



## Tendercare Living Centre's Heat Related Illness Prevention and Management Plan

Tendercare Living Centre is committed to maintaining a comfortable temperature of 22 degrees Celsius for its residents year-round in accordance with Fixing Long Term Care Act Reg. 246/22. This Heat Related Illness Prevention and Management Plan (hereinafter referred to as "The Plan") was developed by the interdisciplinary team to meet the needs of residents, families, substitute decision makers, staff, volunteers, and visitors. The Plan identifies specific risk factors that may lead to heat related illness, the regular monitoring of residents who are exposed to such risk factors, and staff taking appropriate actions in response. The Plan also includes preventive measures to mitigate risk factors, and symptoms associated with excessive heat or cold temperatures. The Plan shall be evaluated annually by the interdisciplinary team. The Plan shall be communicated to all residents, substitute decision makers, families, staff, volunteers, visitors Resident Council, Family Council, and others where appropriate, via email or hard copy.

The purpose of The Plan is to prevent residents, staff, families, volunteers, and visitors from sustaining heat related illness while at Tendercare Living Centre. The Plan shall be implemented:

- Between May 15<sup>th</sup> and September 15<sup>th</sup> yearly.
- When Environment and Climate Change Canada for Southern Ontario forecast the temperature to at 26 degrees Celsius or above at any point during the day.
- When the temperature in an area in the home reaches 26 degrees Celsius or above, for the remainder of the day and the following day.

When Environment and Climate Change Canada forecast the temperature to 26 degrees Celsius or above, the Executive Director or Designate will announce on the PA system the heat alert for the day. The Executive Director or Designate shall implement The Plan and staff will continue to monitor residents. A heat alert memo would be sent to all family members via email and hard copies would be made available at the reception desk.

The Environmental Services Department shall monitor temperatures at minimum in the following areas of the home:

- At least two resident bedrooms in different parts of the home



- One resident common area on every floor of the home, which may include a lounge, dining area or corridor
- Every designated cooling area (if there are any in the home).

The team member will measure and document the temperature required in each of the areas on the temperature log sheet, at minimum:

1. Once every morning
2. Once every afternoon between 12 p.m. and 5 p.m.
3. Once every evening or night.

The above documentation shall be kept for at least one year in the home.

Tendercare Living Centre has a centralized air conditioning system. Despite having central air conditioning, the family Lounge, recreation room, and Spiritual Centre on the main floor have been designated as cooling centres for residents, families, staff, volunteers, and visitors. The three designated cooling areas are comfortable and served by the central air conditioning system. Should the central air conditioning system become ineffective, arrangements have been made with Daikin to rent a portable air system to provide central air to the home. The temporary equipment could be operational within three hours.

Risk of heat-related illnesses occurs when the environmental temperature exceeds the normal body temperature for several hours or days. The environment includes any area where the individual resident resides and as such, the risk is identified by measuring the temperature of the indoor air for residents who remain inside the building.

For residents who plan to spend a significant amount of time outside the building during times when the temperatures will exceed 26 degrees Celsius, preventive measures shall be implemented for these residents. Prevention and early intervention for heat-related illnesses should be aimed at cooling and rehydrating affected individuals.

## **Signs and Symptoms of Health-Related Illness**

### ***Heat Related Illness***

Heat related illnesses are a group of serious and escalating medical conditions which include heat rash, heat cramps, heat exhaustion, and heat stroke. A body temperature excluding infection is also known as hyperthermia.

### ***Hypothermia***

A cold induced condition which results from over cooling of the body due to excessive loss of body heat.

### ***Heat Rash***

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

### ***Heat Cramps***

A heat-induced condition characterized by painful cramps in the arms, legs, or stomach which can occur to an individual. This condition can be a warning of other more serious heat-induced illnesses.

### ***Heat exhaustion***

A heat-induced condition characterized by sweating, cool moist skin, pale skin, body temperature over 38C, weak pulse, and normal or low blood pressure.

### ***Heat Stroke***

A heat-induced condition characterized by high body temperature 41C and any one of the following:

- Weakness, confusion, disorientation, emotional upset and strange behaviour
- Fast pulse
- Headaches and dizziness
- Hot, dry red skin
- Fatigue
- Syncope
- Tachycardia
- Nausea
- Convulsions

### ***Pyrexia***

Temperature greater than 38 degrees Celsius.

## **Staff monitoring Residents for Signs and Symptoms**

During periods of hot weather, all staff must identify early signs of heat related illnesses. In preparation for periods of hot weather, residents may be classified according to their ability to independently manage heat stress. In doing so, it will assist in the



implementation of preventative or treatment measures, if necessary. Classification could include:

- Those residents who can independently meet hydration requirements and have access to fluids.
- Those residents who are cognitively impaired to the extent that they require scheduled provision of fluids and encouragement to drink through the day and evening.
- Those residents with acute illness or disability who require careful monitoring scheduled fluid provision and encouragement to drink.
- Those residents with medical conditions or therapies which may result in fluid loss (i.e. diabetics, individuals receiving diuretics or laxatives).

In addition, to the above symptoms, staff must observe residents for minor effects which may include heat rash, painful muscle spasms following exercise. Acute intake and output measures and documentation may be necessary for individuals who are severely dehydrated. This may be a clinical nursing decision or may be ordered by the physician.

