, mental health status) that make them most at risk also tend to limit their access to information. In our examples, we used phone check-ins (to clients and from clients), attendance at drop-ins, and home outreach as tools to ensure the safety of registry members.

Heat Registries can be run by staff, volunteers or peer outreach workers. Both the PARC and Sistering models were extremely dependent upon peer outreach workers who worked in partnership with staff. The pros and cons of each variation will be discussed.

Understanding Extreme Hot Weather



In North America, heat kills more people than all other weather-related calamities (such as lightning, earthquakes, tsunamis, extreme cold and hurricanes) combined.ⁱ In Toronto alone, extreme heat is responsible for 120 deaths annually, compared to 105 from extreme cold.ⁱⁱ Yet, the majority of heat-related deaths and illness are preventable.ⁱⁱⁱ Heat should not be the killer that it has become; rather, communities, agencies, public health departments, medical facilities and similar groups should work together to reduce the risk of increased illness and death.

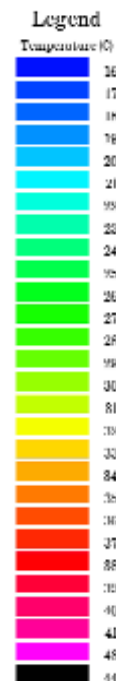
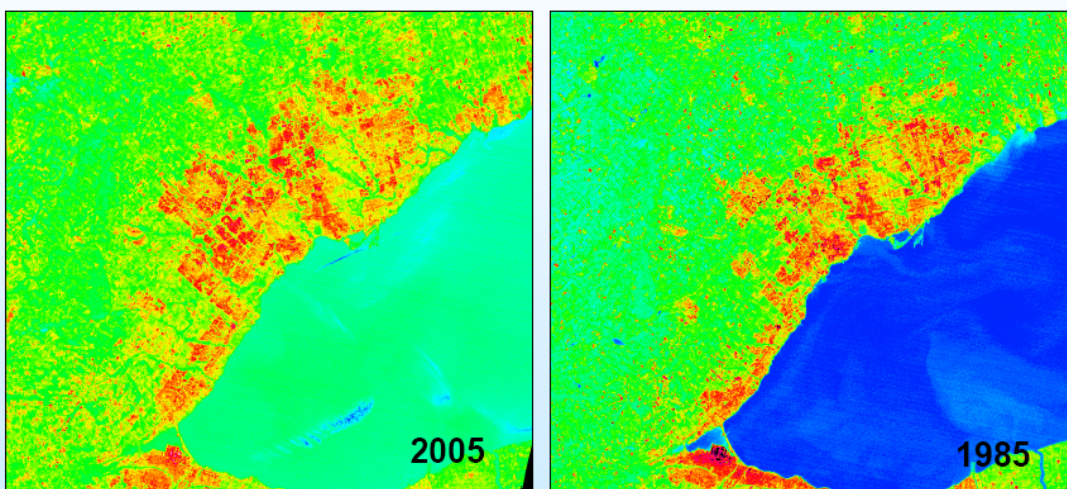
Due to growing urbanization, a changing climate and an increasingly elderly population, Toronto faces three of the highest heat-related risk trends.^{iv}

Growing Urbanization

Toronto's population was 2,503,281 according to the 2006 Census. Development in Toronto continues to rise, and with it comes the Urban Heat Island Effect. Many studies have found a correlation between heat risk and urban areas. "Urban populations in developed countries may be more vulnerable because of higher underlying rates of cardio-respiratory disease because of higher heat exposures due to the urban heat island effect and other types of housing." Urban areas may also have less vegetation, darker roofs, reduced airflow from tall buildings, higher waster heat from cars and industrial areas, etc.^v

This contributes to the Urban Heat Island Effect, which causes temperatures to rise in cities, especially when compared to surrounding areas. Over the past twenty years the temperature has increased in and around Toronto, including the surface temperature of the lake (shown blue in 1985 but green in 2005).

Urban Heat Island Effect Intensification



Temperature hot spots have multiplied and warmer areas are seen in most of the City of Toronto. Significant heat areas have expanded into the suburbs and surrounding GTA.

Aging Population

In the Toronto Census Metropolitan Area (CMA), 11.9% of the population were seniors 65 and older, up from 11.3% in 2001. Baby boomers, a cohort that will soon become seniors, make up nearly 30% of the population. In fact, the City of Toronto, as opposed to the census area, is the only municipality in the Toronto CMA with a lower than national average percentage of children and youth under the age of 15.^{vi}

Global Warming

“The increased frequency of heat-stress episodes is likely to be one of the most direct consequences of global warming and there may be a doubling of heat-related deaths world-wide by 2020.” Exactly how fast the planet is warming is the subject of debate. In 1998, global temperatures set a record for warmth every month between January and June.^{vii} “Climate model simulations have suggested that temperatures in Southern Ontario will warm between 2°C and 5°C by the end of the 21st century”.^{viii}

While the consequence of global warming will be felt all over the world, the combination of urbanization and an aging population means it will have a serious impact in Toronto. A study on climate change models that looked at climate and heat mortality found that the eastern United States will have a high mortality density (as will East Asia, South Asia, and Europe) because of high population density as the heat rises. Toronto and southern Ontario also fit into that category. According to this model, if population density remains the same and age compositions are consistent, the change in excess mortality density due to heat stress (future excess mortality minus existing excess mortality) in Canada will reflect an approximate 230% increase in 100 years.^{ix} This correlates with other studies, which found that “heat-related mortality is projected to double or triple by the end of the century”.^x

In addition, there are specific population groups that have a higher risk of morbidity and mortality as a result of extreme heat. These groups include the elderly, very young infants (under the age of one), homeless people, people living in marginal housing situations, those who are socially isolated, and those who are ill - especially from heart or circulatory disease but including addictions and mental illness. Socio-economic factors can also create additional risk.^{xi} As climate change becomes a bigger force, and summers get warmer, the problems of heat are going to become even more significant. Agencies working with people who are marginalized have to be ready to respond.

Risk Factors Explained

Seniors/Elderly

Most deaths across the developed world (including North America, Italy, France and the United Kingdom) related to heat have been in elderly populations. A study in Vienna found that 80% of heat-related deaths in 2003 occurred in people over the age of 65. During Chicago’s 1995 heat wave, nearly three-quarters of the victims were over the age of 65.^{xii}

In some seniors, the way in which their body regulates temperature changes and they tend to not feel the effects of heat until it is potentially too late. As homeostasis is impaired, the elderly may not be aware that the hot weather is affecting their health, and therefore may not take appropriate actions to reduce their exposure. Their thirst



mechanism diminishes, which means they no longer feel thirsty, which in turn leads to them not maintaining an appropriate fluid balance in their system; this increases their risk for dehydration. In addition, there is a high correlation between age and increasing illness, disability, medication use and reduced fitness.^{xiii}

In one study of seniors over 65, more than half felt that heat wasn't dangerous to them or was only slightly dangerous. Only one in seven felt that heat was very dangerous.^{xiv}

Seniors who are living on a limited income may choose not to use their air conditioning because of a sense of needing to conserve energy or a concern about the cost^{xv}. Yet, just a few hours of air conditioning can reduce someone's risk of suffering heat effects. Seniors are sometimes isolated from their community, family and friends because of geography, health and even the death of those people with whom they were once close to. Social isolation can mean there are no regular visits or contact with people who can check on how they are coping with the heat.^{xvi}

Infants under one year old

Very young children can get dehydrated very quickly. This isn't always obvious to a parent or caregiver. Because of the inability of an infant to communicate clearly, extra attention must be paid to ensure that they are drinking enough liquid.^{xvii}

Homeless People

People who are homeless aren't always able to escape from the heat. Those that live on street grates endure the heat and steam rising from beneath them, as well the exhaust from cars. Smog alert days and heat alert days often overlap; as a result, living outside may cause increased breathing problems. Additionally, homeless people often contend with multiple health issues, poor nutrition, lack of access to services, and an inability to access beverages needed for hydration. They also face a risk from ongoing exposure to the sun.



People living in Marginal Housing Situations

The construction and redevelopment of rooming houses, boarding homes, secondary suites and low-income apartments have led to a significant number of units that don't provide escape from the heat for tenants. "Exposure to heat stress is higher in poorly designed housing with no access to cooling centres or air conditioning...mapping of heat event deaths in St Louis in 1966 showed the highest rates in inner city areas where population density was higher, open spaces were fewer, and where socio-economic status was lower than in surrounding areas."^{xviii}

Some basement apartments have small windows and others contain higher levels of mold. Rooming houses and boarding homes may be a single-family home converted into multi-residential units; consequently, problems may include limited airflow, small windows and inadequate ventilation. Apartments over stores or restaurants often experience increased heat as a result of the activities of the business below. In high rises, units on the upper floors tend to be subjected to hotter temperatures. In many areas, several apartment buildings have been built closely together, which reduces the airflow between and around buildings. Additionally, problems with pests – especially bed bugs – mean that individuals are dealing with uncomfortable living and physical health situations (itching from the bites) that are aggravated by the heat.

Socially Isolated

During the 1995 Chicago heat wave, social isolation was one of the most significant factors in determining who lived and who died. People who are isolated (which often overlaps with mental and physical health, addictions, poverty, housing status and age) lack access to supports, family and friends to check on their condition. Often this situation is taken to an extreme by those who are isolated actually rejecting or ignoring attempts by others who want to ensure that they are okay. This is especially true in higher crime areas, where an individual may perceive someone trying to help as someone trying to take advantage of them.^{xix}

Ill Health

One factor that contributes to a higher number of deaths during a heat wave, but which is sometimes disregarded when creating totals, is known as “harvesting”. This refers to “people at terminal stages of disease dying during heat waves, instead of a few days later”.^{xx} Also, those who suffer from a physical impairment that limits mobility, or who are bed-ridden, will have difficulty accessing a cooler location.^{xxi} Conditions that are particularly vulnerable to heat include heart problems (including high blood pressure, heart attacks and strokes), respiratory illnesses (for example, asthma and emphysema) and diabetes. Menopause can also be an issue for middle-aged women.

Addictions

Addictions can impair an individual’s judgment, by decreasing their ability to take care of themselves and monitor their own condition during the heat. Consuming alcohol and taking certain medications can also be detrimental during a heat wave; dehydration may occur more quickly.



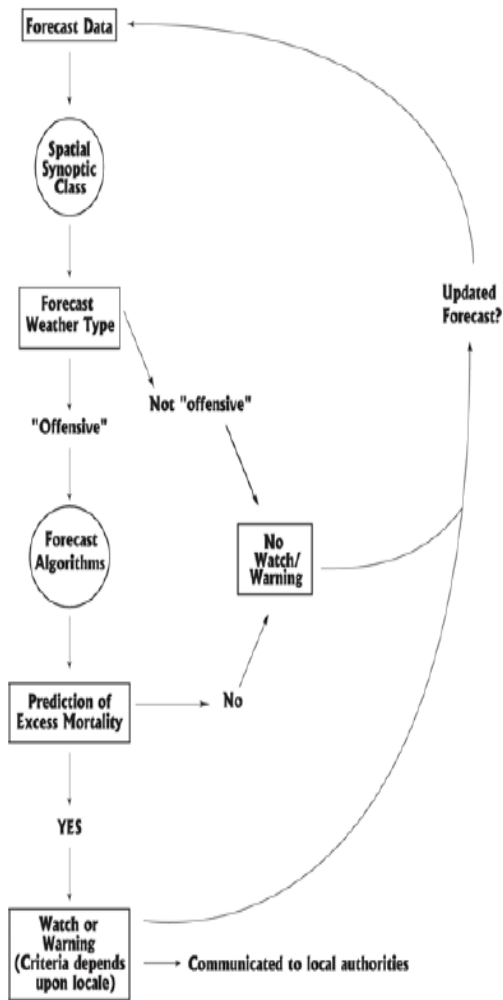
Mental Illness

Heat affects those with a mental illness in various ways. Psychotropic medications can cause people to feel the heat more intensely; when the weather is hot, it can amplify the medications’ sedative effects and speed up dehydration.^{xxii} An individual with paranoia may become increasingly isolated and unwilling to reach out to services, or even to respond to landlords, outreach workers or others wishing to check on their health. Some people with mental health issues wear excessive clothing that can easily cause them to overheat. Stress, and the poverty risks which often accompany mental illness, can reduce people’s attention to self-care.



A combination of factors can increase an individual’s risk to the heat exponentially. The heat registry questionnaire used in the pilot programs is designed to examine the impact of multiple factors, in order to help assess risk.

Toronto's Heat Health Alert System



Toronto uses a synoptic climatology method in its Heat Health Alert System for the city. Synoptic climatology draws on a holistic approach to determine specific weather and climate conditions that have caused excess death in the past. Research into health, mortality and weather data over a period of time - in Toronto's case, 46 years - is analyzed in order to develop an algorithm that will estimate the risk of increased mortality. Conditions analyzed include: temperature; dew point (the temperature at which dew condenses); cloud cover; humidity; wind speed and direction; length of time it has been hot; and when the heat occurred in the summer season. Heat-related mortality is evident on the very first day, and worsens if the heat wave extends beyond three days.^{xxiii}

Toronto Public Health staff monitor the Heat Health Alert System several times a day from May 15 to September 30. When Toronto Public Health receives information predicting hot weather, the Medical Officer of Health may then choose to issue a Heat Alert or an Extreme Heat Alert, depending upon the severity of the prediction. Both Heat Alert and Extreme Heat Alert mean that an oppressive air mass is forecast and the likelihood of deaths may increase due to the weather. During an Extreme Heat Alert, the likelihood of premature weather-related deaths increases because the heat has become more severe or is lasting longer. In Toronto, heat alerts are called when there is a 65% chance of increased mortality, and extreme heat alerts are called when there is a 90% chance of increased mortality.^{xxiv}

Figure 1 – Synoptic Climatology model used to determine when to call a hot weather event^{xxv}

Heat Response

Each type of alert leads to a variety of responses. These range from notifying community agencies to homeless shelters allowing clients to stay inside during the day, increased street outreach, the opening of a Red Cross information line and park-based water delivery. During Extreme Heat Alerts, the Toronto operates several cooling centres throughout the city from 11 am to 7 pm, and one site (currently Metro Hall) is opened 24 hours a day.

The Toronto Hot Weather Response Plan

In Toronto, Public Health – through its *Healthy Lifestyles, Healthy Environments* division – has responsibility for most heat alerts. The Hot Weather Response Plan is a living document, in that it goes under annual, and sometime semi-annual, review. The latest versions can be found at:

http://www.toronto.ca/health/heatalerts/beatheat_program.htm



Project Development Principles: Prevention/Mitigation, Preparedness, Response and Recovery

The Heat Registry operated at the Parkdale Activity-Recreation Centre (PARC) in the summers of 2008 and 2009, used the Disaster Management concepts of “Prevention/Mitigation, Preparedness, Response and Recovery (PMPRR)”^{xxvi} to deliver a program that a) tries to help prevent heat from becoming an issue, and b) helps people out when it does.

These four pillars of emergency management provided a context for the operation of PARC’s Heat Registry. We wanted to approach the hot weather from a proactive, as well as a reactive, position. This included being prepared to respond, but also the provision of fans, water and assistance in obtaining air conditioning.

We feel that the best heat registries will incorporate all of these aspects; however, we also recognize that funding limitations – at both a municipal and agency level – may restrict this from happening.

Prevention/Mitigation

The prevention/mitigation phase of a natural disaster means those steps that are conducted to reduce the impact of a potential disaster. In earthquake-prone areas, this means the construction of buildings in a way that will make them more secure during an earthquake. For a flood- or hurricane-prone area, this could mean the building of levees along waterways.



There are many aspects that can fall within this category, including the entire concept of the heat registry, which is designed to prevent the negative impacts of extreme heat. In our pilot, however, we incorporated several key components: the provision of fans through a fan-lending program, assisting clients to access cooling supports through a municipally-funded program (Ontario Works, Toronto Social Services Special Needs Unit), and educating clients about heat risks. Adding further fortification to our efforts are the multi-lingual pamphlets created by the City of Toronto, which address dealing with heat risk in a variety of situations.

Preparedness

The preparedness stage of dealing with a disaster may overlap with prevention/mitigation, as it did for us. It includes ensuring that families and communities have communication and evacuation plans in place – from the simple ‘how to evacuate your house during a fire’ to more complex processes that look at evacuation centres, contraflow lane reversal and other systems for mandatory city-wide evacuations. The key issue in preparedness is education.

While client preparedness is important, we addressed this mostly under prevention/mitigation. We did, however, begin registering clients as early as April in the first year, and May of the second year. This allowed us to develop a database of high-risk clients, well before the hot weather arrived.

Preparedness for our pilot was mostly directed at the agencies that hosted the heat registries or partnered with us. We obtained a large delivery of water through The Bargains Group’s Project Water campaign, which we gave out to clients on hot days. Staff was trained to be aware of heat symptoms (such as cramps, stroke, and stress). Agency policies and staff practices were reviewed to determine the optimal functioning for heat alert days. We would have liked to expand this, to include outreach to businesses and landlords in the community,

as they can play a key role in heat response. However, we were limited in scope by human and financial resources.

Response

Natural disaster response generally operates at two levels: community-based and government-based. Community response takes place in the first few hours or days following a disaster. After the recent earthquake in Haiti, it was regular community members who were the first responders, pulling people out of crumbled buildings. Government response comes later and includes search and rescue, first-aid and field hospitals, evacuation centres and housing, and the provision of meals, water and supplies.

Outlined in greater detail elsewhere in the manual (see pages 46 onwards), our response model included checking on people who were registered (through drop-in attendance, phone calls and home outreach) as well providing water, and general announcements about heat alerts. We also attempted to extend hours of the drop-in programs, to enable clients to stay indoors in air-conditioned spaces. The City of Toronto supplied TTC tokens that were distributed to clients, allowing them to access cooling centres on Extreme Heat Alert days.

Recovery

Recovery from a major disaster is a long and involved process. Communities and families are often scattered – after Hurricane Katrina, for example, residents were sent not just to neighbouring states but also to every state within the continental USA. If a disaster has caused damage to homes, buildings or community infrastructure, these must all be rebuilt.

The recovery phase should move a community back into prevention/mitigation. This process should be seen as cyclical and ongoing. Lessons learned throughout the disaster phases allow government at all levels, residents and community organizations to determine what new prevention/mitigation methods should be incorporated.

For us it meant a continual review of practices and materials (from information resources to all of the written guidelines pertaining to the operation of the Heat Registry). Our goal was simply to ensure they were as useful as possible. Since we weren't faced with any extreme heat waves, we did not have to deal with traditional response issues. Instead, we used the time after each heat alert to assess and improve our systems and procedures. We found that PARC members were most interested in the project during and shortly after a heat wave, and so we were able to process a large number of registrations and air conditioner applications after each heat alert. At the end of the summer, we reviewed the entire process before moving on to make plans for the next year.

Participatory Research Design

Our entire process – from development through implementation to evaluation and recommendations for future work – was carried out using a participatory process. The peer outreach workers were involved at each stage, working in conjunction with a student from York University studying for a Masters degree in Environmental Studies. Community agencies also played a key role in the creation of the Heat Registry. As is typical with community-based research projects, our underlying assumption was “nothing about us without us.” Since the work that was being done was aimed at benefiting a specific population, that population played a key role in determining the function and outcomes of the project, from beginning to end.

Education

Training was conducted in multiple ways, and included training for staff, peer outreach workers and for agencies partnering with the project. Specific peer-related training is outlined later. Our staff/agency training focused on two areas: Heat-Related Issues and Heat Registry Functioning. As each Heat Registry will operate differently, this section will focus on heat-related training. The information is based on materials from Toronto Public Health, and can be cut and paste for a PowerPoint slide show.

Why is heat an important issue?

- In the United States, “excessive heat is the number one weather-related killer, causing more fatalities per year than floods, lightning, tornadoes, hurricanes, winter storms and extreme cold.” The situation is similar in Canada.
- Approximately 120 people die from heat-related illnesses every year, in the City of Toronto.
- In 1995, Chicago suffered a devastating summer when over 600 people perished. France experienced an even more horrific summer in 2003, when nearly 15,000 people died. This has spurred many governments to take action on this issue.

What does Toronto do?

- Toronto developed its Heat Warning System in 1999, and then overhauled it in 2000/2001, in conjunction with the University of Delaware.
- Toronto developed a Hot Weather Response Plan in 2001, and has updated it several times since.

Terminology

Heat Alert and Extreme Heat Alert – These are called by the City of Toronto when a hot air mass is forecast, and the likelihood of deaths is more than 65% for a Heat Alert or 90% for an Extreme Heat Alert. They are collectively known as heat events.

Cooling Centre – Cooling Centres are opened only when an Extreme Heat Alert is called. They are city-funded, but staffed primarily by Red Cross volunteers.

Cooling Places – Cooling Places are city-owned and operated facilities with air conditioning that are available during heat events for people to cool off and obtain water.

Why do we have Heat Alerts?

To minimize the negative health impact of extreme heat. Heat Alerts/Extreme Heat Alerts are meant to warn the public, especially those most at risk, to take precautions due to the existing hot weather conditions.

What constitutes a Heat Event?

A heat event is a rating of how the weather affects human health, based on data about different air masses and climate conditions. Some of the air mass and climate conditions include:

- Temperature
- Dew point (the temperature at which dew condenses)
- Cloud cover
- Humidity
- Wind speed and direction
- Length of time that it has been hot
- When the heat occurred in the summer season

Two Types of Heat Alert

Heat Alert

- When the likelihood of excess weather-related deaths exceeds 65%.
- Advises taking precautions to beat the heat.
- During a heat alert, notices are sent to all registered “partners” by email or fax. This notice encourages them to implement their own heat response plan, which could include offering water, increased access to air-conditioned space, posting a notice, or cancelling certain services.

Extreme Heat Alert

- When the likelihood of excess weather-related deaths exceeds 90%.
- Several Cooling Centres are opened to provide special services; most operate 11 am to 7 pm, one is open 24 hours.
- Notices are sent to all registered partners, as described above.
- Red Cross delivers water in city parks.
- City pools offer extended hours.

Other Responses

- The city’s Hot Weather Response Team meets two or three times per year – it includes representatives from Public Health, Toronto EMS (Emergency Medical Services), Shelter Support and Housing Administration, Toronto Public Libraries, Animal Services, Red Cross, Toronto Police Service, Toronto Disaster Relief Committee, Street Health and other similar agencies – to discuss ongoing heat response.
- Drop-ins are able to apply to offer extended hours (i.e. weekend hours) if they have air-conditioned space.
- Drop-ins and other service providers are able to access tokens from Shelter, Support and Housing Administration to distribute to clients during Extreme Heat Alerts.
- Red Cross and Street Helpline coordinate phone response to connect people in need to services.

Risk Groups

High-risk groups include socially isolated individuals, seniors, people with chronic and pre-existing illnesses including mental illness, children under one year old, people with poor nutrition or who are dehydrated, people who work outside, and people living in poor housing or who are homeless.

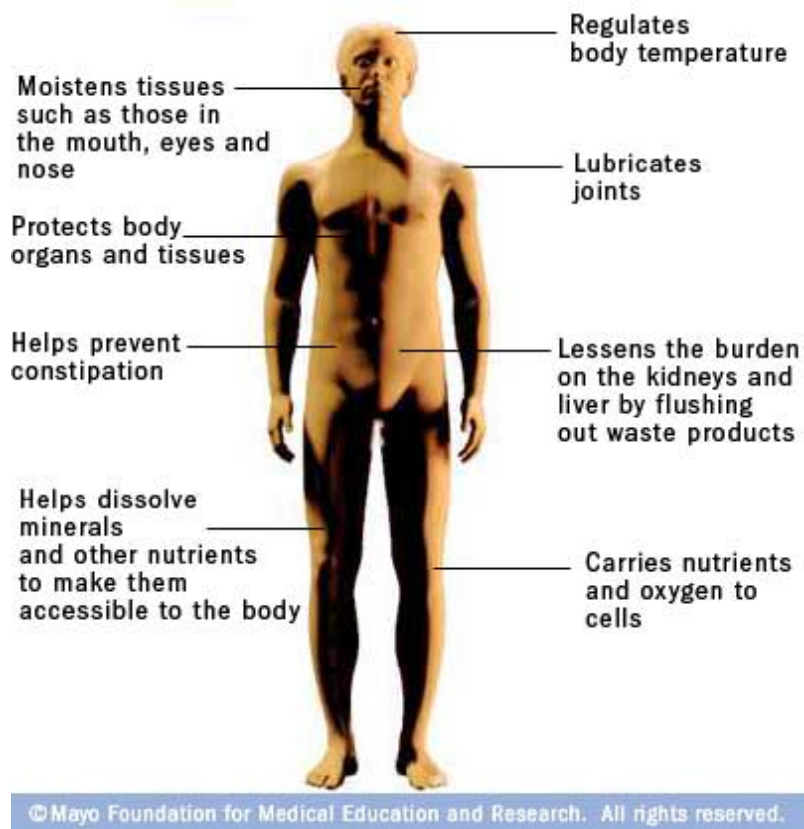
Medications

Some medications can:

- Affect your body’s ability to control temperature
- Contribute to decreased feeling of thirst
- Contribute to increased loss of fluids, leading to dehydration
- Make it easier for your skin to burn

Consult with a doctor or pharmacist, and see the City of Toronto’s *Medications and the Heat* brochure.

The importance of water in the body.



Heat-Related Illnesses – Warning Signs and Actions to Take

Heat Rash

A heat-induced condition characterized by a red, bumpy rash with severe itching.

Sun Burn

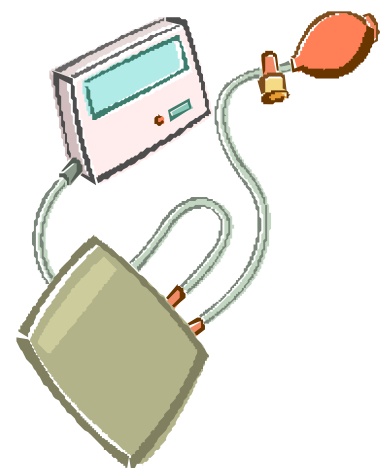
Over exposure of the skin to ultraviolet (UV) rays from sunlight characterized by redness, pain and, in severe cases, swelling of the skin, blisters, fever and headache.

Muscle Cramps

A heat-induced condition characterized by painful cramps in the arms, legs or stomach, brought on by prolonged activity and sweating during hot weather.

Heat Exhaustion

A heat-induced condition characterized by sweating, cool moist skin, high body temperature, weak pulse and may include fainting and vomiting.



Heat Stroke

A heat-induced condition characterized by high body temperature and any of the following:

- Weakness
- Confusion, emotional upset and strange behaviour
- Hot, dry, flushed skin
- Fast pulse
- Headache and dizziness
- Possible unconsciousness or seizures

General signs and symptoms of heat-related illnesses

Get help if you or someone you know experiences:

- Headache
- More tiredness than usual
- Weakness, dizziness, or fainting
- Nausea
- Rapid or difficulty in breathing
- Confusion or disorientation

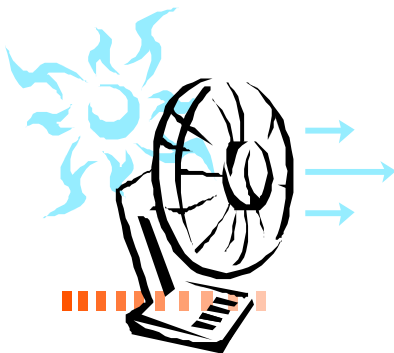


How to help someone with a heat-related illness

- Call for...HELP
- Move the person to a cooler place
- Loosen excess clothing
- Cool the person down by patting or sponging with lukewarm water
- Give the person sips of cool water (not ice-cold water) provided there is no nausea or vomiting

Prevention of heat-related illnesses

- Drink lots of water & fruit juices.
- Find a cool or air-conditioned place to rest.
- Stay out of the blazing sun or heat.
- Decrease your activity level; take frequent rests.
- Wear light, loose-fitting, light-coloured clothing.
- Take frequent lukewarm bath / showers.
- Cover windows to keep out sunlight.



Safe Fan Use

Do:

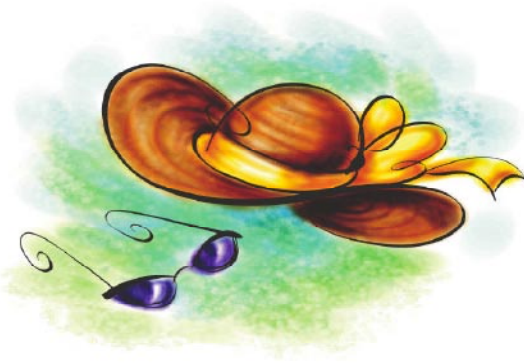
- Use next to an open window to bring cooler air from outside.
- Plug your fan directly into the wall outlet.

Don't:

- Use in a closed room.
- Believe that fans cool the air – they just move the air around.
- Use a fan to blow hot air on yourself.

Keep cool outdoors

- Wear a wide-brimmed hat, sunscreen and sunglasses.
- Wear light-coloured, long sleeved, loose-fitting clothing.
- Reduce the time spent in the sun, between 11:00 am and 4:00 pm.
- Look for shaded areas to enjoy outdoor activities.
- Drink lots of water and take frequent rest breaks.



Getting help in an emergency:



Call 911

Canadian Red Cross Heat Information Line: 416-480-2615 (9:00 a.m. to 9:00 p.m.)

Toronto Health Connection: 416-338-7600 (Mon – Fri 8:30 a.m. to 4:30 p.m.)

Visit us at www.toronto.ca/health/heatalerts

The Parkdale Community

During Year 1 and most of Year 2, we conducted our pilot program in Toronto's Parkdale neighbourhood. The area covered by our outreach team was bordered by Lake Ontario in the south, Bathurst Street in the east, Parkside Avenue to the west, and approximately to Dundas Street in the north. However, some clients lived outside of these boundaries, and were served through phone outreach.

Parkdale is a unique community that faces many issues. The combined impact of the de-institutionalization of mental health facilities (Lakeshore Psychiatric Hospital in 1979 and Queen Street Mental Health Centre in 1998), with the extensive outreach patient program at St. Joseph's Health Centre has placed an immense burden on the Parkdale neighbourhood and has contributed to the proliferation of boarding houses and rooming homes in the community. The Parkdale Activity-Recreation Centre (PARC drop-in was created 30 years ago, in large part to respond to the high need in Parkdale for services for people with mental health issues.

Parkdale Statistics

Population – 50, 640

Number of Dwellings – 24, 130

Only 8.1% of Parkdale's population live in single-family homes compared to the city average of 27.3%.^{xxvii} In fact, 40% of the dwellings have only one person living in them.^{xxviii}

This can be attributed to the high number of apartment buildings in the area:

- 38.9% live in apartment building of five storeys or more (compared to the city-wide figure of 38.8%)
- 35.8% live in buildings with less than five storeys (compared to the city-wide figure of 16.6%)^{xxix}

Figure 2 <http://www.toronto.ca/wards2000/images/ward14.gif>



--- **14** Parkdale-High Park --- ↑ ---

The Heat Registry Pilot

History

The Parkdale Activity-Recreation Centre (PARC) has spent over two years developing, implementing and evaluating the Heat Registry pilot project. The first registry operated in the summer of 2008 and the second in the summer of 2009. The Heat Registry built on work previously done by PARC and other community organizations.

PARC has a long history of working with people living in poverty, dealing with disability and mental health issues, and with compromised housing. In 2005, a PARC member, Richard Howell, died in his residence, which was a room on the third floor of a boarding home in Parkdale.

”Richard’s death was caused by extreme heat conditions converging with the other risks he experienced as a psychiatric survivor; including personal health issues, heat / treatment hazard and inadequate housing.”^{xxx} His death, together with other deaths occurring during spells of hot weather, created general alarm within the PARC community. In response, PARC joined with the Toronto Disaster Relief Committee and the Medical Officer of Health to request an inquest be held into all of the circumstances leading to Richard’s sudden and tragic heat-related death.

In spring 2007, the Office of the Chief Coroner denied the request, stating, “We didn’t think that there was anything of value that could be learned from such an inquest.”

PARC conducted heat outreach services in 2006 that built upon the increased hours of its drop-in service. An outreach worker connected with PARC members to encourage them to attend the drop-in, in order that an informal assessment of their needs and health status could be conducted. The heat was so severe that summer that the worker ended up on sick leave due to heat stress.

The following year, in 2008, the West End Heat Registry/Heat Response pilot was designed to expand upon the work of the previous two summers, by building a neighbourhood-based program in the west end/Parkdale area. The behavioural modification messages most commonly promoted – in brochures, websites and through the media – focus more on actions that can be taken by individuals. These include reducing activity, drinking more fluid, decreasing alcohol, finding cool places to stay during the heat, wearing light and loose clothing, and checking on elderly people. However, “it is clear that passive dissemination of heat avoidance advice is insufficient to prevent many deaths”.^{xxxii}

In its second year, the Heat Registry added a couple of components. In addition to the PARC location, the peer outreach workers also worked out of the Sistering Drop-In’s Parkdale location. This operated as a satellite location, with PARC peers conducting the registration, assessment and outreach activities. In late July, a second heat registry was opened at Sistering’s main Bloor Street drop-in. Staff and peer outreach workers were hired, and the new site operated as a stand-alone project (although with support from the original PARC Heat Project Coordinator). One of the PARC peers was hired to work at the new Sistering project, as a lead peer providing support to staff and the new peers.

Profile of Sistering

Sistering – A Woman’s Place is a women’s organization that offers practical and emotional support to women through programs that enable them to take greater control over their lives. Guided by the principles of Anti-Racism/Anti-Oppression, Sistering works to change the social conditions that endanger women’s welfare.

Sistering operates a multi-service women’s centre for women who have been affected by poverty, homelessness, trauma and displacement. The core services offered are basic needs for daily living, housing support services, counselling, advocacy, harm reduction and income and employment supports.

There are three locations in Toronto: the main Drop-In Centre on Bloor Street West, a Drop-In/Outreach Centre located in Parkdale, and two social purpose enterprise art/craft-based studios: Inspirations Studio, on Queen Street West and Spun Studio, located at the Drop-In on Bloor Street.

Many of the women who access Sistering supports through our two drop-in locations are seniors - most notably, the women who attend our Parkdale drop-in. This past year, Sistering conducted a demographic survey of the women who use our services. Of those women surveyed, 44% of the women who attend our drop-in in Parkdale are between 46-60 years old, 36% are between 61-74 years old. Of women surveyed at our main drop-in located on Bloor at Dovercourt, 31% are between 46-60 years old and 31% between 61-74 years old.

These are women who have been profoundly impacted by poverty, trauma, homelessness and displacement. Many struggle with mental health and addictions, and live on inadequate government financial supports. These are women marginalized from mainstream access to employment, healthcare and appropriate, safe housing. Many of the senior women we serve have experienced a lifetime of abuse and trauma. This population is burdened with premature aging issues due to the impact of poverty and trauma, and the lack of needed supports throughout their lifetime.

Partnering on the Heat Project

Sistering welcomed the opportunity to partner with PARC this past summer of 2009 in order to address the serious health concerns related to heat for the women we serve. The project was set up at both our drop-in locations, with a separate heat registry set up at our Bloor Street location. Two peer outreach workers were hired from our drop-in. Support and training was provided by PARC’s Heat Registry Coordinator, with additional support by a student and a PARC peer.

The joint training provided by PARC for staff and peer workers from both Sistering and PARC was incredibly valuable, and made important agency links that have extended beyond the Heat Project. The peers benefited tremendously from the work experience – from the financial compensation to learning new skills, working as a team, and being part of a larger initiative that addresses issues related to health and well being – issues that they understand well.

The project also benefited our agency as we learned firsthand the values of this model – particularly the peer-led focus, and the development of a registry that identifies those at risk, then creates an effective communication plan and means for information-sharing. We plan to utilize this model to address other issues related to vulnerabilities in the population of the women we serve.

Profile of the Parkdale Activity-Recreation Centre

The Parkdale Activity-Recreation Centre (PARC) was born in 1977, when a group of dedicated community volunteers observed the large number of adults living in Parkdale rooming houses and boarding homes. Many were survivors of the psychiatric system and had little income, few family contacts and no place to go during the day. After acquiring funding, staff and a space to rent at 1499 Queen West, PARC opened its doors on March 17, 1980. These were humble beginnings: a couple of staff, a stove and a place for social interaction, playing cards, comparing stories and developing a new history. Over time, PARC has grown into an organization that issues hundreds of T4s and runs a multitude of programs and initiatives with a budget over \$2 million. In addition to the many programs offered, PARC also provides affordable housing. An extensive renovation, completed in 2000, created ten units of housing on the third floor of 1499 Queen, including two accessible suites for people with physical disabilities. PARC's future as a housing provider is even more exciting. 2007 marked the beginning of the development of Edmond Place, a 29-unit building at 1495 Queen St. West, slated to open late 2010.

PARC has advocated and fought for the rights of survivors and marginalized people from its inception, always supporting member involvement in systemic change projects. The Heat Registry Project is an example of PARC's program process. PARC has always tried to hire from its membership, create new support / employment initiatives, and shed light on the desperate need for affordable and supportive housing. These efforts to improve the quality of life of psychiatric survivors and marginalized persons have supported PARC's 30-year evolution, in keeping with our mission statement: **PARC: A community where people rebuild their lives.**

Pilot Model Development

Summary

Beginning in the fall of 2007, PARC staff and a York University graduate student in Environmental Studies began researching heat registry tools and effective heat prevention. It was discovered that no similar model existed anywhere in North America (and perhaps the world). Most heat programs focused on passive messaging or non-risk assessed messaging; Chicago for example, uses a reverse-911 phone system to call people who have registered to be informed about extreme weather conditions. As a result, PARC decided to build a model from scratch.

A consultation in November 2007 brought together 20 individuals representing 15 organizations, to share experiences and to begin to develop the program. The development phase included researching best practices in heat response, and creating a risk-based questionnaire tool that could weigh and assess various risk factors such as physical and emotional health, as well as social and living environments.

PARC hired eight peer outreach workers to assist staff in the development and implementation of the registry and outreach. These peers received extensive training that included heat awareness, first aid, safety and working with difficult people. They helped revise the questionnaire and played a role in generating protocols and documentation.

Approximately 100 clients were registered on the heat registry by the end of the summer. A number of these clients – about 70 people in total, including some not on the registry – also received air conditioners through a spin-off initiative, the air conditioner pilot program.

During heat emergencies – heat alerts and extreme heat alerts called by the City of Toronto – as well as on extremely hot non-heat alert days, PARC peer outreach workers would check on everyone listed in the registry, to make sure that they were coping with the heat, and to suggest cooling options to them.