The Interdisciplinary team will conduct seasonal assessments including heat risk assessments on all residents annually on or before April 15th and reassess with any significant change in resident condition using a Heat Risk Assessment tool. The purpose of the assessment is to identify residents who are at increased risk of developing a heat-related illness and implement prevention strategies to reduce the likelihood of heat-related issues in these residents. Interventions may include:

- Closing windows, drapes and blinds during the day
- Moving residents to designated cooling areas of the building
- Turning off lights to reduce the temperatures in the room, when possible
- Encouraging adequate hydration with residents as per individual resident hydration targets
- Encouraging residents to dress appropriately for the weather
- Loosening clothing, encouraging well ventilated, absorptive clothing
- Preventing Heat-Related Illnesses.
- Ensure adequate hydration (provide at least 6-8 large (240ml) glasses of fluid per day, as permitted, spread over the entire 24hr period; ensure a variety of fluids to replace electrolyte losses.
- Alter meal plans to provide lighter cool meals which contain extra fluids.
- Reduce or eliminate active recreational programs during times of the day which are normally the hottest (10am – 2pm).
- Restrict outdoor activities and protect residents from direct exposure to the sun.



- Encourage residents to remain in cooler areas.

Registered staff will conduct routine assessments, including vital signs, skin turgor etc. and document their findings in resident's health care records.

Personal Support Workers will encourage residents to dress in cooler, loose fitting clothing during hot weather. They will encourage residents to drink more fluids including their favourite fluids, offer sips of fluid once per hour, and accurately document the intake and output of each resident. Residents will also be encouraged to spend time in cooler areas of the home as appropriate.

Recreation and program staff may include special programs or restrictions for residents during hot weather.

Dietary staff will provide a variety of beverages, popsicles, and water.

Environmental Services will ensure that the generator is functional in the case of a potential furnace failure. They will also ensure that an accurate, portable environmental thermometer and an accurate portable humidity measuring device (psychrometer or Hygrometer) is in place.

### ***HYGROMETER***

An instrument that directly measures relative humidity of the atmosphere or the proportion of water in a specified gas or gas mixture, without extracting the moisture.

### ***PSYCHROMETER***

A type of hygrometer consisting of two thermometers, one of which has a dry bulb and the other a bulb that is kept moist and ventilated. The difference in temperature between the two thermometers indicates the relative humidity. Also called wet-and-dry-bulb thermometer. Hygrometer, Pscyrometer definitions: (n.d.) Mosby's Medical Dictionary, 8th edition. (2009). <http://medical-dictionary.thefreedictionary.com> Cold Weather Injuries, Prevention, Identification and Treatment, Army Public Health (2015)

Temperatures may fall and conditions of hypothermia may result, particularly for elderly residents. Hypothermia is defined as a core body temperature of 35.5 degrees Celsius



(96 degrees Fahrenheit) or less (Carpenito, 1993, p. 143). Eventually, mental processes will become clouded. Kidney function will become impaired, resulting in dehydration. In the final stages, myocardial functioning is impaired which may result in death.

The risk of cold-related illnesses occurs when the environmental temperature drops significantly below the normal body temperature for several hours or days. The environment includes any area where the individual resident resides and as such, the risk is identified by measuring the temperature of the indoor air for residents who remain inside the building.

Preventive measures are in place for residents who plan to spend a significant amount of time outside the building during times when the temperatures will be below the temperatures noted in the policy statement. Prevention and early intervention for cold-related illnesses are aimed at warming affected individuals to raise their core body temperature to normal ranges.

During cold weather, staff are required to respond to individual resident needs and implement measures to prevent hypothermia and frostbite, treat hypothermia and frostbite.

### ***Frostbite***

When localized tissues are damaged through exposure to temperatures that are below freezing (0 degrees Celsius or 32 degrees Fahrenheit), frostbite will result. Frostbite is most likely to affect the feet, hands, nose and ears.

***Superficial frostbite*** presents with white, waxy or grayish-yellow skin which is cold to the touch and feels stiff or crusty but with softer tissues palpable underneath. The resident may complain of tingling, stinging or itchiness.

***Deep frostbite*** is characterized by cold, hard, solid flesh on palpation. The affected part is very pale and waxy in appearance. A previously painfully cold part will no longer feel pain. This is a medical emergency and requires immediate treatment.

Signs and symptoms of cold-related illness include

## ***Hypothermia***

When environmental temperatures experienced by the resident fall below 22 degrees Celsius and these lower temperatures are sustained for several hours or days, core body Preventing Cold-Related Illnesses

Registered staff are required to identify residents who are at increased risk of developing a cold-related illness and implement prevention strategies to reduce the likelihood of cold-related issues in these residents as per (RC-08-01-03) policy and procedure. Clinical assessment may include taking the resident's temperature, completing any relevant referrals and consulting with the interdisciplinary team to develop a plan of care for the individual resident. Registered staff are responsible for instructing the care staff to be alert for cold related illnesses when temperature is less than 20 degrees Celsius and to report immediately to the nursing staff if there are changes in resident's condition.

Resident specific preventative measures include:

- Providing warm fluids such as tea, coffee, hot chocolate, soups to residents to help raise core body temperatures.
- Ensuring that residents are dressed appropriately, encourage layering of clothing and warm sweaters.
- Ensure appropriate warm bedding is available and supplied to each resident.
- Activation staff will encourage residents to participate in programs that promote movement to help promote circulation.
- Residents would be encouraged to remain indoors and avoid outdoor activities when the temperatures outside are below freezing.

If residents must leave the building when temperatures are below zero degrees Celsius, ensure the resident is dressed warmly, has proper non-slip footwear (preferably boots) and all exposed skin is covered as much as possible. (Wear mitts, gloves, scarves which can cover facial skin, hats, etc.).

Environmental measures to prevent cold-related illness include the following:

- Closing windows, drapes, and blinds to prevent heat from escaping to reduce drafts.
- Residents will seek refuge from the cold by moving to the lounge area on each floor, the main floor Family Lounge, Recreation Room and Spiritual Centre.

This plan applies to all residents, staff, families, volunteers, visitors and others who conduct business with Tendercare Living Centre.