2008 Model:

- Research was conducted on possible models and functions - from September 2007 to February 2008 intensely, and ongoing afterwards. Summary documents were developed, and a peer outreach model designed.
- A West End Roundtable was held in November, which brought together community agencies to explore their interest in partnering and creating a West End Heat Safety Network.
- A Working Group was formed, composed of City staff and community agency partners. This group met bi-weekly or monthly for several months.
- The job positions for the peer outreach workers were posted and required a written application; 28 applications were received. The selection process included an interview with 14 of the most qualified candidates. In February, eight peer outreach workers were hired and took part in several weeks of extensive training. Of the eight original peers, two quit during the training process and were replaced during the summer.
- Peers worked five hours a week, and were on-call for heat alerts. Many went above and beyond their required hours because of their dedication to the project.
- Staffing was provided by a part-time coordinator funded by York University's Knowledge Mobilization Unit, a part-time assistant from the PARC relief pool, and support from other PARC staff including supervision by the PARC Program Director. The Heat Project Coordinator worked full-time most weeks despite the limited funding, because of the needs of the job. The part-time assistant averaged seven hours a week.

- The Risk Assessment questionnaire was developed based on academic research, a sub-committee, and input from peers, as well as feedback during trial runs.
- Tests were conducted with Working Group members, as well as with peer-identified high-risk PARC members – who were also given a small honorarium for their participation and evaluation of the project.
- Response protocols were developed in conjunction with the peers outreach workers, and revised as needed throughout the summer.
- During heat alerts, peers would respond by checking to see if people had come into the drop-in, phoning to check up on them, or conducting outreach visits. As the summer progressed most registrants came to PARC themselves and/or phoned the Heat Registry to let us know they were okay.
- Bottles of water were distributed to members leaving the drop-in during a heat alert; drinking water was also available while they were using the facilities. PARC often extended hours in the afternoons for heat registrants and other members identified by PARC staff as at high risk.
- An air conditioner pilot program was also developed to assist people in obtaining air conditioning.
- The Heat Registry was evaluated throughout the fall, and a draft manual was created. The evaluation included a peer-administered survey (developed jointly by peers and staff) and focus groups for peers, PARC staff and the Heat Registry Working Group.

2009 Model:

- In the spring of 2009, PARC again began to develop its Heat Registry.
- The part-time Heat Registry Coordinator from 2008 returned, still on a part-time basis. Two PARC relief pool staff job-shared the assistant position (for about 8 hours per week). Other PARC staff also played active roles.
- A similar job hiring process to 2008 was followed, which included job posting, receiving written applications and interviews. Eight peer outreach workers were hired from a selection of about 15. Four were returning peers from the previous year and four were new. During the course of the summer, three peers left the program and were replaced by increasing the hours of some of the remaining peers.
- Peers worked five hours a week, and were on-call for heat alerts. Additional hours allotted to three peers saw them working seven-and-a-half to ten hours per week. Later in the season, one peer worked 15 to 20 hours a week for a couple of weeks, to deal with air conditioner-related demands.
- The draft manual was used to train the peer outreach workers, with adjustments being when identified as needed.
- It was decided to operate a satellite location at Sistering drop-in's Parkdale location. This presented some challenges because of its relocation during the city strike, but two peers visited to register clients on a regular basis.
- Mid-summer, additional funding allowed the expansion of the program to a separate heat registry at Sistering's Bloor Street location. A student was hired part-time, one of the PARC peers was given lead peer responsibilities, and two additional peer outreach workers from Sistering were hired. Again, a full job hiring process – encompassing posting, applications, and interviews – was followed.
- This program operated as a separate entity but support and training were provided by PARC's Heat Registry Coordinator. The manual and all forms were shared between the two sites.
- Training was conducted by the Heat Project Coordinator for all PARC and Sistering drop-in, outreach and housing staff. This joint training allowed staff working in similar positions to share concerns and issues.
- The cooling support program was revamped and operated out of all three sites, allowing eligible clients to access air conditioners and fans.

Partnerships – Heat Registry Working Groups and Safety Networks

An ideal way to engage community engagement and support is the development of community partnerships. The model you choose for your Heat Registry may influence the partnership opportunities you pursue. In the first year of the pilot, we had two active and engaged groups - a Working Group and a Heat Safety Network. In the second year, due to limited time and funding, as well as the high demands of one component of our project, we had to focus on service provision, which didn't leave much time for partnership groups.



However, we found that the initial development of the Working Group and Heat Safety Network played a key role in the first year.

Functions

There are two types of partnerships that can be developed as part of your Heat Registry program. The first is a Working Group. This group is available to support you, make connections, assist with training and oversight of materials and the project as a whole. Basically, it acts as a *sounding board* to the project.

We also developed a Heat Safety Network. These neighbourhood partners play a more direct *partnership role* in registering and providing outreach to their own clients (as did the Parkdale Community Health Centre). They can *provide referrals* to your heat registry, and possibly *register clients themselves* – even when you are providing the response (for example, Archway Clinic, Community Care Access Centre and PARC staff did this for us).

Additionally, members of both the Working Group and the Heat Safety Network can work internally to improve their own policies and response protocols. This will ensure increased safety and awareness of heat among your client group. To assist in improving practices, we have developed a checklist for agencies. This should be distributed to members of your local network as early as possible in the formation of the Heat Registry. Regular meetings, and joint training if applicable, are also useful parts of establishing partnerships.

Developing Heat Registry Partners

Once you have decided that you want to establish a Heat Registry, it's a good idea to try to bring together some of your local organizations. The agencies and individuals that participated in our registry are listed in the acknowledgements section. Who you invite to take part will depend very much on the type of Heat Registry you plan to set up, the goals you have for it, and the client/target groups. Here are some factors that should be taken into consideration:

- Having a manageable number of people to work with is important, but try to involve as many people as needed to capture local knowledge, in order to provide solid outreach and to protect your clients.
- We started with a large roundtable because we invited many agencies and city departments to come and learn about our project. Some of them stayed on as Working Group members and Heat Safety Network partners; others asked to be kept informed by email, but were unable to participate. You will find that there is likely be varying levels of participation.
- **In creating your invitation list consider:**
 - **Health-related agencies/organizations** - Heat can be a significant factor in health-related illnesses. Therefore, it is important to have healthcare service providers taking part in your project. This includes organizations working with people with mental illnesses, addictions, and physical and intellectual disabilities, as well as general healthcare organizations. In terms of reaching people who

have marginal housing or are homeless, it is very important to have street nurses and Community Health Centres (CHCs) on board. If you are running a cooling support program (providing fans and air conditioners), these agencies can also help you with completing the paperwork. Your local hospital and a representative from the Community Care Access Centre can help link up people with health issues to your registry. A Toronto Public Health nurse or community development officer can help you access heat-related training, and provide your team with assessment skills.

- **Seniors' organizations** – As seniors are one of the most vulnerable of at-risk groups, it is important to connect with the local seniors' service providers in your neighbourhood. This can include outreach services such as Meals on Wheels; programs where seniors come into a facility, such as Adult Day Programs; and places where seniors live, such as retirement homes, seniors housing and long-term care facilities.
- **Homeless/Housing service providers** – Homeless people often have compromised health and may experience problems because of their exposure to the heat. Partnering with local shelters, drop-ins, and outreach agencies will help you connect with this vulnerable population. If they have air-conditioned facilities, they may also be able to assist in keeping people cool during heat events. Seven of the 100 people in the pilot project were homeless at the time of registration, and they and many others experienced ongoing or episodic homelessness over the course of the summer.

People who are living in low-income housing have often been homeless, and as a result may still be faced with compromised health. Boarding homes and rooming houses usually feature units that are relatively small, and may have poor air circulation. Housing providers – both non-profit and for-profit – should be encouraged to provide a cooling room in their building if they don't have one. Landlords and housing staff can also help you to access people in their homes, provide follow-up support, and – if necessary – post a notice and enter a housing unit if the tenant hasn't been seen for a while. Therefore, it is important to build connections with Rooming House/Boarding Home operators (especially non-profits), Toronto Community Housing Corporation and other social housing providers, private landlords and the City of Toronto's Shelter, Support and Housing Administration Department.

- **Impacted community members** – One of the individuals on our Working Group was a regular member at the PARC drop-in. He later became one of the peer outreach workers. Having two or three people who are personally affected by this issue makes the team far more effective. If you are using a peer-based model, peer representation on the Working Group is also helpful.
- **Politicians** – City Councillor, Member of Parliament (MP) and Member of Provincial Parliament (MPP). While heat is largely a municipal issue at the moment, it is likely to become a federal and provincial issue as climate change begins to create hotter summers. Most politicians will be unable to sit on a committee, but they or their staff might be able to attend the large roundtable, and it is useful to keep them informed. Our City Councillor helped us negotiate better communication routes, and provided detailed city maps.
- **Ethno-cultural agencies and groups** – Although the City of Toronto provides much of its heat-related material in multiple languages, information still isn't as accessible for people who speak English as a second language. In any area with a high concentration of people speaking languages other than English, it is important to bring in language-specific agencies, ethno-cultural agencies, and organizations working with immigrants and refugees.

Heat Preparedness Checklist for Agency Partners

This checklist may be useful for your Heat Registry partners. It provides a list of activities that they can do at their own agency to help improve the system-wide heat response.

- 1) Register for the City's Hot Weather Notification list. This list lets you know whenever a heat alert or extreme heat alert is called, and terminated. There is also a smog notification system that performs a similar function.
- 2) Develop an internal notification system to inform all staff and clients of the heat alert or extreme heat alert (when you receive the notices from the City). This can include posters, email blasts and system-wide voicemails.
- 3) Obtain copies of relevant materials on heat risk, including multilingual versions where relevant. In Toronto, these can be downloaded from: <http://www.toronto.ca/health/heatalerts/beatheat.htm>
- 4) Develop policies for the organization providing heat response. This could include how services might change, including information such as extended hours and change in program locations. It also may include changes to staff hours and responsibilities during a heat alert or an extreme heat alert. Modify work on heat alert days (to facilitate more staff checking on clients and staff outreach).
- 5) Determine how to contact at-risk and vulnerable clients during a heat alert or extreme heat alert. Do you have a list of clients who attend programs that may have to be shut down or modified? If you close during a heat alert, develop a system for letting clients know, to prevent them from coming to the organization.
- 6) Assist clients on social assistance who have health concerns to obtain air conditioners in the spring, if this is available in your jurisdiction.
- 7) Provide access to water on-site and provide access to bottled water for clients to take away.
- 8) Provide cooling resources to clients, such as a fan loan program.
- 9) Provide clients with transit fare to help them easily access cooling places, and to reduce the physical burden of travelling to and from your location.
- 10) Increase access to air-conditioned space during a heat alert (and attract clients by offering programming).
- 11) Create and implement for your agency a heat response protocol for heat alert days that summarizes all activities and changes that will be instituted.
- 12) If you are working with high-risk clients, are you able to ensure that they return home safely? This is particularly important for patients of a medical establishment or in residential services. Do clients have a safe place to stay upon discharge?

Peer Involvement

The decision to use peer outreach workers as part of this pilot project was based on PARC's ongoing support for members. This builds upon the enhancement of members' skills, and makes use of the experiential "local knowledge" crucial to developing and implementing this type of project. Another factor was our determination that members may be less afraid and more open to sharing details of their lives with peers over staff.

Following the Community-Based Research axiom "*Nothing about us, without us*", peers were also part of the process to develop and evaluate the process. Their feedback was essential to the development of the model.

Peer Hiring

Peers were recruited through poster advertisements at PARC and Heat Registry Working Group agencies. These posters were modelled on the staff hiring postings to emphasize the legitimacy and importance of the work. Drop-in staff was directed to bring the posting to the attention of potential applicants and to offer support to complete the required written application. This application included basic questions about contact information and interest in the project. A resume was not required although many applicants did attach one.

A formal hiring and selection process took place as well. The applications were short-listed to create an interview pool. Given the history of most PARC members many had not been working at a steady job for some time. As a result, the screening process focussed on the candidate's written application, stated interest and enthusiasm for the position, as well as prior knowledge of the applicants by PARC staff.

The hiring team in the first year included the Heat Project Coordinator, the Drop-in Coordinator and a member of the Toronto Drop-in Network familiar with drop-ins but not PARC members. In the second year, the hiring team was composed of the Heat Project Coordinator and the two heat assistants, although short-listing involved other PARC staff.

The short-listed applicants were invited to take part in an interview. These ranged in length from five to thirty minutes depending upon the applicant. Significant discussion took place to create a team that took into account gender, diversity and skills. Eight peers were hired each year.

Each selected peer was given a formal letter of agreement, and information about training. Those candidates not selected were provided with a letter informing them that they were not chosen and encouraging their participation in other opportunities at PARC or in the community.

A copy of the posting, application and interview questions are available in Appendix A on page 64.

Peer Assets

Peers identified their assets as:

- Being people you associate with
- Your friends and your family
- Being trusted
- Having the same life experiences
- Having equal status, whereas staff have power of authority

Peer Training

Peer outreach workers were paid \$10/hr for training. Their training was conducted by the Heat Project Coordinator, Toronto Public Health, PARC staff and the Red Cross.

Training components included:

- Understanding heat and hot weather
- Recognizing heat illnesses
- First Aid and CPR (for most peers)
- Understanding roles as peers
- Skill development and group building
- Dealing with conflicts and difficult people
- Safety and Outreach Protocols

Peer Supervision

Providing personal supervision support (for peers and volunteers) is important for any Heat Registry. Create time and space for this in your project planning. During the 2009 Heat Registry season, staff held one-on-one supervision meetings with the peers to help address some of the concerns raised and experienced in 2008. These meetings counted towards the peers' five-hour/week commitment, and as such, were paid. Generally, these meetings were quite short but they allowed staff to address any concerns with a peer's performance (e.g. identified issues in completing forms, hours of work) and provided peers with an opportunity to discuss personal issues that may be impacting their performance.

Benefits to Peers

In addition to the obvious financial benefit (peer outreach workers were paid \$10/hr honoraria for training, and \$50 per week during the summer), working on the Heat Registry often boosted their self-esteem. They learned new skills, improving their ability to work with others (team cooperation and participant service) and to respond positively to crisis. There was significant improvement in their communication and personal motivation skills. At the same time, they also faced limitations such as a lack of authority/acknowledgment from those people being served, and a lack of staff understanding on the extent of their role within the project.

Issues and Challenges

There were numerous issues that hindered peers' ability to do the work. These included:

- Bed bugs
- Injuries and Assaults
- Homelessness and housing problems
- Over heating; lack of air conditioning
- Lack of transit (some didn't have TTC passes)
- OW/ODSP (some were not able to access start-up to buy necessary supplies (such as shoes))
- Theft of belongings on site
- Peers didn't feel respected by staff (and sometimes registry members), which made them less interested/willing to do the work
- Amount of work for the small honorarium provided
- Lack of office space (in the second year) hampered the creation of a team atmosphere that had existed during the first year
- Lack of heat alerts (during the second year) reduced peer motivation and demand from clients
- Given the peers' life history with homelessness, addictions and/or mental health, there were also instances that triggered past memories or caused stress for them.

Questionnaire & Risk Assessment

The questionnaire is an essential part of the Heat Registry. It allows you to track individual risk and contact information, in order to provide an efficient and accurate response to your clients. The questionnaire can be as short or as long as you need it to be. It is important that you ask enough questions in order to determine risk levels. At the same time, you have to balance your clients' privacy and comfort levels.

It is important to determine who you will be questioning, and for what purpose. For example, if your clients are spread throughout a neighbourhood then knowing about their housing situation is important. However, if you are conducting a site-specific Heat Registry in an apartment building, then you already have a good understanding of the individual's living situation and won't need to ask questions about that.



One of the biggest challenges that we found was the issue of trust. It is vital that participants are able to trust the person asking the questions; the more intimate the questions, the more important this becomes. We dealt with this by allowing people to not answer questions that they didn't feel comfortable with, and through the use of peer outreach workers. Many of our Heat Registry clients told us that they felt safer giving information about drug use, for example, to a peer rather than to a staff member.

What counts as high risk may vary, depending upon the type of Heat Registry that you are running. For example, if you are working in a long-term care facility where residents receive meals, then absence from a meal is a quick way to identify that someone might be in trouble, whereas if you are working with a homeless clientele, it isn't unusual not to see someone for a few days.

We tried a variety of methods to score risk and found them all challenging to maintain. We are in the midst of developing an Excel-based formula for risk assessment that may be useful. In the pilot project, our scoring was done by the Heat Project Coordinator, in conjunction with a peer who knew most of the registrants. While the peer wasn't given access to the files (except for the ones that she registered), she was able to indicate whether someone attended the drop-in on a regular basis. So, when someone scored high on potential social isolation questions, but attended the drop-in every day, we were able to reduce their risk score.

A sample questionnaire is attached in Appendix B (see page 64). The following chart lists some of the key questions, as well as possible answers, risk ratings, and rationale for inclusion. These questions were developed using a combination of academic and practical knowledge from staff, as well as lived experience of the peers. They should be adjusted and made relevant to your community, as needed.

Question	Answers	Risk Scoring	Rationale
DEMOGRAPHICS			
Basic Information includes Name, Street Name or Nickname, Address and Phone.	If they have no address or indicate that they are homeless, complete the questionnaire as best as you can.	Homeless is high risk. Lack of a phone is medium risk.	Being homeless means increased exposure to the weather, and a possible lack of access to services. Lack of a phone can be socially isolating.
I'd like to ask about your age. Which category do you fit into? Are you:	<input type="checkbox"/> 18-30 <input type="checkbox"/> 31-45 <input type="checkbox"/> 46-60 <input type="checkbox"/> over 60 The categories of age are dependent upon your clientele.	Barring any health complications or other high risk factors, 46-60 is medium risk, and over 60 is high risk. For long-term homeless clients, bump up their age when assessing risk by several years, depending upon how long they were homeless, when they were housed (if they are) and health issues.	The elderly are one of the highest risk groups in terms of ill effects from the heat. People who have experienced homelessness are often physically more aged than their actual age, and therefore their risk would be higher.
Do you live with any other adults? For example: spouse, partner, family member, roommate? Do you see them regularly?	<i>Specify:</i> <input type="checkbox"/> Partner/Spouse <input type="checkbox"/> Roommate <input type="checkbox"/> Family member <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Just Occasionally	A partner/spouse/adult child can reduce risk. A roommate may or may not reduce risk as it depends upon the interactions that take place.	The presence of another adult in the home can reduce risk as it means someone is there who can check on the client and reduces their isolation.
Do you live with any children? <i>(Complete children's details at end of survey)</i>	A children's heat risk assessment form is included when working with individuals likely to have children at home. It asks questions about the children's ages, physical and mental health, activities outside the home, and their ability to call 911.	If including children in your registry, babies under one should be a high risk, and 1-3 yrs old should be medium. The presence of an older child reduces risk, as someone is there who can check on the client. If a child is involved in camp or daycare, that creates an additional level of monitoring and reduces risk. If they are able to call 911, it reduces the risk to the parents because emergency help can be summoned quickly.	Infants are extremely susceptible to heat, and can dehydrate very quickly. We have created a 911 pamphlet for parents to help their children understand the 911 system.

<p>Can I get a number for someone that I can call during a heat alert, if I can't reach you? This should be someone you see or talk to regularly, or who may have a key to your place to come check on you.</p> <p>Name, Relationship, Contact #:</p>	<p>Be sure to obtain the number, the name of the individual, and how they are known.</p> <p>Add this information to the consent form as well.</p>	<p>If they don't have someone, there is no scoring change unless there are several other indicators of social isolation, in which case a medium or high-risk score.</p>	<p>Ability to contact someone else is helpful if a client cannot be reached. Not having a number may be an indicator of social isolation and should be judged in combination with other factors.</p>
<p>Have you attended one of the heat safety workshops?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No (give pamphlets to everyone)</p> <p><i>This question should only be included if you are providing heat awareness workshops.</i></p>	<p>Attendance at a heat safety network could decrease a client's risk.</p>	<p>The heat safety pamphlets (available from the City) are useful IF you are not working with clients with significant language or literacy issues.</p>
<p>Do you experience personal distress during extremely hot weather? If yes, describe what gives you the most difficulty.</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Answers will be individualized, depending upon client's description of difficulties.</p>	<p>The more distress a client experiences, and the more serious it seems, the greater their level of risk.</p>	<p>This question is a way of gauging how you think a client might cope in the heat. The more issues they identify, the more likely that they consistently have problems.</p>
<p>What steps do you take to protect yourself during hot weather?</p>	<p><input type="checkbox"/> Use air conditioning <input type="checkbox"/> Use fan <input type="checkbox"/> Open windows <input type="checkbox"/> Drink lots of fluids <input type="checkbox"/> Go outside <input type="checkbox"/> Wear a hat <input type="checkbox"/> Take a cool shower <input type="checkbox"/> Wear light clothing <input type="checkbox"/> Go to air-conditioned place <input type="checkbox"/> Nothing I can do <input type="checkbox"/> Other (describe)</p>	<p>This doesn't really affect their risk rating unless they are unable to identify any, have expressed a sentiment such as "nothing I can do", and their health/social isolation factors are high. In those cases, this would increase their risk.</p>	<p>The more techniques they are able to identify, the better. Note: Don't provide these answers to the client. Let them make a list of what they do. Suggestions can be made afterwards as to some other cooling methods they might want to think about.</p>
<p>LIVING ENVIRONMENT</p>			
<p>Do you experience problems with heat because of where you live? If yes, what kinds of problems?</p>	<p><input type="checkbox"/> No problems reported <input type="checkbox"/> Problems staying cool <input type="checkbox"/> No air circulating <input type="checkbox"/> Cooling system didn't work <input type="checkbox"/> Problems with refrigeration <input type="checkbox"/> Poor window ventilation <input type="checkbox"/> Heat stays inside <input type="checkbox"/> Elevator broken down <input type="checkbox"/> Other (elaborate)</p>	<p>If no problems, then risk is low. Otherwise, the more they name, the higher they risk. This is particularly important when combined with mobility issue questions and social isolation.</p>	<p>If someone has no problems leaving their housing, then even if it gets hot they will be able to go elsewhere to access cooling resources. If however, their housing is hot and they can't/won't leave, then the heat inside presents a risk.</p>

<p>Do you have air conditioning in your unit or in your building?</p> <p>Are you able to use it without problems?</p>	<input type="checkbox"/> Air conditioning (in unit) <input type="checkbox"/> Air Conditioning (in building) that is easily accessible <input type="checkbox"/> Air Conditioning (in building) that is not accessible <input type="checkbox"/> No Air conditioning	<p>Air conditioning in unit means that they are no risk (unless there seem to be other significant factors). In fact, it basically cancels out all risk unless a client has extensive risk factors.</p> <p>Air conditioning in building that is accessible is also no risk.</p> <p>Air conditioning in building that isn't accessible is medium risk.</p>	<p>Even a few hours a day of air conditioning can significantly reduce someone's risk. While in-unit air conditioning gives them the most control, this isn't always possible. Most Toronto Community Housing facilities and many rooming/boarding homes in the city are now providing an air-conditioned space that people can access during a heat alert. This significantly reduces the risk of harm as long as it is easily accessible.</p>
<p>Do you have access to a fan?</p>	<input type="checkbox"/> Yes <p>What kind?</p> <input type="checkbox"/> Table Fan <input type="checkbox"/> Standing Fan <input type="checkbox"/> Ceiling Fan <input type="checkbox"/> Window Fan <input type="checkbox"/> No	<p>A fan can be harmful or helpful. If it is a window fan that can push air out, or a ceiling fan, it could be a small reduction of risk.</p> <p>If it is a small table fan, and the client indicates that there is also limited air circulation and ventilation, then a fan actually adds medium risk.</p>	<p>Clients who have fans should be given a copy of Toronto Public Health's Fan Facts pamphlet.</p> <p>At a certain temperature and with limited air circulation, improper use of a fan can actually increase one's body temperature.</p>
<p>Do you live in social housing? (i.e. TCHC, Supportive Housing, Habitat, Homes First).</p>	<input type="checkbox"/> Yes Which provider? <input type="checkbox"/> No	<p>Risk-neutral to potential risk reduction.</p>	<p>Many social housing agencies in the city provide an air-conditioned room for tenants to access during hot weather. Social housing providers may become partners in your outreach program. TCHC, for example, left notes on client's doors for us to assist us.</p>
<p>How big is your unit?</p>	<input type="checkbox"/> Room <input type="checkbox"/> Bachelor <input type="checkbox"/> One-bedroom <input type="checkbox"/> Two-bedroom <input type="checkbox"/> Larger than two bedrooms	<p>Rooms or bachelors add some risk, but it depends upon other factors such as air circulation.</p>	<p>The smaller the space, the less chance for air to circulate because there will be a limited amount of doors and windows essential for cross ventilation.</p>
<p>What kind of building is it?</p>	<input type="checkbox"/> Private Apt in a house <input type="checkbox"/> Apt above store <input type="checkbox"/> Apt above restaurant <input type="checkbox"/> Rooming House/Boarding Home <input type="checkbox"/> Low rise (less than 6 floors)	<p>The first four may increase risk slightly but should be looked at in conjunction with other housing issues.</p>	<p>Apartments and rooms that have been carved out of an existing house often have less air circulation and may keep air inside.</p>

	<input type="checkbox"/> High rise (7 floors and higher) <input type="checkbox"/> House		
Where are you in the building (i.e. which floor)?	<input type="checkbox"/> Top floor or close <input type="checkbox"/> Middle <input type="checkbox"/> Bottom/Ground <input type="checkbox"/> Basement	Top floor is medium risk.	The higher floors receive more direct sunlight and internal heat rises within a building.
Do you feel you can leave your building during a heat alert?	<input type="checkbox"/> Yes, no problems Reasons, why not? <input type="checkbox"/> Elevator problems <input type="checkbox"/> Physical health issues <input type="checkbox"/> Physical disability issues <input type="checkbox"/> Fire escape too hot to use <input type="checkbox"/> Stairwell broken <input type="checkbox"/> Unsafe building <input type="checkbox"/> Unsafe neighbourhood <input type="checkbox"/> Other – indicate	Each of these factors adds risk. The more there are, the higher the risk. This can be compounded when looked at in conjunction with social isolation, physical health, unit size and location, and other housing-related heat problems.	<p>If no air conditioning is present, and housing is hot, it's important that an individual finds a way to access cooling resources – cooling centres, drop-ins, libraries, malls, etc.</p> <p>If there are problems leaving their housing, then they are going to be forced to remain in overheated conditions that cause them harm.</p>
What type of access to cooking and refrigeration do you have in your housing?	<u>Cooking</u> <input type="checkbox"/> Kitchen <input type="checkbox"/> Hot plate <input type="checkbox"/> Hot pot <input type="checkbox"/> No cooking <u>Refrigeration</u> <input type="checkbox"/> Full size fridge <input type="checkbox"/> Bar/mini fridge <input type="checkbox"/> Shared fridge <input type="checkbox"/> No fridge	No cooking or no fridge adds a small element of risk.	Being able to access cool water and cooking food to ensure nutritional health is important.
Do you have access to water for drinking/cooking	<input type="checkbox"/> Yes <input type="checkbox"/> No	No water is high risk.	Water is crucial for preventing dehydration.
Do you have access to water for showering/bathing (<i>ask about type and about access – shared or private</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> Shower only <input type="checkbox"/> Bath only <input type="checkbox"/> Shower/Bath <input type="checkbox"/> Private <input type="checkbox"/> Shared <input type="checkbox"/> No	No access for showering/bathing adds a small amount of risk. Needs to be considered in conjunction with housing, physical health, especially mobility and social isolation factors.	Being able to cool off with a shower or bath is especially important for people whose housing is very hot or who have limited access to other cooling supports.
Have you ever been homeless in the past?	<input type="checkbox"/> Yes How long were you homeless? _____ When did you get housed? _____ <input type="checkbox"/> No	Extensive and/or recent homeless experience adds a medium to high degree of risk.	

Are there any other issues or problems with your housing that you would like to tell us about?	Will vary.	Judgement needs to be used to decide about other issues presented by clients, and what amount of risk should be attached to them.	
SOCIAL ENVIRONMENT			
<i>Observe only: Does this person have problems communicating in English?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, adds low to medium risk.	If a client is unable to read or speak English, they may not be able to heed warnings about heat on the radio or in the newspapers.
How long have you been living in this area?	<input type="checkbox"/> New <input type="checkbox"/> A few months <input type="checkbox"/> Less than a year <input type="checkbox"/> Over a year	If very new, adds a small amount of risk.	Someone who is new to an area may not be aware of all the resources available to them, including places they can go to cool off.
Do you have a pet of any kind?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Mostly neutral. Can both add or decrease risk, depending upon the situation. Ask more questions!	People with dogs are more likely to be forced to walk their dog. However, if the heat is very bad, they might not do that, or be able to take care of any other pets. <i>Give Pet Facts pamphlet</i>
Do you volunteer or work with Sistering?	<input type="checkbox"/> Yes <u>Give details:</u> <input type="checkbox"/> No	Reduces risk.	Having a commitment – work or volunteer – means regularly getting out, lowers social isolation etc.
Do you access the Parkdale Activity-Recreation Centre on Queen Street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Reduces risk.	This was one of the key monitoring locations For us, but the question was used at a separate site to increase knowledge of peers about opportunities for monitoring.
What kinds of places do you go to on a hot day? <u>DON'T READ LIST</u>	<input type="checkbox"/> Drop-In Centres <input type="checkbox"/> Hospital/Doctor's Office/Health Centre <input type="checkbox"/> Stores/Mall <input type="checkbox"/> Library <input type="checkbox"/> Meal/Food Programs <input type="checkbox"/> Library <input type="checkbox"/> Community Centre <input type="checkbox"/> Bingo Parlour <input type="checkbox"/> Other (<i>list</i>)	A high number of places that are accessed for support means decreased risk.	The more places someone is involved, with the lower the chance that they are socially isolated. If one organization is coming up repeatedly, you may want to invite them to join the Heat Safety Network so that they can assist in checking on clients.
Do you have contact with other people in your living environment?	<input type="checkbox"/> I have frequent contacts (describe) <input type="checkbox"/> Just in passing (i.e. hallway/elevator) <input type="checkbox"/> I don't usually see anyone else <input type="checkbox"/> I rarely see anyone <input type="checkbox"/> I see people only when I seek them out	Frequent contacts reduce risk. Any of the other answers add medium to high risk (judge in conjunction with other factors).	Lack of contact means less chance that someone will notice if a client hasn't been seen for a few days, and is an indicator of the potential for a high degree of social isolation.

Who would come to assist you if you felt unwell?	<input type="checkbox"/> Superintendent or landlord <input type="checkbox"/> Friend/Family <input type="checkbox"/> Social worker, health worker etc <input type="checkbox"/> No one	If no one, adds a medium degree of risk.	Social isolation can be indicated through the feeling that no one would be available to assist them. On the other hand, this is a good opportunity to develop another contact to help check on the client (add to the contact consent form).
How do you get news about the weather?	<input type="checkbox"/> Radio <input type="checkbox"/> TV <input type="checkbox"/> Friends <input type="checkbox"/> Newspaper <input type="checkbox"/> Internet <input type="checkbox"/> Looking outside <input type="checkbox"/> Other	Neutral	Is helpful to know whether a client may be aware of the heat alerts, or whether you will have to let them know about it.
Are you easily able to access services on a hot day?	<input type="checkbox"/> Yes <input type="checkbox"/> Usually <input type="checkbox"/> No (why not?) <input type="checkbox"/> Mobility issues <input type="checkbox"/> Problems in bldg <input type="checkbox"/> No access to transit <input type="checkbox"/> Too far to walk <input type="checkbox"/> Don't feel safe going <input type="checkbox"/> Other....elaborate	If there are several reasons given for inability to access services, then risk is increased by a medium to high amount. If they are able to access services, then their risk is significantly reduced.	This ties into the housing question. People who have problems getting to services are not going to be able to access cooling supports or other services that they need.
PHYSICAL HEALTH			
Have you had any health-related problems in the heat over the last few years?	<input type="checkbox"/> Yes Elaborate: <input type="checkbox"/> No	Severe, frequent, or multiple health issues add to risk – medium to high amount depending on the details.	The heat exacerbates certain health conditions.
Do you have any history of heart problems? (If yes, describe)	<input type="checkbox"/> Heart attack <input type="checkbox"/> Angina <input type="checkbox"/> Heart Murmur <input type="checkbox"/> Stroke <input type="checkbox"/> High Blood Pressure <input type="checkbox"/> No problems <input type="checkbox"/> Other....	Heart problems are a medium to high risk factor depending on the number and severity.	Heart problems can be exacerbated by the heat. A recent or severe heart attack, in particular, can impact someone's energy, mobility, etc.
Have you had any lung or breathing problems? (If yes, describe)	<input type="checkbox"/> Mild asthma <input type="checkbox"/> Severe asthma <input type="checkbox"/> TB <input type="checkbox"/> Bronchitis <input type="checkbox"/> COPD <input type="checkbox"/> Emphysema <input type="checkbox"/> Other... <input type="checkbox"/> No problems	Lung problems are a high risk factor generally; mild asthma is medium risk.	Breathing problems are exacerbated by the heat. Smog days and heat alert days are often correlated so breathing will be made worse by the smog, heat, and possibly humidity. This may make it hard for someone to leave their housing to access cooling services.

<p>Have you ever been diagnosed with diabetes?</p>	<p><input type="checkbox"/> Yes</p> <p>Do you think it's being managed okay?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> No diabetes</p>	<p>Diabetes is a low to medium risk factor. If it isn't under control, then it should be considered a high risk.</p>	<p>Controlled diabetes does not present much of a problem generally. However, heat can change the way a body uses blood sugar or people's behaviour may change it. For example, drinking pop/juice to stay cool may increase the amount of sugar present. Additionally, if someone's housing is very hot, they may not eat properly.</p>
<p>Is there anything that causes you to have limited ability to get up and walk around? Any problems with your feet?</p>	<p><input type="checkbox"/> Yes (describe)</p> <p><input type="checkbox"/> No</p>	<p>Mobility constraints are a high risk.</p> <p>Feet problems are medium to high risk.</p>	<p>If someone is mobility challenged or has problems with their feet, then they may not be able to leave their housing to access cooling supports.</p>
<p>Are you experiencing any problems or issues with menopause?</p>	<p><input type="checkbox"/> Yes</p> <p>Describe:</p> <p><input type="checkbox"/> No</p>	<p>If experiencing severe problems, especially hot flashes, this is a medium – high risk.</p>	<p>Excess body heat leading to excessive sweating – night sweats - can cause dehydration, exhaustion, etc.</p>
<p>Are you able to get enough water or juice to drink?</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>No is high risk.</p>	<p>Dehydration can happen very quickly during heat alerts so it is critical that someone has access to water, juice and other fluids.</p>
<p>Are you able to get enough food to eat?</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Needs to be considered in relation to other issues.</p>	<p>Diabetes is often undiagnosed in this population. Being unable to eat may affect their body because of blood sugars, or just general health and energy.</p>
<p>Do you regularly see a doctor/nurse?</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Risk depends on other factors and why they see a doctor.</p>	<p>If they are seeing a doctor regularly, it could draw attention to a health issue that they haven't mentioned previously, or it could be an indicator that something is wrong, or it could show that they are taking care of their health.</p>
<p>Do you take any prescription medications to improve your physical health?</p>	<p><input type="checkbox"/> Yes</p> <p>What kind?</p> <p><input type="checkbox"/> No</p> <p>Is there anything you should be taking?</p>	<p>Risk factors depend on type of medication.</p>	<p>Some medications are affected by the heat. This question also provides another opportunity to discuss health history.</p>

<p><u>CREATE YOUR OWN WORDING</u></p> <p>Do you use any non-prescribed substances on a regular basis?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No What kind?	Risk factors depend on the items listed, and openness of client.	Being under the influence of certain medications may affect one's ability to assess how they feel, and to access needed services.
<p>Would you like to tell us what you use?</p> <p>Tick if they use, circle if it seems frequent.</p>	<input type="checkbox"/> Alcohol <input type="checkbox"/> Listerine <input type="checkbox"/> Cooking wine <input type="checkbox"/> Bitters <input type="checkbox"/> Pot <input type="checkbox"/> Heroin <input type="checkbox"/> Methadone <input type="checkbox"/> Crack <input type="checkbox"/> Gas <input type="checkbox"/> Glue <input type="checkbox"/> Methamphetamines <input type="checkbox"/> Ecstasy <input type="checkbox"/> Rx misuse <input type="checkbox"/> Oxycontin <input type="checkbox"/> Percocets <input type="checkbox"/> Morphine <input type="checkbox"/> Dilaudid <input type="checkbox"/> Codeine Pills <input type="checkbox"/> T3 <input type="checkbox"/> Aspirin <input type="checkbox"/> Cough Syrup <input type="checkbox"/> Other...	Risk factors depend on the items listed, and openness of client. <i>Note: In the second year we eliminated this list because we felt that it intimidated people. Instead we invited them to tell us what they used more informally.</i>	The more substances a client uses, and the more often, the greater chance that they will be affected by the heat either because of the medication or because of an inability to access services.
<p>Have you had any health-related problems in the heat over the last few years?</p>	<input type="checkbox"/> Yes Elaborate... <input type="checkbox"/> No	Risk will depend on what problems they have had, whether they have been resolved, and should be examined in relation to other items on questionnaire.	Another opportunity to discuss health, and a way to determine how the client seems to be affected during a heat alert.
<p>Are there any other health issues that you would like to tell us about, i.e. lupus, MS, Alzheimer's, cancer, epilepsy...</p>	<input type="checkbox"/> Yes Elaborate:	<input type="checkbox"/> No	
<p>How do you feel your health is overall?</p>	<input type="checkbox"/> Good <input type="checkbox"/> OKAY <input type="checkbox"/> Poor If poor elaborate...	Good health reduces risk; poor health adds a medium to high amount of risk depending upon details.	Certain health conditions are exacerbated by the heat.

EMOTIONAL HEALTH			
<u>Observe: Does their style of dress appear to present any heat risk?</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Wearing many layers of clothes adds a high degree of risk.	<p>Client can become overheated quite easily.</p> <p>If completing questionnaires before the summer, this question may need to be revisited.</p>
Are you worried about coping in the heat this summer?	<input type="checkbox"/> Yes Elaborate.... <input type="checkbox"/> No	If they are very worried it is a medium – high risk depending upon other factors.	This is one way to determine how the client seems to be affected during a heat alert. Anxiety and stress can prevent someone from accessing services. It is also an indicator to their general frame of mind.
Do you have any mental health issues you would like to share?	<input type="checkbox"/> Depression <input type="checkbox"/> Anxiety <input type="checkbox"/> Bipolar <input type="checkbox"/> Schizophrenia <input type="checkbox"/> Post Traumatic Stress <input type="checkbox"/> Agoraphobia <input type="checkbox"/> OCD <input type="checkbox"/> Dementia <input type="checkbox"/> Other (list) <input type="checkbox"/> Other (list)	Multiple items mean high risk. Agoraphobia is extremely high risk.	The more issues someone is dealing with, the more challenging it may be for them to access services. Someone who is agoraphobic may be housebound most of the time.
Do you take any medications for any of these?	<input type="checkbox"/> Yes (please list) <input type="checkbox"/> No	Depends on medication. Certain medications are affected by the heat and they should be considered high risk.	Give Toronto Public Health pamphlet on medications and the heat
Could you help with outreach this summer by checking in on people in your building?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Shows a lack of social isolation so can be a slight decrease in risk.	Is mostly beneficial for the program as it allows you to build an extended network of supports.
Is there any other information you would like to provide to us to help with assessing your risk for heat?		Depends on items mentioned.	Allows client to provide information that they see as important.

Consents

Before completing the Heat Registry forms we asked applicants to complete two consent forms, the *Heat Registry Consent Form* and the *Consent to Contact Form* (see Appendices A and B on pages 64 and 65).

- **Heat Registry Consent Form** – This form explained the Heat Registry program to the applicant and explained how the information would be used. It said:

I agree to provide personal information to the West End Heat Registry and Heat Response Project. I understand that the information being collected about me will only be used to determine my risk of ill health from heat during the summer of 2009, and to provide appropriate outreach services. I can refuse to answer any question if I so choose. My refusal to answer questions will not affect the general services that I receive at Sistering. However, missing questions may mean that staff are unable to properly decide what level of risk I face from heat.

All information collected will be kept confidential and will not be shared with others with the following exceptions:

- 1) The Heat staff will access my information to determine my heat risk.
 - 2) My contact information – Name, Address, Phone Number – will be shared with staff, peer outreach workers, volunteers and/or students who are conducting outreach during the summer. They will be able to access this on a “Need to Know” basis only.
 - 3) If I am a member of PARC, the team will check to see if I have been there during a heat event.
- **Consent to Contact** – This form allowed us to contact a family member, friend or worker if we hadn’t been able to reach the client after a designated period of time (determined by the client). This was primarily designed for use during heat waves, and due to the limited number of heat alerts during the summer of 2009, it has not been implemented and tested yet.

During extreme hot weather I, _____, give permission for the
(name)
Heat Team to contact _____ who is my _____
(name) (relationship)
if I cannot be reached any other way after _____ hours/days. They can be reached by
(Length of time)
phone at: _____
(phone number)

This permission is only to be used for checking on my health and well being during the summer of 2009 (May 15th to Sept 15th) when there is a heat alert or extreme heat alert.

Quick Heat Assessment Tool (The QHA Tool)

A tool was created that could be used by staff to quickly assess a client's risk, especially when the clients were unlikely to complete the form themselves. The form is detailed below and can also be seen in Appendix C (see pages 66 to 74), which includes the Children's Survey. We have provided a sample scenario to demonstrate how the form is to be used.

The QHA Tool is intended to help protect vulnerable individuals from experiencing ill effects as a result of extreme heat. **It is designed to be used with people who are unwilling (or unable) to participate in the full Heat Registry process.** If your client is willing to be placed on the Heat Registry, you may complete the Heat Registry form with him/her, or refer him/her to the Heat Registry Project staff or peer outreach workers.

The QHA Tool can be used by caseworkers, housing workers, social workers and support staff. It may be completed by the worker, or by the worker and client together.

There are multi-lingual brochures available (in English, Chinese, Farsi, French, Italian, Portuguese, Russian, Spanish and Tamil) from the city's website on seven topics (*Medications and Heat Related Illness, How to Beat the Heat, Heat, Drugs and Alcohol, Fan Facts, Help Pets Beat the Heat, Child Car Safety in Hot Weather, and Advice to Landlords*). These brochures are available at: <http://www.toronto.ca/health/heatalerts/beatheat.htm>

QHA Tool Instructions

- 1) This tool may be completed with or without your client.
 - If you are completing it with your client, it is a good opportunity to discuss heat safety planning (i.e. accessing air-conditioned places when it is hot, access to drinking water, extensive multi-layered clothing, fan safety, pet safety, etc.)
 - If you are completing it without your client, use your best judgement to determine the answers.
- 2) At the top of the sheet, record the client's name or initials, case number, and the date of the evaluation.
- 3) Circle the relevant answer found on the left hand side of the questionnaire.
- 4) Total up the answers to determine the client's score.
- 5) Whenever you are unable to answer a question, use 5 as the median answer or indicate NS (Not Scored) and deduct 10 points from the possible total, then adjust the assessment accordingly.
- 6) When you have finished, total up their score and mark it in the sub-total box.
- 7) Complete the Air Conditioner (A/C) deduction line.
- 8) Subtract the A/C deduction from the sub-total to determine your client's final score.
- 9) Compare their score to the Rating Chart to determine their risk and record this at the top of the sheet.
- 10) Throughout the summer, any time that the risk factors change (e.g. they get diagnosed with a new illness, or their living situation changes), you can easily reassess their situation – and their score.
- 11) Record on the Summary Sheet what kind of response was undertaken during a heat alert or extreme heat alert. Every time there is a heat alert, you should record what actions you took. At the end of the heat season, give the Summary Sheet to the Heat Project Coordinator.
- 12) Depending upon the client's risk, be sure to do appropriate safety planning (as outlined in #1) with them.

Quick Heat Assessment Tool

Date of Evaluation: _____ Client's Name _____

Circle the appropriate score:

SEX							
Trans = 10	Male = 5	Female = 0		10	5	0	NS
AGE							
Up to 45yrs = 0	45-55yrs= 5	Over 55yrs = 10		10	5	0	NS
DRUG or ALCOHOL ADDICTION/USE							
Severe = 10	Medium = 5	None or Minor = 0		10	5	0	NS
HEART PROBLEMS (HEART ATTACKS, STROKES, ANGINA, MURMURS, HIGH BLOOD PRESSURE)							
Severe/Recent = 10	Mild/Past = 5	None = 0		10	5	0	NS
LUNG PROBLEMS (ASTHMA, COPD, TB, EMPHYSEMA)							
Severe/Recent = 10	Mild/Past = 5	None = 0		10	5	0	NS
DIABETES							
Severe/Uncontrolled = 10	Controlled =5	None = 0		10	5	0	NS
FEET OR MOBILITY ISSUES							
Severe = 10	Mild = 5	None = 0		10	5	0	NS
HOMELESS HISTORY							
Current/Long = 10	Short = 5	None = 0		10	5	0	NS
SOCIAL ISOLATION							
Severe = 10	Mild = 5	None = 0		10	5	0	NS
MEDICATIONS (SPECIFICALLY: PSYCHIATRIC, ANTI-DEPRESSANT, ANTI-PARKINSON)							
Many = 10	Some = 5	None = 0		10	5	0	NS
LIVING ENVIRONMENT (examples AIR CIRCULATION, RETENTION OF HEAT, ACCESS ISSUES)							
Many Issues = 10	Some = 5	None = 0		10	5	0	NS
SIZE OF SPACE							
Room/Small Bach = 10	Bach/1 BR =5	2 BR & up = 0		10	5	0	NS
				Sub Total			
Air Conditioning (A/C)	In Unit = -80	In Building = -50	None = 0	AC Deduction			
				FINAL SCORE			

Rating

Extreme Heat Risk = 100-120

Medium Heat Risk = 55-70

High Heat Risk = 80-95

Low Heat Risk = 20-50

Medium High Heat Risk = 60-75

No Heat Risk = negative # to 15

Rating: _____

Assessment Conducted by: _____ [] Worker alone [] With client

SUMMARY SHEET

Client's Name: _____ Rating: _____

Date of Alert	HA or EHA	Action Taken, Follow-up (i.e. client seen at drop-in, phone call, visited client, other)

At the end of the summer, please photocopy this sheet and give to the Heat Project Coordinator. Remove the client's name if you wish; all information will be held in confidence.

Quick Heat Assessment Tool – Sample Scenario

Jean Jones is a client of Caseworker Smith. She sees a doctor on occasion but isn't fully medically compliant. She has a good relationship with Caseworker Smith and they are able to complete the QHA Tool together. The score for each item is listed in brackets and also noted in bold on the form.

Jean is a transgendered woman [+10] of 55 years of age [+5]. She has a dependency on prescription medications such as Oxycontin, and uses crack on occasion but not regularly [+5].

Several years ago, Jean had two small heart attacks. Since then, she hasn't reported any problems with her heart [+5]. However, she does have severe asthma, and was recently diagnosed with Latent TB [+10].

Jean reports that she doesn't think she has diabetes, although her doctor told her that she has had high blood sugar on her last few tests. However, Jean hasn't followed up with a specialist nor been she tested for diabetes. As Jean is non-compliant in this issue, she and Caseworker Smith decide to record this as NS (No Score), and this question will be taken out of the equation. The questionnaire will now be out of 110 instead of 120. Each risk category therefore changes by 10 points. (Extreme High risk is 90-110, High is 70-85 etc). They also make a plan to get Jean tested for sugar when the street nurse next visits the drop-in, and to discuss the follow-up with her [NS].

Jean reports no problems with her feet and, in fact, walks a few miles every day [+0].

Jean has been homeless on and off in the past, over a period of about three years. Generally she couch-surfed, living with friends or family. On a few occasions she lived in shelters or on the street. She has been securely housed now for five years [+5].

Jean is quite socially isolated. Although she gets out and walks regularly, she doesn't have regular contact with people or community agencies. Her weekly meeting with Caseworker Smith is her most frequent contacts with people, other than passing them in the hallway where she lives [+10].

In addition to her Oxycontin addiction, Jean takes a variety of prescription medications. Some are hormones to assist her transition. She also takes medications for depression and anxiety [+10].

Jean lives in a private boarding home and reports problems with air circulation. She has a window but because of safety regulations, the window only opens 10 centimetres. Due to fire regulations, Jean is prohibited from leaving her door open to get a cross breeze. She and Caseworker Smith take the temperature in the room and discover that it is 32°Celsius even though it isn't a hot day outside [+10]. She only has one small room of approximately 150 sq ft [+10].

After completing the form, Jean and Counsellor Smith get a subtotal of **80/110** (the score is reduced because they didn't give a point value to the diabetes question). There is no air conditioning in the building so there is no A/C deduction, leaving a final score of 80. This corresponds to the **High Heat Risk Category**, which is now 70-85 because of the one No Score question. Counsellor Smith and Jean discuss ways she can protect herself during Extreme Hot Weather.

Date of Evaluation: July 25th 2009

Client's Name: Jean Jones

Circle the appropriate score:

SEX							
Trans = 10	Male = 5	Female = 0		10	5	0	NS
AGE							
Up to 45yrs = 0	45-55yrs = 5	Over 55yrs = 10		10	5	0	NS
DRUG or ALCOHOL ADDICTION/USE							
Severe = 10	Medium = 5	None or Minor = 0		10	5	0	NS
HEART PROBLEMS (HEART ATTACKS, STROKES, ANGINA, MURMURS, HIGH BLOOD PRESSURE)							
Severe/Recent = 10	Mild/Past = 5	None = 0		10	5	0	NS
LUNG PROBLEMS (ASTHMA, COPD, TB, EMPHYSEMA)							
Severe/Recent = 10	Mild/Past = 5	None = 0		10	5	0	NS
DIABETES							
Severe/Uncontrolled = 10	Controlled = 5	None = 0		10	5	0	NS
FEET OR MOBILITY ISSUES							
Severe = 10	Mild = 5	None = 0		10	5	0	NS
HOMELESS HISTORY							
Current/Long = 10	Short = 5	None = 0		10	5	0	NS
SOCIAL ISOLATION							
Severe = 10	Mild = 5	None = 0		10	5	0	NS
MEDICATIONS (SPECIFICALLY: PSYCHIATRIC, ANTI-DEPRESSANT, ANTI-PARKINSON)							
Many = 10	Some = 5	None = 0		10	5	0	NS
LIVING ENVIRONMENT (examples AIR CIRCULATION, RETENTION OF HEAT, ACCESS ISSUES)							
Many Issues = 10	Some = 5	None = 0		10	5	0	NS
SIZE OF SPACE							
Room/Small Bach = 10	Bach/1 BR =5	2 BR & up = 0		10	5	0	NS
				Sub Total	80/110		
Air Conditioning (A/C)	In Unit = -80	In Building = -50	None = 0	AC Deduction	-0		
				FINAL SCORE	80		

Rating

Extreme Heat Risk = 100-120

Medium Heat Risk = 55-70

High Heat Risk = 80-95

Low Heat Risk = 20-50

Medium High Heat Risk = 60-75

No Heat Risk = negative # to 15

Rating: **HIGH RISK**

Assessment Conducted by: Caseworker Smith and Jean Jones [] Worker alone [X] With client

Working Practices: Heat Response Outreach

Our project was staffed by the Heat Project Outreach Coordinator, the Heat Project assistant, and the eight Peer Outreach Workers. There was also support provided by other staff in the PARC drop-in during the first two years, and by Sistering Drop-in staff during the second summer.

All tasks could be completed by any of the individuals, because we worked hard to build a system that reduced hierarchy as much as possible. During the first summer, this was actualized when the Heat Project Coordinator overslept on the day of a heat alert. By the time she got to the office, the peers had started their early morning procedures, from posting signs to notifying drop-in staff and phone heat registry members! This was a prime example of the peer-leadership created, through empowering them to take responsibility for their work.

We developed a general system of working protocols.

Heat Response Assessment

We created a Master List of the name, phone number, address and risk status of every person on the Heat Registry. Earlier in the summer, we viewed everyone as high-risk, so the list was divided according to geography to enhance outreach and home visits. As the summer progressed, we felt that people were more aware of the heat risk and possible solutions, and modified our list to be based on risk status. This allowed us to concentrate on those people who we deemed to be most at risk.

Heat Alert Advance Notification

The Heat Project Coordinator negotiated with Public Health to receive advance notice in cases of a potential extreme heat alert. When she was made aware that there may be a heat alert through this notification or via weather reports, she called the peer outreach workers and heat staff the evening before to ask them to be on stand-by for the morning. The entire heat team became obsessed with weather tracking.

Morning Roll-out

When a heat alert is announced, Toronto Public Health sends out a notice by email or fax. Usually we received the announcement of a heat alert via the notice that is sent around 7:30 am to members of the Hot Weather Response Team, of which the Heat Project Coordinator is a member. Sometimes we had to wait until the notice was sent out to community agencies (usually between 9 am and 10 am). This would be faxed to the agency, which would in turn email the Heat Registry's staff and some of the peer outreach workers.

Staff and peers also relied on the city's heat alert website: <http://www.toronto.ca/health/heatalerts/index.htm>. This site is updated daily, usually between 9 am and 10am.



When a heat alert was called, the Heat Project Coordinator or Heat Assistant mobilized the team. The drop-in staff was notified, and emails were sent to key partners (members of the Heat Registry Safety Network and the Heat Registry Working Group), as well as to staff at PARC and Sistering who were designated as heat leads on their teams. Signs were posted at the drop-in to let members know about the heat alert. In addition, signs posted in the drop-in windows announced “Cool Down Here”, which let the public know that they could also access a cooling space.

The team would gather at PARC and divide the tasks. Some peers would begin making phone calls, while others stayed in the drop-in to see if clients came in. The contacts were recorded on the master list, and were continually cross tabulated by team members to reduce duplication. The **Early Morning Phone Call script and Documentation** were used for the first set of phone calls (see Appendices D and E on pages 75 and 76).

Afternoon Activities

In the afternoon, home visits were made to those people who hadn't been reached by phone. One or two team members remained at the drop-in to keep making phone calls, and to check in with extremely high or high-risk individuals for a second time. For the second set of phone calls, the **Phone Check-in Script and Documentation** were used (see Appendix F on page 77).

During a home visit, the team would try to see the client directly. Some clients wouldn't allow access to their building, but the team could ask a couple of questions over the intercom. Other times there was no answer. When possible, the team would enter the building and knock on the client's door. If there was no answer, they would leave some of Toronto Public Health's heat material and a notice saying the team had been by. This was a brightly coloured card that would be left half in and half out of the door, so it could be seen the next day, if the client was visited again. This allowed us to track whether a client had left their housing and/or were away. All information was recorded on a **Home Visit Check-in Form** (see Appendix G on page 78).

The contact information was tabulated at the end of the day, which enabled us to track someone's status over a couple of days.

Outreach Safety Protocols/Outreach Support Tools

We developed a lengthy list of protocols/rules for outreach. Peer outreach workers were trained by a Public Health Nurse and one of the Outreach Workers at the drop-in, and key tips were developed based on their training. They included:

5 most important things to watch out for with a client (heat related)

- Breathing
- Heartbeat
 - Heat exhaustion = Weak, fast pulse
 - Heat stroke = Fast heart rate and pulse of 130/min
- Weakness
- Tiredness/sleepiness
- Temperature
 - heat exhaustion = 102.2F/38.9C
 - heat stroke = 104F/41C

Communication Protocols

- When heading out on a home visit, each outreach team carried a cell phone.
- Additionally, a list of sites to be visited was left with the heat office. Staff or peer outreach workers remaining in the office were aware of who was to be visited.
- To ensure safety, in the second year, teams phoned the heat office before and after a visit.
- The office also continued to phone members of the Heat Registry, so could notify outreach teams if a visit was no longer required.

Clothing Protocols

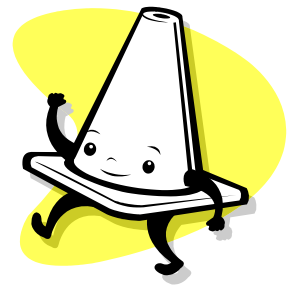
- Wear clean, heat-appropriate clothing (one summer we had “HeatBusters” t-shirts for staff and peers) including pants/long shorts/skirt and a t-shirt/blouse/short-sleeved shirt.
- Wear hat, scarf or bandana on head if outside.
- Shoes must be closed-toe e.g. running shoes. No open-toe sandals or flip flops. Sandals must have a strap around back. Socks are recommended.
- Keep jewellery to a minimum. Small earrings and rings are okay, but try to avoid necklaces.
- Wear ID card (see Supplies List below for more information on the ID card).

Heat Safety Protocols

- If doing outside outreach, wear sunscreen and lip block, and reapply them regularly.
- Drink lots of water, sports drinks, and/or natural fruit juices.
- Take time to cool off. Go somewhere air-conditioned. Seek some shade.
- Eat small snacks during the day.
- Take a lunch break somewhere cool.

General Safety Protocols

- Always work in pairs. Both people must go together to see each client.
- Stay between the client and the door.
- Never go into a room alone (i.e. if they say they want to show you something).
- Don't accept food or drinks from the client.
- Be honest with yourself i.e. if you are triggered by drug paraphernalia.
- If a party is taking place in the unit, don't go in.
- If there is more than double the number of adults to outreach workers, then don't go in. For example, if there are four or five adults, don't go in. Two adults and several young kids are fine.
- Don't carry much money with you, if any. Make sure it is in a secure place.
- Keep ID on you at all times.



Health Safety Protocols

- Don't take food/drinks or let clients kiss you on the hands.
- Try to avoid touching counters/surfaces.
- Use antiseptic hand cleanser after leaving an apartment.
- Try to choose a chair that is not fabric – i.e. vinyl or wooden.
- If doing a survey, try to take the person out of the apartment.

Emergency Codes and Tools

- **Emergency must leave:** “Tanya just buzzed; we need to get back to PARC.”
- **Taking too long:** “Wow, I sure could go for an onion sandwich.”
- **For using gloves:** “I've got a cut on my hand so for your safety I am going to put gloves on.”
- **If offered alcohol, or a joint:** “Sorry, I'm on the job.”

Building Rapport

- Be kind, compassionate. Respect their needs and circumstances.
- Allow people to have their own speed of communication.
- If you see something that bothers you in their apartment don't share it.

- Pick out something that you see that is good about them (praise them).
- Let them know that anonymity will be protected.
- Use non-threatening body language – arms straight down at side, stand at a bit of an angle, and look friendly.
- Have something to give them – information flyer, food information, tokens, bottled water.
- Learn to say no respectfully to a person (i.e. if asked for money, cigarettes).
- Self-disclosure from you isn't necessary, but can be helpful to show them that you have come a long way.

General Protocols

- Do check-ins before the shift with your partner.
- Tell the client up-front that you only have five minutes when doing a visit.
- After outreach – team check-in/debrief.
- Call Heat Registry Coordinator or Heat Registry office if there are any problems.
- Engage in self-care activities when you get home.
- Maintain logs of how things are going.
- Keep track of your knapsacks and all written information.

Supplies List

The supplies you will need depend on the model chosen. This basic list can be adapted as needed.

- **Cell Phones** – Each outreach team was given a cell phone to remain in contact with the staff or peers working from the home base.
- **TTC tokens or passes** – You might be able to get some assistance with transportation funding if your peers are in receipt of Ontario Works (OW) or Ontario Disability Support Program (ODSP).
- **Proper clothing** – We provided t-shirts for each peer. We also required peers to wear running shoes, for safety, during outreach. Again, OW or ODSP might provide a start-up allowance that would enable a peer to purchase proper clothing. (Note: begin this process as soon as you hire someone)
- **Identification** – We created an ID card that peer outreach workers could wear around their neck. It was laminated and included their picture, first name only, and their title. The back was a business card that explained the project and provided a number for additional information.
- **Knapsacks** – Each peer liked having their own knapsack. This enabled them to keep personal and other items in it as well.



- **Items to include in the knapsacks** – hand sanitizer, mini-first aid kits, temperature stripes (for forehead) or ear thermometer and caps, personal water bottle, bottles of water to distribute, cloths (to help people cool down), heat-based flyers, “we were here” cards, pens, and home visit forms.

- **Shared items for outreach** – thermometers to measure temperatures in unit. Personal thermometers may also have to be shared. A large first aid kit would be helpful if a lot of street outreach in locations such as parks and ravines is planned. Each team should also have a cell phone, and a list of key numbers (or program them into the cell).
- **Bottled Water** – We had several cases of bottled water available in our office. This was for peers to drink and to give out. Additional cases of water were available for distribution in the drop-in on hot days. Most of our water was supplied through Project Water, courtesy of The Bargains Group.
- **Clipboard and Pens** – Essential for taking notes either during outreach visits or even during registration.



Administrative Tools

As with many projects, the operation of a Heat Registry involves extensive paperwork and/or computer documentation. In this section, we have outlined some of the tools that we used over the two years to make the project function efficiently. All of these are included in the Appendices for your modification and use.

Job Flyer

We created a job flyer that was posted in our drop-in, at Sistering, and distributed to partner organizations for further distribution. With PARC's membership, it was important to provide enough time between posting and closing for those who don't use the drop-in daily to see it; bear in mind, however, that people who apply are eager to know the results, so the posting should not be up for too long. The flyer should state that staff can help people fill in the application. Staff or volunteers should also be directed to encourage suitable applicants to apply.

Application

We tried to make the application as clear and simple as possible. However, we also wanted to encourage job readiness for other employment by making the application a formal process. Some people may have resumes to attach; in our case, many didn't.

Interview

Our interviews were conducted by panels of two or three. We tried to interview as many people as possible, in order to give applicants the experience they need if seeking other employment. We also recognized that some people might not be able to express themselves in writing, and may do better in an interview setting. In the first year we received 28 applications and interviewed 14; in the second year we had about 13 applications and interviewed them all.

The interview process and questions are designed to be casual and to make people feel at ease. At the same time, there were several questions that it was important to see how someone would respond, and it was also important for them to know that we were taking the process seriously.

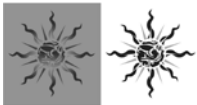
Confirmation of Employment

We called each interviewee to let them know whether or not they had been accepted to the program. Those who were accepted were also given a letter that outlined the program, the pay, the hours and any other information that they should know. They could also show the letter to their worker at Ontario Works or Ontario Disability Support Program, if they desired. Some people chose to do this in order to access start-up employment funds.

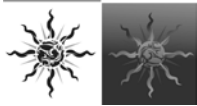
Notices to Clients of the Heat Registry

We created two flyers for clients: a "We Were Here" notice, and an "Extended Hours" pass. These flyers are available in an editable Word Document version (see Appendices H and I on pages 79 and 80) but the general look and content appears below.

- **We Were Here** - This notice was designed to be put under doors if the outreach team didn't find the clients at home. It was strategically placed - along with some heat-related information on cooling centre locations (during an extreme heat alert) - so that part of it stuck out from under the door. That way, if the team returned the next day they would be able to see whether the information had been received; another method of insuring whether someone was okay.



The West End Heat Registry Outreach Workers were here to check on you today because of the extreme heat. Sorry we missed you.

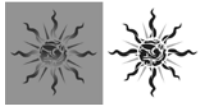


Please let us know that you're okay. Call Heat Busters at PARC at 416-537-2262 ext 239

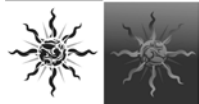
STAY COOL TODAY – Access an Air Conditioned Location (PARC is now open 7 days a week). Drink lots of water. Wear light clothing and a hat. Go to the lake. Stay in the shade.



• **Extended Hours** – The extended hours' program was used to keep the PARC drop-in open in the afternoon for members of the Heat Registry deemed to be at high risk who needed extra time in a cool environment. This pass was used to confirm that members were part of the Heat Registry. Later it was refined to include any members that staff deemed to be at risk. As Sistering has longer operating hours than PARC, this was not required at their locations.



As a member of the Heat Registry _____ can access PARC when the drop-in is closed. Present this card to the receptionist or drop-in staff to receive an extension on your hours at PARC.



STAY COOL TODAY – Access an Air Conditioned Location (PARC is now open 7 days a week). Drink lots of water. Wear light clothing and a hat. Stay in the shade.



Signage

We created several signs for use in the program. The four most common were the HeatBusters and West End Heat Registry and Heat Response Network door or table signage, and the Heat/Extreme Heat Alert notices.

- **Heat Busters** – The peer outreach team in 2008 nicknamed themselves the HeatBusters, and used that slogan on their t-shirts as well. This sign was posted on our office door so that members knew where to find us. It could also be used when setting up a heat registration or Air Conditioner clinic as table signage.
- **West End Heat Registry and Heat Response Network** – As above, this sign can be used for doors or tables.
- **Heat Alert notice** – This was posted in the drop-ins and around the buildings we covered whenever a heat alert was called by the City. It was simple and clear to let people know that a heat alert had been declared.
- **Extreme Heat Alert notice** – As above, this was a sign posted to inform people that an Extreme Heat Alert had been called.

How to Call 911

When the program expanded to Sistering, we realized that there were a lot of moms/caregivers with children who accessed their drop-ins. This form was created to help moms/caregivers explain to their kids how to call 911. The hope was that this would provide one more layer of safety, as a child would have a tool available to them if their parent/caregiver was in distress.

Work Activities Tracking Tools

In 2008 our program operated with one heat assistant (a PARC relief pool staff member who was seconded to work on the project) and in 2009, the position was shared by two relief staff. Additionally, mid-season 2009 Sistering hired a summer student to run their heat project. As all four staff, including the Heat Project Coordinator, were part-time, their shifts didn't always overlap. The less overlap, the more coverage was available for the program. This document allowed the Heat Project Coordinator to track the hours of the assistants, and to use their time wisely, as we were operating on a very minimal and tight staffing budget. The Coordinator used a similar version for her invoices (see template in Appendix J on page 81).

Heat Project Assistant Tracking Tool

Name: John Doe

Date: Sunday August 2nd, for preceding week

Activity	Details	Time Spent
Administration	Processing AC forms for delivery	2 hours
Computer/Data Entry		
Peer Supervision	Continue to attempt to contact peer X	15 minutes
Meeting		
AC Registrations or Related Work	Faxing new ODSP AC applications to the ODSP offices; finding folks in Drop In who need to give us more info	1 hour 15 minutes
Heat Registrations		
Community Outreach		
Landlord Outreach		
Heat Alert or Extreme Heat Alert		
Drop-In Extended Hours Coverage		
Other (specify)		
		Total Hours = 3.5 hrs

Total Project Hours including this week: 68.5 hours

Peer Outreach Workers' Hours Tracking Tool

We created a binder that was left in an easily accessible place for peers to record their hours. They were asked to sign in and out, and to list the activities that they did, each time they were in. This was initialled by the peer's supervisor at the end of the week during the check-in meeting. (See template in Appendix K on page 82.)

Name of Peer: Susie Q

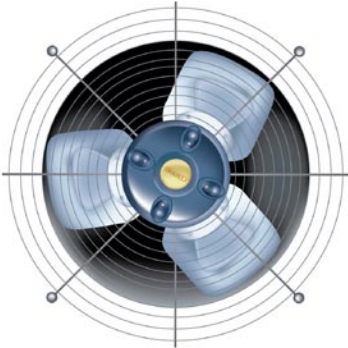
Week of May 20th to 27th

Date	Arrival Time	Departure Time	Total Time Worked (if it was sporadic/on & off, please indicate)	Activities – What did you do while you were working? e.g. AC work, Heat Registry signups, working at other agency, community outreach, heat alert day etc. Be specific so we know how much time is needed for each activity	Supervisor Initials
May 20 th	10:15am	12:15pm	2 hours no breaks	Signed up 4 people to the Heat Registry	
May 22 nd	9:30am	1:30pm	2 hours over that time	Talked to people about the heat registry, did 5 Air Conditioning Applications and 2 heat applications.	

Access to Cooling Supports

In Toronto, the City's Social Services Client Special Services Unit (CSSU) has a Cooling Supports program for people who are affected medically by the heat. Both fans and air conditioners can be obtained through this program. This program uses discretionary funds, which may not be available in all communities, and limitations are placed on funding by Social Services. It is intended to ensure that recipients with the highest need – who have a medical condition exacerbated by the heat – obtain this special benefit. The air conditioning program is explained below. An additional service offered by PARC – the fan lending program – is explained later in this manual (see Page 55).

Air Conditioning Program



The Air Conditioning Program was intended to operate as a secondary component of the Heat Registry. However, due to the medical complications faced by PARC members and the severe heat people face in their housing – even when the temperature does not result in a heat alert – it took up more time and energy than the Heat Registry could handle, at least in the second year. In the first year, 70 successful air conditioner applications were processed/purchased. The Heat Registry processed 200 applications (for 199 air conditioners and one fan) in the second year, but it is unknown how many were ultimately funded by Social Services.

During the original pilot project, in the summer of 2008, there were several problems (outlined in the evaluation of that year's pilot) that were addressed with the support of CSSU staff in the project's second year. Developmental and other improvements are likely to be required on an ongoing basis. It should be borne in mind that the "best practices" guideline described below are based on the first two years' of running the project.

Setting Up An Air Conditioning Program

There are multiple steps to conducting a "Cooling Supports" program. These include:

Get Support

- Not all jurisdictions will have discretionary funds available; if they do, there may be a limit on availability. Contact your local Social Services branch to see if medically necessary cooling supports are available in your area. If not, might they consider providing such a program? In Toronto, the maximum allowed is \$375 per unit, plus taxes, and including installation/delivery.
- If there is such a program, explore the possibility of your organization providing support in assisting vulnerable clients apply for a fan or air conditioner.

Preparation

- Create – in consultation with Social Services – the process, criteria guidelines, and application form. One important piece that we overlooked in the first two years was a "Release of Information" component that would have allowed Social Services to update us on the status of the application for OW and ODSP applicants (see Appendix L on pages 83 to 86 for forms that we used in 2009).
- Train staff/volunteers/peer outreach workers to complete the forms. Ours were very detailed, and required multiple signatures.
- Contact potential providers of air conditioners and fans. In Toronto, applicants must show two quotes. To make it simpler for people who were applying for cooling support, we obtained quotations - for

each size of unit - on their behalf. A printout of current prices from Internet ads also meets the requirements.

- The type of quotes necessary depends on the method of purchase available. We used two different systems, Direct Purchase and Vendor Support. In 2008, we used one method of Vendor Support and in 2009 used another; both are outlined below.

Direct Purchase

- Applicants apply for the air conditioner or fan through the Heat Registry project.
- This involves meeting with a member of the Heat Registry team – peer or staff – to complete an application form.
- The applicant has to take the medical documentation form to their nurse-practitioner or medical doctor (family doctor, psychiatrist) for completion, and return it to the program. The nurses at PARC’s clinic played a significant role in completing this documentation for PARC and Sistering members.
- The applicant must meet with a Heat Registry team member again, to select their unit (based on housing unit size) and the location of the purchase (from the quotations). They can also bring in their own quotation, if they prefer to purchase the air conditioner elsewhere.
- The Heat Registry team reviews all the forms to ensure they are complete, and then has the client sign them.
- Once completed, the application is documented, and delivered (by fax, mail or hand delivery) to the appropriate Social Services office. (In Toronto, applications for people on Ontario Works (OW) are sent to the Client Special Services Unit (CSSU) directly, whereas applications for people receiving Ontario Disability Support Program (ODSP) are sent to their ODSP worker, who makes a determination before sending it to the CSSU.
- The Heat Registry team does not decide whether the individual is medically qualified for an air conditioner or not. That decision is left to Social Services. The only responsibility of the Heat Registry team is to assist people with completing the paperwork and to facilitate the process.
- In this process, the cheque is mailed directly to the applicant. They are responsible for the purchase, delivery and installation of the unit. They are also required to send the receipt to their OW or ODSP worker. Failure to produce a receipt could result in an overpayment on their file, which meant that the money would be deducted from future assistance cheques (see Appendix M on pages 87 and 88).

Vendor Support – 2008 – Direct Purchase/Single Supplier

- In 2008 we used a single supplier method, which combined purchase, delivery and installation in the quotation. Ideally, two or three suppliers should be used to provide applicants with choice and to ensure that the effectiveness of the program is not compromised because one company gets behind in delivery and installation. (We were unable to find more than one company that could provide this service for the amount available from Social Services).
- When completing the forms, the client agrees to have their cheque sent directly to the vendor from Social Services.
- The vendor is responsible for arranging delivery and installation, although PARC assisted when the applicant didn’t have a phone or was non-responsive to phone calls.
- This method could be highly effective if more than one company is used – to deal with capacity issues experienced in our pilot. It would also be helpful if the supporting organization could determine what cheques have been sent to the company, and which applications were funded.

Vendor Support – 2009 – Using a Local/Neighbourhood Supplier

- In 2009 we continued to use a single supplier for the air conditioners that were purchased through vendor support but installation was obtained separately. This allowed us to purchase units from a local hardware store that were cheaper than those supplied through air conditioning companies, who tend to focus on full home AC units. (See Appendix N on page 89 for sample of Purchase Request used by PARC.)
- An agreement was made with the vendor that outlined the store's responsibility and obligations and those of PARC.
- Separately, we contracted with two air conditioner installers; women who had completed a special training course at a local college. One left early in the season, so we ended up with just one installer, which again caused capacity issues.
- When cheques were issued to the vendor, the vendor gave us the names of the clients for whom the cheques had been issued.
- The vendor delivered the AC units in bulk to PARC, where they were stored for delivery to applicants.
- The installer and a peer outreach worker visited each recipient to conduct a pre-installation inspection that included measuring windows to ensure the unit would fit, determining whether wood would be needed to fill gaps, whether brackets were required, whether the window was accessible, etc. The unit was delivered to the recipient either at that time, or at the time of installation, or in between pre-inspection and installation.
- The installer and a peer would go to the client's house to install the AC unit. The peer's role was to mediate between the recipient and the installer if there were any issues, and to generally provide support to the installer.

Outreach

- Hold AC registration clinics and conduct ongoing one-on-one registrations.
- Connect with local health providers to see if you can set up an air conditioner registration clinic.
- Follow-up with the applicant to make sure everything has gone smoothly.

Note: The process from submission to receipt of cheque can take from two to six weeks.

Fan Lending Program

The fan lending program is designed to help people who are unable to use an air conditioner (or who cannot afford to purchase one) to stay cooler, with the assistance of a table fan. While fans are not ideal cooling supports in terms of temperature, they can – when used properly – make temperatures in a small area more bearable. As fans can be dangerous when used incorrectly, it is important to instruct clients on the proper use of a fan – see the City of Toronto FAN FACTS brochure - http://www.toronto.ca/health/heatalerts/beatheat_fan.htm



PARC has been able to obtain – through direct purchase and donations – a large number of fans. These fans are loaned out to individuals who are identified as facing excessive heat in their housing. These individuals either self-identified, or were identified through staff awareness. People can borrow a fan for the duration of the summer, but are expected to return it when the weather gets cooler. These fans are stored during the winter. In the spring they are cleaned and examined for workability.

Model Options

There are several options to consider when looking at how to run a heat registry in your own area or organization. Our aim with this manual is to provide you with the tools you need to get the program up and running. How you design your own program is up to you.

One-Location Model with Peer Outreach Team (i.e. PARC– Summer 2008)

- One site for registration, using minimal staff and hiring peer outreach workers. It offered a central location for checking on people, supplemented by phone calls and home outreach visits.

Two-Locations Model with one Peer Outreach Team (i.e. PARC – Summer 2009)

- Two sites for registration, using minimal staff and peer outreach workers. Outreach took place at both the PARC and Sistering’s Parkdale drop-in locations, supplemented by phone calls and home outreach visits.

One-Location Model with student/lead peer/peer outreach team (i.e. Sistering, Summer 2009)

- One site for registration, at Sistering’s main location. A student took on the staff role, supported by PARC’s Heat Registry Coordinator and Sistering staff. A lead peer (someone experienced from their work at PARC) and two peer outreach workers were hired. Outreach was designed to take place in the drop-in and by phone, with minimal home visits, as the clients were spread throughout the city.

Staff-run Model

- Staff would register clients, assess risk and conduct outreach. This would involve some reworking of job descriptions and schedules, to allow staff to respond when a heat alert is called.
- Special heat services could be put in place, as well such as programming changes, extended hours and increased access to the office for air-conditioned space.

Multi-Agency Model – staff and volunteers

- Several agencies would partner to register clients and assess risk.
- Outreach could be provided by a team of staff, or a combination of staff and volunteers.

Multi-Agency Model – peer team

- This would combine the multi-agency model and the Two-Locations with a Peer Outreach Worker team.
- All agencies would be responsible for registering clients and assessing risk.
- Outreach would be completed by peers, who could be based out of one or several locations.

All-Volunteer Model

- Volunteers would be completely responsible for running the program, registration, assessing risk and conducting outreach.

Phone Outreach-Only Model

- In conjunction with any model, this method would involve phone outreach only.
- This would be useful for an organization with a geographically diverse client base that is relatively stable in housing and has access to phones.

Residential Model

- If all clients lived in the same building, the outreach would be simplified.
- Some agencies use a card system for safety with seniors. The individual leaves a card on the door at night and takes it in when they get up. If it is not removed, staff knows there is a problem and can enter the unit.

Timeline Charts

We have developed some draft timelines to assist you in your process. Some things may take longer and others may go smoother, depending upon your agency and the model that you choose.

In our process the development time took 15-40 hours a week, from September to April (including all staff involved but not the work of the Working Group or sub-committees), and then 60-80 hours a week from May to September, plus the work of the peers. This should be greatly decreased for other Heat Registries because the development work has, to a large extent, been completed.

Heat Registry

Specific Activity ¹	Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Coordinator hired or staff designated to work on project										
Develop community partnerships										
Partnership meetings										
Examine staff practices and policies										
Update materials										
Heat education training for staff and clients										
Registration Clinics										
Ongoing client registration										
Risk Assessment										
Database and information management										
Review work and protocols										
Make necessary modifications										
Registry client supports										
Obtain water donations and manage distribution										
Review and Evaluation										

Heat Registry with Peer Component

Specific Activity ¹	Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Posting for Peer Positions										
Interviews and Hiring										
Training for Peers (see Peer Training outline)										
Peers on call for heat alerts										
Ongoing emotional/resource support to peers										
Peer management – shifts, payments etc										
Evaluation and Review										

Heat Registry with Air Conditioner Component

Specific Activity ¹	Month ²	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Obtain multiple Air Conditioner quotes										
Hire installers										
Air Conditioner Registration Clinics										
Individual Air Conditioner Registrations										
Ongoing support for clients assisting with purchase, installation etc.										
Evaluation and Review										

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2008 only

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Sistering Team

Emily Charles-Kinlocke
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Heat Registry Working Group:

- Alanna Barr and Lisa King (Toronto Public Health)
- Sally Bryant and Kevin Lee (Shelter, Support and Housing Administration – City of Toronto)
- Rebil Brown (Toronto Community Housing Corporation)
- Isabel Palmer (St. Christopher House)
- Robert Fitzgerald (PARC Outreach Peer)
- Tanya Gulliver, Andrew Mindszenty and Bob Rose (PARC)
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Appendix A: Heat Registry Consent Form

HEAT REGISTRY CONSENT FORM

I agree to provide personal information to the West End Heat Registry and Heat Response Project. I understand that the information being collected about me will only be used to determine my risk of ill health from heat during the summer of 2009, and to provide appropriate outreach services.

I can refuse to answer any question if I so choose. My refusal to answer questions will not affect the general services that I receive at Sistering. However, missing questions may mean that staff are unable to properly decide what level of risk I face from heat.

All information collected will be kept confidential and will not be shared with others with the following exceptions:

- 4) The Heat staff will access my information to determine my heat risk.
- 5) My contact information – Name, Address, Phone Number – will be shared with staff, peer outreach workers, volunteers and/or students who are conducting outreach during the summer. They will be able to access this on a “Need to Know” basis only.
- 6) If I am a member of PARC the team will check to see if I have been there during a heat event.

I, _____, consent to the collection of my information, and release as outlined above.

Date: _____

Signature: _____

Witness: _____

Appendix B: Consent to Contact Form

CONSENT TO CONTACT

During extreme hot weather I, _____, give permission for the
(name)
Heat Team to contact _____ who is my _____
(name) *(relationship)*

if I cannot be reached any other way after _____ hours/days. They can be reached by
(Length of time)
phone at: _____
(phone number)

This permission is only to be used for checking on my health and well-being during the summer
of 2009 (May 15th to Sept 15th) when there is a heat alert or extreme heat alert.

Date: _____

Printed Name: _____

Signature: _____

Witness: _____

Appendix C: Sample Questionnaire, including the Children's Survey

Sistering is involved in creating a registry of people who might be at risk of ill health or other problems during the extreme heat in the summer. We are gathering information about factors that could influence your risk of being affected by the heat. During warm weather we will be doing follow-up, especially on heat alert days, to find out if you're doing okay.

If you're willing to participate in this project, I would like to ask you some questions about your living situation, and your health. This information will be kept confidential and will be used only for the purpose of the Heat Registry project.

Once you are registered, we will assess your risks during a heat alert and work to develop a safety plan with some of our partners and the peer staff. Whenever there is hot weather and the city calls a Heat or Extreme Heat Alert, we will be contacting you.

Would you like to take part? Yes No *If No, thanks for your time.*

If Yes, before I ask you any information about yourself, I need to take a minute to explain our consent form to you so that you can feel confident that your personal information will be safe. Explain consent process to individual including confidentiality and privacy of information.

Complete Consent form --- Consent form explained. Yes No

Date: _____

Name: _____ Street Name or nickname: _____

I'd like to ask about your age. Which category do you fit into? Are you:

18-30 31-45 46-60 over 60

Address: _____

If they have no address or indicate that they are homeless complete the questionnaire as best as you can.

Phone _____ Phone not available

Do you live with any other adults? For example: Spouse, partner, family member, roommate?

Specify: Partner/Spouse Roommate Family member

Do you see them regularly? No Yes Just Occasionally

Do you live with any children? No Yes *(complete children's details at end of survey)*

Can I get a number for someone that I can call during a Heat Alert if I can't reach you? This should be someone you see regularly, talk to regularly, or who may have a key to your place to come check on you.

Name: _____ Relationship: _____

Contact #: _____

Sign additional consent form for contact. Yes No

Heat Risk Awareness and Experience

Have you attended one of the heat safety workshops? Yes No (give pamphlets to everyone)

Do you experience personal distress during extremely hot weather Yes No

If yes, Describe what gives you the most difficulty:

What steps do you take to protect yourself during hot weather? (DON'T READ LIST!)

- | | | |
|---|--|--|
| <input type="checkbox"/> Use air conditioning | <input type="checkbox"/> Go to air conditioned place | <input type="checkbox"/> Use fan |
| <input type="checkbox"/> Nothing I can do | <input type="checkbox"/> Wear a hat | <input type="checkbox"/> Wear light clothing |
| <input type="checkbox"/> Open windows | <input type="checkbox"/> Drink lots of fluids | <input type="checkbox"/> Go outside |
| <input type="checkbox"/> Take a cool shower | <input type="checkbox"/> Other (describe) | |

LIVING ENVIRONMENT		
I'm going to ask you some questions about your housing now. This helps us determine whether your housing increases your risk of problems in the heat.		
<p>Do you experience problems with heat because of where you live?</p> <p>If, yes what kinds of problems?</p> <p><u>READ LIST</u></p>	<input type="checkbox"/> No problems reported <input type="checkbox"/> New place; don't know yet <input type="checkbox"/> Poor window ventilation <input type="checkbox"/> Cooling system didn't work <input type="checkbox"/> Problems with refrigeration	<input type="checkbox"/> Problems staying cool <input type="checkbox"/> No air circulating <input type="checkbox"/> Heat stays inside <input type="checkbox"/> Elevator broken down <input type="checkbox"/> Other (elaborate)
<p>Do you have air conditioning in your unit or in your building?</p> <p>Are you able to use it without problems?</p>	<input type="checkbox"/> Air conditioning (in unit) <input type="checkbox"/> Air Conditioning (in building) that is easily accessible <p>Because you have air conditioning, your risk of</p>	<input type="checkbox"/> Air Conditioning (in building) that is not accessible <input type="checkbox"/> No Air conditioning <p>Would you like us to help you apply to the city for a free air</p>

	heat is decreased significantly if you use it 3 hours a day during a heat event. We consider you to be low risk but you are welcome to complete the questionnaire still if you choose.	conditioner? <input type="checkbox"/> Yes <input type="checkbox"/> No
Do you have access to a fan?	<input type="checkbox"/> Yes (<i>Give Fan Facts pamphlet</i>) <input type="checkbox"/> No What kind? <input type="checkbox"/> Table Fan <input type="checkbox"/> Standing Fan <input type="checkbox"/> Ceiling Fan <input type="checkbox"/> Window Fan	(<i>If not getting AC</i>) Would you like us to help you apply to the city for a free fan to help cool your place? <input type="checkbox"/> Yes <input type="checkbox"/> No
Do you live in social housing? (i.e. TCHC, Supportive Housing, Habitat, Homes First).	<input type="checkbox"/> Yes Which provider?	<input type="checkbox"/> No
How big is your unit?	<input type="checkbox"/> Room <input type="checkbox"/> Bachelor <input type="checkbox"/> One- bedroom	<input type="checkbox"/> Two-bedroom <input type="checkbox"/> Larger than two
What kind of building is it?	<input type="checkbox"/> Apt/Room in a house <input type="checkbox"/> Basement Apt/Room in House <input type="checkbox"/> Apt above store <input type="checkbox"/> Apt above restaurant <input type="checkbox"/> Shelter <input type="checkbox"/> Motel/Hotel <input type="checkbox"/> House	<input type="checkbox"/> Rooming House/Boarding Home <input type="checkbox"/> Low rise (less than 6 floors) <input type="checkbox"/> High rise (seven floors or more)
Where are you in the building? (i.e. which floor)	<input type="checkbox"/> Top floor <input type="checkbox"/> Middle	<input type="checkbox"/> Bottom/Ground <input type="checkbox"/> Basement
Do you feel you can leave your building during a heat alert?	<input type="checkbox"/> Yes, no problems Reasons, why not? <u>READ LIST</u> <input type="checkbox"/> Elevator problems <input type="checkbox"/> Physical health issues <input type="checkbox"/> Physical disability issues <input type="checkbox"/> Fire escape too hot use	<input type="checkbox"/> Stairwell broken <input type="checkbox"/> Unsafe building <input type="checkbox"/> Unsafe neighbourhood <input type="checkbox"/> Other – indicate
What type of access to cooking and refrigeration do you have in your housing?	<u>COOKING</u> <input type="checkbox"/> Kitchen <input type="checkbox"/> Hot plate <input type="checkbox"/> Hot pot <input type="checkbox"/> No cooking	<u>REFRIGERATION</u> <input type="checkbox"/> Full Size fridge <input type="checkbox"/> Bar/mini fridge <input type="checkbox"/> No fridge <input type="checkbox"/> Shared fridge
Do you have access to water for drinking/cooking	<input type="checkbox"/> Yes	<input type="checkbox"/> No

<p>Do you have access to water for showering/bathing (<i>ask about type and about access – shared or private</i>)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> Shower only <input type="checkbox"/> Bath only <input type="checkbox"/> Shower/Bath <input type="checkbox"/> Private <input type="checkbox"/> Shared	<input type="checkbox"/> No (<i>describe problems</i>)
<p>Have you ever been homeless in the past?</p>	<input type="checkbox"/> Yes How long were you homeless? _____ When did you get housed? _____	<input type="checkbox"/> No
<p>Are there any other issues or problems with your housing that you would like to tell us about?</p>	<p><u>Comments:</u></p>	
<p>Social Environment Now I am going to ask you some questions about supports and services that you may use in the community, as well as ways of accessing information. This will help us develop a plan for you during heat alerts.</p>		
<p><u>Observe only:</u> <i>Does this person have problems communicating in English?</i></p>	<input type="checkbox"/> Yes <u>Describe:</u>	<input type="checkbox"/> No
<p>How long have you been living in this area?</p>	<input type="checkbox"/> New <input type="checkbox"/> A few months	<input type="checkbox"/> Less than a year <input type="checkbox"/> Over a year
<p>Do you have a pet of any kind?</p>	<input type="checkbox"/> Yes Ask about type of pet, issues that arise and give <i>Pet Facts pamphlet.</i>	<input type="checkbox"/> No
<p>Do you volunteer or work with Sisting?</p>	<input type="checkbox"/> Yes <u>Give details:</u>	<input type="checkbox"/> No
<p>Do you access the Parkdale Activity-Recreation Centre on Queen Street?</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<p>What kinds of places do you go to on a hot day? <u>DON'T READ LIST</u></p>	<input type="checkbox"/> Drop-In Centres <input type="checkbox"/> Hospital/Doctor's Office/Health Centre <input type="checkbox"/> Stores/Mall <input type="checkbox"/> Library <input type="checkbox"/> Meal/Food Programs	<input type="checkbox"/> Church <input type="checkbox"/> Community Centre <input type="checkbox"/> Bingo Parlour <input type="checkbox"/> <u>Other (list)</u>
<p>Do you have contact with other people in your living</p>	<input type="checkbox"/> I have frequent contacts (describe)	<input type="checkbox"/> I rarely see anyone

environment?	<input type="checkbox"/> I don't usually see anyone else <input type="checkbox"/> Just in passing (i.e. hallway/elevator)	<input type="checkbox"/> I see people only when I seek them out
Who would come to assist you if you felt unwell?	<input type="checkbox"/> Superintendent or landlord <input type="checkbox"/> Friend/Family <input type="checkbox"/> Social worker, health worker etc	<input type="checkbox"/> No one
How do you get news about the weather?	<input type="checkbox"/> Radio <input type="checkbox"/> TV <input type="checkbox"/> Friends <input type="checkbox"/> Newspaper	<input type="checkbox"/> Internet <input type="checkbox"/> Looking outside <input type="checkbox"/> Other
Are you easily able to access services on a hot day?	<input type="checkbox"/> Yes <input type="checkbox"/> Usually	<input type="checkbox"/> No (why not?) <input type="checkbox"/> Mobility issues <input type="checkbox"/> Problems in bldg <input type="checkbox"/> No access to transit <input type="checkbox"/> Too far to walk <input type="checkbox"/> Don't feel safe going Other....elaborate

Physical Health		
Now I am going to ask you some questions about your health. There are certain things that can cause people to be at risk because of heat and I would like to assess these.		
Have you had any health-related problems in the heat over the last few years?	<input type="checkbox"/> Yes Elaborate:	<input type="checkbox"/> No
Do you have any history of heart problems? (If yes, describe)	<input type="checkbox"/> Heart attack <input type="checkbox"/> Angina <input type="checkbox"/> Heart Murmur <input type="checkbox"/> Stroke <input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Other (<i>Elaborate</i>) <input type="checkbox"/> No problems
Have you had any lung or breathing problems? (If yes, describe)	<input type="checkbox"/> Mild asthma <input type="checkbox"/> Severe asthma <input type="checkbox"/> TB <input type="checkbox"/> Bronchitis <input type="checkbox"/> COPD <input type="checkbox"/> Emphysema	<input type="checkbox"/> Other (<i>Elaborate</i>) <input type="checkbox"/> No problems
Have you ever been diagnosed with diabetes?	<input type="checkbox"/> Yes Do you think it's being managed okay? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> No diabetes
Is there anything that causes you	<input type="checkbox"/> Yes	<input type="checkbox"/> No

to have limited ability to get up and walk around? Any problems with your feet?	Describe...	
Are you experiencing any problems or issues with menopause?	<input type="checkbox"/> Yes Describe:	<input type="checkbox"/> No
Are you able to get enough to eat usually?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are you able to get enough water or juice to drink?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do you regularly see a doctor/nurse?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do you take any prescription medications to improve your physical health?	<input type="checkbox"/> Yes What kind?	<input type="checkbox"/> No Is there anything you should be taking?
How do you feel your health is overall?	<input type="checkbox"/> Good <input type="checkbox"/> OKAY	<input type="checkbox"/> Poor <i>If poor elaborate...</i>
Are there any other health issues that you would like to tell us about, i.e. lupus, MS, Alzheimer's, cancer, epilepsy	<input type="checkbox"/> Yes Elaborate:	<input type="checkbox"/> No
<u>CREATE YOUR OWN WORDING</u> Do you use any non-prescribed substances on a regular basis?	<input type="checkbox"/> Yes What kind?	<input type="checkbox"/> No
Have you had any health-related problems in the heat over the last few years?	<input type="checkbox"/> Yes Elaborate...	<input type="checkbox"/> No
EMOTIONAL HEALTH		
Now I am going to ask you some questions that deal with emotional health issues. Again, these help us determine your risk for heat in the summer.		
<u>Observe: Does their style of dress appear to present any heat risk?</u>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are you worried about coping in the heat this summer?	<input type="checkbox"/> Yes Elaborate....	<input type="checkbox"/> No
Do you have any mental health issues you would like to share?	<input type="checkbox"/> Depression <input type="checkbox"/> Anxiety	<input type="checkbox"/> Agoraphobia <input type="checkbox"/> OCD

	<input type="checkbox"/> Bipolar <input type="checkbox"/> Schizophrenia <input type="checkbox"/> Post Traumatic Stress	<input type="checkbox"/> Dementia <input type="checkbox"/> Other (list)
Do you take any medications for any of these? <i>Give pamphlet on medications and the heat</i>	<input type="checkbox"/> Yes (please list)	<input type="checkbox"/> No
Could you help with outreach this summer by checking in on people in your building?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is there any other information you would like to provide to us to help with assessing your risk for heat?		

CHILDREN'S SURVEY (continuation of Appendix C)

Child #1

Name: _____ Age: _____

Does your child have any physical health issues? Yes No

If yes, elaborate:

Does your child have any emotional or mental health issues? Yes Yes

If yes, elaborate:

Is your child involved in any summer activities: sports, camp? Yes No

If yes, elaborate:

Does your child know how to call 911 in an emergency? Yes No

Child #2

Name: _____ Age: _____

Does your child have any physical health issues? Yes No

If yes, elaborate:

Does your child have any emotional or mental health issues? Yes Yes

If yes, elaborate:

Is your child involved in any summer activities: sports, camp? Yes No

If yes, elaborate:

Does your child know how to call 911 in an emergency? Yes No

Child #3

Name: _____ Age: _____

Does your child have any physical health issues? Yes No

If yes, elaborate:

Does your child have any emotional or mental health issues? Yes Yes

If yes, elaborate:

Is your child involved in any summer activities: sports, camp? Yes No

If yes, elaborate:

Does your child know how to call 911 in an emergency? Yes No

Thank you for taking the time to complete this survey.

During a heat alert, we will look in the morning to see if you are at the Sistering drop-in centre at either Bloor Street or Parkdale Outreach location. Signs about heat alert days will be posted in the drop-in centres. If you're a member of PARC, we will also see if you have been there.

If we don't see you at the drop-ins, and you have a phone, we will try to give you a call. Messages will be left if we don't reach you, and we encourage you to call us back so that we know you're okay.

If we haven't been able to reach you, or if you don't have a phone, outreach workers may go to your door to try to reach you. Our teams work in pairs and they will have identification that they can show you. You don't have to let them in if you don't want to; you can talk to them through the door, as their job is just to check to make sure you are okay. They will only be there for a couple of minutes, and they will ask you some questions to see if you are experiencing any symptoms of heat illnesses.

If we find you in distress from heat, we will provide support for you as best as we are able to, but we may need to contact 911 if we think you should go to the hospital. This is a last resort, of course, but we want to let you know that it may be necessary.

If you ever start feeling sick because of the heat, please call 911 if you think it is serious. If there is a minor problem, come check in with us at Sistering or call us.

Form completed by (please print)

Signature of Applicant

Agency

Signature

Date Form finished

Appendix D: Early Morning Phone Call Script

1) Start by letting them know who you are and why you are calling:

“Hi **(insert Client Name)**, this is **(insert Worker Name)** calling from **(insert Agency Name)** and the West End Heat Registry. We wanted to let you know that the City has called a **(Heat Alert or Extreme Heat Alert)** for today. I just wanted to make sure you knew about the heat alert and to encourage you to find somewhere cool.”

2) Ask questions like:

- How are you feeling? Are you able to get cooled down?
- Are you able to come to PARC or another cool place today? (As a Heat Registry client, you are able to have some access to the drop-in, even when it is closed).
- Are you able to get enough to drink (water, fruit juice)

3) Let them know that:

- Libraries and community centres will let you come in to cool down.
- *If Extreme Heat Alert* – Metro Hall is open 24 hours a day, if you need to go somewhere tonight.

4) Wrap-up the call:

“If you have any questions or need someone to come check on you, please call us at 416-537-2262 ext. 239. Is it okay if we call you again later?”

If you get an answering machine: “Hi **(insert Client Name)**, this is **(insert Worker Name)** calling from **(insert Agency Name)** and the West End Heat Registry. We wanted to let you know that the City has called a **(Heat Alert or Extreme Heat Alert)** for today. I just wanted to make sure you knew about the heat alert and to encourage you to find somewhere cool. PARC is open until X time today, if you want to come here to cool down. If you have any questions or need someone to come check on you, please call us at 416-537-2262 ext 239. We hope you’re doing okay. We’d appreciate a call back to let us know you received this message.”

If someone else answers: “This is **(insert Worker Name)** calling from **(insert Agency Name)** and the West End Heat Registry. We wanted to let **(insert Client Name)** know that the City has called a **(Heat Alert or Extreme Heat Alert)** for today, and wanted to make sure he/she was okay. Have you seen them today? Are they coping with the heat? Please have **(insert client name)** call us at 416-537-2262 ext 239. ”

Appendix F: Phone Check-in Script and Documentation Form

Heat Registry Client Name: _____

Date of Call _____ Time of Call: _____

Team member: _____

No answer. No machine.

Spoke to client.

No answer. Message left on machine.

Spoke with someone else at home.

Hi **Name of Client** this is **Name of caller** calling from the West End Heat Registry. I just wanted to check up on you and see how you were doing with the heat today. The city has called a **heat alert/extreme heat alert** today.

Questions to Ask	
How are you feeling with this heat today?	
How are you staying cool?	
What have you had to drink today? Do you need any bottled water?	
Have you had something to eat (give list of food options)?	
Do you need a token to get to a cool place?	
Would you like one of the peer outreach workers to come check on you?	

Are you experiencing any of the following?

Symptoms of Dehydration	Yes \checkmark	No X	Symptoms of Dehydration	Yes \checkmark	No X
Blurred Vision			Lack of Sweating		
Rapid and Shallow Breathing			Weakness/Muscle Fatigue		
Rapid and weak heartbeat			Sleepiness/Fainting		
Nausea/Vomiting			Excessive Thirst		
Headache/Light-headed/Dizziness					

Action: None needed. Client is doing well. 911 Called (Record incident notes on back)

Client referred to Cooling Place or Cooling Centre.

Follow-up Peer Visit requested (note which peer outreach workers were called to go visit the client) _____

Appendix G: Home Visit Check-in Documentation

Heat Registry Client Name: _____

Date of Visit: _____ Time of Visit: _____

Team Members: _____

- Client not home. Flyer left underneath the door.
- Client home but would only communicate through door.
- Client not home on second visit – flyer **still under door**
- Client home and seen in unit.
- Client not home on second visit – flyer **NOT** under door

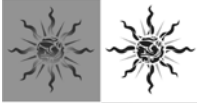
Questions to Ask (especially if assessing through the door:	
How are you feeling with this heat today?	
How are you staying cool?	
What have you had to drink today? Do you need any bottled water?	
Have you had something to eat (give list of food options)?	
Are you feeling really sleepy?	
Have you taken your medication?	
Do you need a token to get to a cool place?	

Physical Symptoms Assessment (observe or ask)

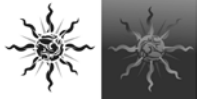
Symptoms of Dehydration	Yes √	No X	Symptoms of Dehydration	Yes √	No X
Blurred Vision			Lack of Sweating		
Rapid and Shallow Breathing			Poor Skin Turgor (pinch skin on hand)		
Rapid and weak heartbeat			Poor capillary nail refill (push down on nail)		
Nausea/Vomiting			Elevated temperature		
Weakness/Muscle Fatigue			Headache/Light-headed/Dizziness		
Sleepiness/Fainting			Excessive Thirst		

- Action:** None needed. Client is doing well. 911 Called (Record incident notes on back).
- Client referred to Cooling Place or Cooling Centre.

Appendix H: Sample of Notice for We Were Here



The West End Heat Registry Outreach Workers were here to check on you today because of the extreme heat. Sorry we missed you.

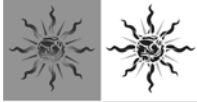


Please let us know that you're okay. Call Heat Busters at PARC at 416-537-2262 ext 239

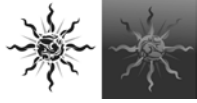
STAY COOL TODAY – Access an Air Conditioned Location (PARC is now open 7 days a week). Drink lots of water. Wear light clothing and a hat. Go to the lake. Stay in the shade.



Appendix I: Sample of Notice for Extended Hours



The West End Heat Registry Outreach Workers were here to check on you today because of the extreme heat. Sorry we missed you.



Please let us know that you're okay. Call Heat Busters at PARC at 416-537-2262 ext 239

STAY COOL TODAY – Access an Air Conditioned Location (PARC is now open 7 days a week). Drink lots of water. Wear light clothing and a hat. Go to the lake. Stay in the shade.



Appendix J: Sample of Heat Project Assistant Tracking Tool

Heat Project Assistant Tracking

Name: Jane Doe

Date: July 11, 2009

Activity	Details	Time Spent
Administration	Email detailing faxing/admin work in preparation for my departure; email follow-up with Andrew re: departure, plus general email-checking/updates	45 minutes
Computer/Data Entry	Updating the AC forms/files, re-checking and re-labeling documents	30 minutes
Peer Supervision	Meeting with XX	15 minutes
Meeting		
AC Registrations or Related Work	Faxing new ODSP AC applications to the ODSP offices,	30 minutes
Heat Registrations		
Community Outreach		
Landlord Outreach		
Heat Alert or Extreme Heat Alert		
Drop-In Extended Hours Coverage		
Other (specify)		
		Total Hours = 2.5 hrs

Appendix K: Sample of Peer Outreach Workers' Hours Tracking Tool

Peer Outreach Hours Tracking

Name of Peer: _____

Date	Arrival Time	Departure Time	Total Time Worked (if it was sporadic/on&off please indicate)	Activities – What did you do while you were working? I.e. AC work, Heat Registry signups, working at other agency, community outreach, heat alert day etc. Be specific so we know how much time is needed for each activity	Supervisor Initials

Appendix L: Sample of Cooling Support Application Form

Cooling Support Application Form

Toronto Employment and Social Services – Client Special Services will provide funds for the purchase of an air conditioner for medical reasons. The maximum payment allowable for air conditioner support under the guidelines is \$375 including installation plus applicable taxes. Fans will also be covered to a reasonable amount.

In order to access cooling support in case of extreme hot weather you must:

- 1) Be in receipt of Ontario Works (OW) or Ontario Disability Support Plan (ODSP) or qualify for special needs assistance if receiving other sources of income (see Heat Registry peers or staff for more details)
- 2) Have a health condition that would be made better through an air conditioner or fan and confirmation of this from a medical professional (doctor, nurse practitioner etc)
- 3) Provide an air conditioner unit or fan purchase cost quotation. Assistance with this requirement will be provided by the Heat Registry Project peers or staff.
- 4) If applicable, have talked to your landlord to ensure the electrical circuits/window can handle an air conditioner
- 5) Complete the first half of the application form - Part A.
- 6) Have the second half of the application form – Part B – completed by a doctor or nurse practitioner.
- 7) Return the form to a Heat Registry staff or peer. We will keep a copy for our records and administrative monitoring. We will also help you fax or mail the form to your OW or ODSP worker with the required documentation quotation attached. Please ensure that the form is complete. It must provide the necessary information for contacting you in the future and support the successful approval and delivery of your cooling support.
- 8) You have the option to pursue your application independently and arrange your purchase, delivery and installation personally. OR You may request our support with ordering, delivery and installation if you require this. Both options are subject to approval of your application.

***PARC has arranged discounted rates for the purchase of air conditioners and fans. Please see Heat Registry peers or staff to pick up the quotation (you need this for your application)**

This page is for internal use only: Do not submit

Appendix L: Cooling Support Application Form (cont.)

PART A – To be completed by applicant

Name of Applicant: _____

Date of Birth: _____

Applicant Mailing Address: _____

Personal Contact Information: Phone _____ **Other contact**

HOUSING: [] Bachelor/room [] 1 bedroom [] 2 bedroom [] Other housing _____

COOLING SUPPORT: I am applying for a: [] Fan [] Air Conditioner

I, _____ would like to have my Air Conditioner purchase cheque made payable to:
Print Your Name

Application Options / Choose One

[] **Project Vendor – Supported by PARC / 2009 Project Vendor is Pollocks Home Hardware**
ATTACH: Vendor Agreement / Purchase Quote to CSSU Application

Heat Project Vendor Agreement Provides

AC Unit Price Quote and Purchase Order Request: provided by project vendor

Delivery to client home: service through vendor coordinated by PARC

Installation of AC Unit: Supervised and provided through PARC

[] **Myself** I will personally arrange purchase, delivery and installation of my Air Conditioner.
ATTACH: Form B / Purchase Quote to CSSU Application

Signature of Applicant

Date

Appendix L: Cooling Support Application Form/OW Clients (cont.)

Attention: Client Special Services Unit Intake

PART A-- To be completed by Ontario Works Clients

Name of Applicant: _____

Date of Birth: _____ **OW #:** _____

OW Office (if known) _____ **OW Worker (if known)** _____

Applicant Mailing Address:

Personal Contact Information: Phone _____ **Other contact** _____

Attachment: _____ Vendor Agreement (PARC Support) _____ Form B (No Support)
Payment to Vendor Payment to Client

PART B – To be completed by medical practitioner

I, _____, am a _____ operating in
print Health Practitioner Name print Medical Title

the Province of Ontario. _____ has/suffers from _____
Name of Applicant

This illness is affected/worsened by heat and he/she would benefit from the use of: **(please select)**

[] a fan or [] an air conditioner.

Signature of Health Practitioner

Date

Include full contact info or office stamp:

Application # _____

Heat Project Staff Signature _____

Applicant Signature _____

Appendix L: Cooling Support Application Form/ODSP clients (cont.)

**Attention: To ODSP Intake, Client Special Services Unit
To be completed by ODSP Clients**

Name of Applicant: _____

Date of Birth: _____ **ODSP ID #** _____

ODSP Office (if known) _____ **ODSP Worker (if known)** _____

Applicant Mailing Address:

Personal Contact Information: Phone _____ **Other contact**

Attachment: _____ Vendor Agreement (PARC Support) _____ Form B (No Support)
Payment to vendor Payment to Client

PART B – To be completed by medical practitioner

I, _____, am a _____ operating in
print Health Practitioner Name print Medical Title

the Province of Ontario. _____ has/suffers from _____
Name of Applicant

This illness is affected/worsened by heat and he/she would benefit from the use of: **(please select)**

[] a fan or [] an air conditioner.

Signature of Health Practitioner

Date

Include full contact info or office stamp:

Application # _____ **Heat Registry Project Data Base**

Heat Project Staff: _____ **Signature** _____

Appendix M: Sample of Direct Purchase Vendor Form

**WEST END HEAT REGISTRY AND
HEAT RESPONSE PROJECT**

Cooling Support Rates

Date: _____

Applicant Name _____

Applicant Signature _____

Purchase Request for Self Directed Applicants

Air conditioner rates: Vendor // Type -- Price

CT Hardware // 5,000 BTU (*bachelor apt <200 sq ft*)
\$149.99 + Tax (13%) 19.37 = \$169.36

CT Hardware// 6,000 BTU (*bachelor apt <300 sq ft*)
\$169.99 + Tax (13%) 22.09 = \$192.08

CT Hardware// 8,000 BTU (*1 bdrm apt <400 sq ft*) w/ remote control
\$289.99 + Tax (13%) 37.69 = \$327.68

CT Hardware// 10,000 BTU (*2 bdrm apt <500 sq ft*) w/ remote control
\$329.99 + Tax (13%) 42.89 = \$372.88

Free Delivery

Installation Funds Requested: Add \$ 25.00 to purchase order Total Request _____

SJ Cooling Systems // 5,200 BTU (*bachelor apt <200 sq ft*)
\$97.00 + Tax (13%) 12.61 = \$109.61

SJ Cooling Systems // 6000 Haier (*bachelor apt <300 sq ft*)
\$199.00 + Tax (13%) 25.87 = \$224.87

SJ Cooling Systems // 8,000 BTU (*1 bdrm apt <400 sq ft*)
\$279.00 + Tax (13%) 36.27 = \$315.27

SJ Cooling Systems // 10,000 BTU (*2 bdrm apt <500 sq ft*)
\$299.99 + Tax (13%) 38.87 = \$338.86

Delivery Requested _____ Add \$25.00 to purchase order
Installation Funds Requested: _____ Add \$ 25 to purchase order Total Request: _____

Appendix M: Sample of Direct Purchase Vendor Form (cont.)

WK Hardware // 5,000 BTU (*bachelor apt <200 sq ft*)
\$149.99 + Tax (13%) 19.49 = \$169.48

WK Hardware // 5,000 BTU (*bachelor apt <200 sq ft*) w/ remote control
\$174.99 + Tax (13%) 22.75 = \$197.73

WK Hardware // 6,000 BTU (*bachelor apt <300 sq ft*) w/ remote control
\$209.99 + Tax (13%) 27.29 = \$237.28

WK Hardware // 8,000 BTU (*1 bdrm apt <400 sq ft*) w/ remote control
\$279.99 + Tax (13%) 36.39 = \$316.38

Delivery Requested: _____ **Add \$25.00 to purchase order**
Installation Funds Requested: _____ **Add \$ 25.00 to purchase order** **Total Request** _____

Fan rates: Vendor / Location and Price

- | | |
|--|---------|
| <input type="checkbox"/> CT Hardware // 16 inch table fan | \$27.99 |
| <input type="checkbox"/> WK Hardware // 16 inch floor fan (with stand) | \$27.99 |
| <input type="checkbox"/> SJ Cooling Systems // 16 inch table fan | \$29.99 |
| <input type="checkbox"/> X Lumber & Building Supplies // 16 inch table fan | \$34.99 |

LOCATIONS & CONTACT INFO:

	Address and Contact Number
CT Hardware	65 Langley Road 416-222-4545
WK Hardware	19 Crifton Road 416-982-9900
SJ Cooling Systems	4000 Spruce Street 416-123-4567
X Lumber & Building Supplies	987 Sherbourne Street W. 416-456-7890

Application Assistance: West End Heat Registry and Heat Response Project

Heat Project Staff: _____

Contact Information: _____

Appendix N: Vendor Support 2009 Work Orders, Guidelines & Sample Agreement

WEST END HEAT REGISTRY AND
HEAT RESPONSE PROJECT

Cooling Support Rates

Date: _____

Applicant Name _____

Applicant Signature _____

Purchase Request: Form A
Heat Project Cooling Support & Personal Assistance Program

Air Conditioners
Prices include: Unit Cost / Taxes / Delivery / Installation

- Pollocks Home Hardware // 5,000 BTU (*bachelor apt <200 sq ft*)
Unit Cost: \$149.99 Tax (13%) 19.49 Delivery: \$25 Installation \$50 Total: \$244.48
- Pollocks Home Hardware // 5,000 BTU (*bachelor apt <200 sq ft*) w/ remote control
Unit Cost: \$174.99 Tax (13%) 22.75 Delivery: \$25 Installation \$50 Total: \$ 272.74
- Pollocks Home Hardware // 6,000 BTU (*bachelor apt <300 sq ft*) w/ remote control
Unit Cost: \$209.99 Tax (13%) 27.29 Delivery \$25 Installation \$50 Total: \$ 312.28
- Pollocks Home Hardware // 8,000 BTU (*1 bdrm apt <400 sq ft*) w/ remote control
Unit Cost: \$279.99 Tax (13%) 36.39 Delivery \$25 Installation \$50 Total: \$ 391.38

Fans:

- Home Hardware // 16 inch table fan \$27.99
 Home Hardware // 16 inch floor fan (with stand) \$27.99

For Internal Use Only:
Information from this form to be transferred to Vendor Agreement Form for CSS submission

Application Assistance: West End Heat Registry and Heat Response Project

Heat Project Staff: _____

Contact Information: _____

Endnotes to pp 6 – 19

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- ⁱ National Oceanic and Atmospheric Administration, 2005; Pengelly, 2007.
- ⁱⁱ Pengelly, 2007.
- ⁱⁱⁱ Center for Disease Control, 2006.
- ^{iv} Ebi, 2007.
- ^v 67 CBC 2007; 27 Hutter, 2007; 16 Pengelly, L.David 2007; 34 Smoyer-Tomic, Karen E. 2001; 46 Ebi, Kristine L. 2007; 52 Perrin, Alan 2006
- ^{vi} 68 Canadian Press 2007.
- ^{vii} 56 Smith, Keith 2004; 54 Linden, Eugene 2006.
- ^{viii} 34 Smoyer-Tomic, Karen E. 2001.
- ^{ix} 59 Takahashi, Kiyoshi 2007.
- ^x 31 Sheridan, Scott C. 2004.
- ^{xi} Ebi, 2007; Kovats & Ebi, 2006; McKeown, 2007b; Smith, 2004; Smoyer-Tomic & Rainham, 2001.
- ^{xii} 46 Ebi, Kristine L. 2007; 50 Kovats, R. Sari 2006; 48 Thomas, Norma D. 2002; 27 Hutter, Hans-Peter 2007; 33 Healy, Kieran 2005.
- ^{xiii} 46 Ebi, Kristine L. 2007.
- ^{xiv} 32 Sheridan, Scott C. 2006.
- ^{xv} Sheridan, 2006.
- ^{xvi} Thomas and Soliman, 2002.
- ^{xvii} Kovats and Ebi, 2006.
- ^{xviii} 46 Ebi, Kristine L. 2007.
- ^{xix} (Klinenberg, 2002)
- ^{xx} 27 Hutter, Hans-Peter 2007.
- ^{xxi} 52 Perrin, Alan 2006; 49 Mastrangelo, Giuseppe 2007; 38 Kalkstein, Laurence S. 1997.
- ^{xxii} 52 Perrin, Alan 2006; 58 McKeown, David Dr. 2007.
- ^{xxiii} L. D. Pengelly, 2007; Perrin & Samenow, 2006.
- ^{xxiv} McKeown, 2007b; Sheridan, 2006.
- ^{xxv} Sheridan & Kalkstein, 2004.
- ^{xxvi} For more information, see the Public Safety Canada website www.publicsafety.gc.ca/prg/em/emfrmwrk-eng.aspx.
- ^{xxvii} http://www.toronto.ca/wards2000/pdf/2006/ward14_households_page.pdf
- ^{xxviii} Dr. David J. Hulchanski, *Parkdale trends to 2001*, unpublished.
- ^{xxix} Dr. David J. Hulchanski, *Parkdale trends to 2001*, unpublished.
- ^{xxx} Personal communication, Bob Rose
- ^{xxxi} 34 Smoyer-Tomic, Karen E. 2001; 30 Mersereau, Virginia 2007; 61 McKeown, David Dr. 2007; 58 McKeown, David Dr. 2007; 32 Sheridan, Scott C. 2006; 50 Kovats, R. Sari 2006.