Heat Related Illnesses: Prevention and Management in Long-Term Care

Site Applicability

VCH and PHC Long-Term Care

Practice Level

- All regulated staff in their respective scope of practice.
- All unregulated staff under the supervision and direction of a regulated health care professional.

Requirements

Each long-term care home will have a plan in place to provide comfort and safety to all people living in long-term care in the event of a prolonged period of heat.

Care home leads / managers must ensure all staff have reviewed this Decision Support Tool and are aware of the VCH heat plan recommendations.

Need to Know

- Older, frail persons and others living in long-term care are vulnerable to heat illnesses.
- Heat related illnesses include Sunburn, Heat Rash (prickly heat), Heat Cramps, Heat Exhaustion and Heat Stroke
- Heat Exhaustion can quickly progress to Heat stroke
- A core body temperature in excess of 40^{o}C is a medical emergency requiring immediate action to cool to below 39ºC.
- Prolonged hot weather and poorly circulated air can increase risk of heat illness.
- Staff are also at risk of heat illness and be familiar with how to stay healthy in the heat .

Guideline

A. Identifying people most vulnerable to heat related illness:

- Over age 65
- Cognitive losses such as dementia, depression or other mental health conditions
- Functional losses impacting ability to move to a cooler area or obtain fluids independently
- Chronic health conditions
- Medications that cause dehydration
- Previous heat stroke
- Environmental factors e.g. room is exposed to sunshine, little circulating air; clothing is too heavy and dark for the weather

B. Recognizing Heat Exhaustion and Heat Stroke

Heat Exhaustion:

- Core Temp less than 40^{o}C

- Anxiety, Confusion
- Postural hypotension, Dizziness and light-headedness,
- Headache
- Cutaneous flushing (hot, red skin)
- Muscle cramps / spasms
- Sweating present
- Nausea, vomiting

Heat Stroke:

- Core body temperature exceeds 40^{o}C
- Confusion
- Agitation
- Seizures
- Loss of consciousness
- Lack of Sweating (dry armpits)

C. Preventing Heat Related Illnesses During Heat Alerts (Outdoor Temp exceeds 30°C in day and 15°C at night):

1. Care home leads / managers ensure all staff have reviewed this Decision Support Tool and are aware of the Heat Alert and Care home / VCH heat Plan.
2. Nurse to identify people most at risk and monitor for signs and symptoms of Heat Exhaustion and Heat Stroke.
3. All staff to monitor for fluid intake and observe for changes that put people at risk for heat related illness and report to nurse when identified.
4. At huddles / staff shift change ensure all staff is aware of the Heat Alert and implement the following interventions:
    - Encourage people to wear loose, lightweight cotton clothing
    - Provide additional fluids around the clock particularly water and juices
    - Provide cool foods high in water content, such as fruits and salads
    - Ensure people are in the coolest parts of the care home during the day,
    - Encourage people to enjoy outside areas in the early morning or in the evening and if going outside stay in the shade and wear sun protection
    - Move outdoor visits to indoor visits, or reschedule a visit at another time
    - When resident is in bed during the day ensure they are able to stay cool by
        - Shielding from direct sun e.g. draw curtains
        - Are wearing weather appropriate clothing and only using thin sheets when in bed
        - Check in regularly
        - Use fans- follow Infection Prevention and Control (IPAC) guidance when positioning fans
    - Keep windows closed when A/C is on
    - Review medications with Physician or Nurse Practitioner (MRP) or pharmacist
    - If a heat rash is noted apply appropriate product
    - Treat sunburn with cool compresses and Aloe based products.

D. Interventions for Heat Exhaustion

Initiate the cooling and hydration interventions below, if the person begins to shiver, stop cooling, continue with hydration and monitor core temperature

- Use a cool compress applied to the back of the neck and change regularly
- Mist cool water on face and the back of their neck regularly
- Offer intake; such as ice pops, ice cream, floats, cool drinks
- Move person to a cooler space as needed
- Use fans to facilitate cooling - follow Infection Prevention and Control (IPAC) guidance when positioning fans
- If body temp is above 38^{o}C assist with a cool shower or cool bath. Alternatively, use a cool damp wash cloth on face, around neck, and chest.
- Monitor temperature to ensure cooling interventions are working if core temp remains above 38^{o}C, inform nurse in charge, continue with cooling interventions and nurse in charge to discuss with MRP.

E. Interventions for Heat Stroke

Heat Stroke (Temp higher than 40^{o}C) is a medical emergency; core temperature must be reduced promptly to reduce risk of death

- Provide cool shower or bath.
- If unable to provide a cool shower or bath, initiate cooling and hydration interventions as for Heat Exhaustion **continuously** until core temperature is below 39^{o}C.
- Continue with cooling and hydration until signs and symptoms have resolved.
- If person is unable to hydrate **OR** core Temperature remains above 39^{o}C and/ or signs and symptoms are not resolving despite cooling interventions inform MRP immediately to determine need for acute care intervention taking into consideration the person's goals of care.

F. Interventions to maintain a cool environment in a Care Home:

Assess care homes' ability to maintain a cool environment (less than 24^{o}C) when there is a period of prolonged heat. The following includes some suggestions:

- Monitor temperature in common areas and rooms. Use Room Temperature Monitoring Tool – Appendix C
- Access to ice cold water
- Adaptive equipment to promote independent access to fluids such as sturdy cups, wheelchair cup holders
- Availability and scheduling of staff to use a bath / shower to cool
- Identify which areas in the building are potential "hot" spots such as south/ west facing, large windows, space with little or no circulation
- Air conditioners in working order to maintain room temperatures for prolonged time periods. It is recommended that at least one portable air conditioners be used to keep at least one room at the recommended cool temperature
- When using air conditioners keep windows closed
- Fans to provide air circulation and cross ventilation. Place in front of basin of ice to cool air temperature

- Turn off non-essential lights and other electronic devices with consideration for risk or falls
- Windows which are covered with reflective covering, darkened curtains or blinds
- Windows that can be closed and kept dark in the day to promote coolness and deflect direct sun but opened to promote cool air circulation at night
- Consider replacing heat absorbing metal blinds and curtains
- Awnings in place to shade south and west windows from direct sunlight
- Refer to Long-Term Care Decision Support Tool Practice on Hydration
- Consider landscaping such as trees and leafy plants near windows to act as natural air-conditioners and to provide shade
- Refer to Pamphlet with helpful suggestions to be shared with person, family and staff Keeping it Cool
- Display Preventing Heat Illness: Universal Precautions poster throughout care home.

Documentation

Documentation should include:

- Resident risk factors for heat related illness
- Document baseline criteria (e.g. core body temperature, vitals)
- Individualised cooling and hydration interventions for at risk people included in the care plan / care guide
- Signs and symptoms of heat related illness, interventions implemented and response to interventions.
- Indicate if person's room exceeds recommended temperatures and what mitigation measures have been implemented.

Related Documents

VCH

- Hydration: Promoting Fluid Intake and Preventing Dehydration
- Hypodermoclysis – Guidelines for providing fluids via the subcutaneous route in Long-Term Care

Resources:

- Long-Term Care Facilities and Heat
- Public Weather Alerts for British Columbia
- Weather App
- Health Facilities Preparation for Extreme Heat
- Community Care During Extreme Heat
- Vancouver Coastal Health Extreme Heat Webpage
- Heat-related illness
- Advice on staying cool at home during COVID-19
- Staying healthy in the heat infographics
- Beat the heat resources
- Protect Yourself from Extreme Heat

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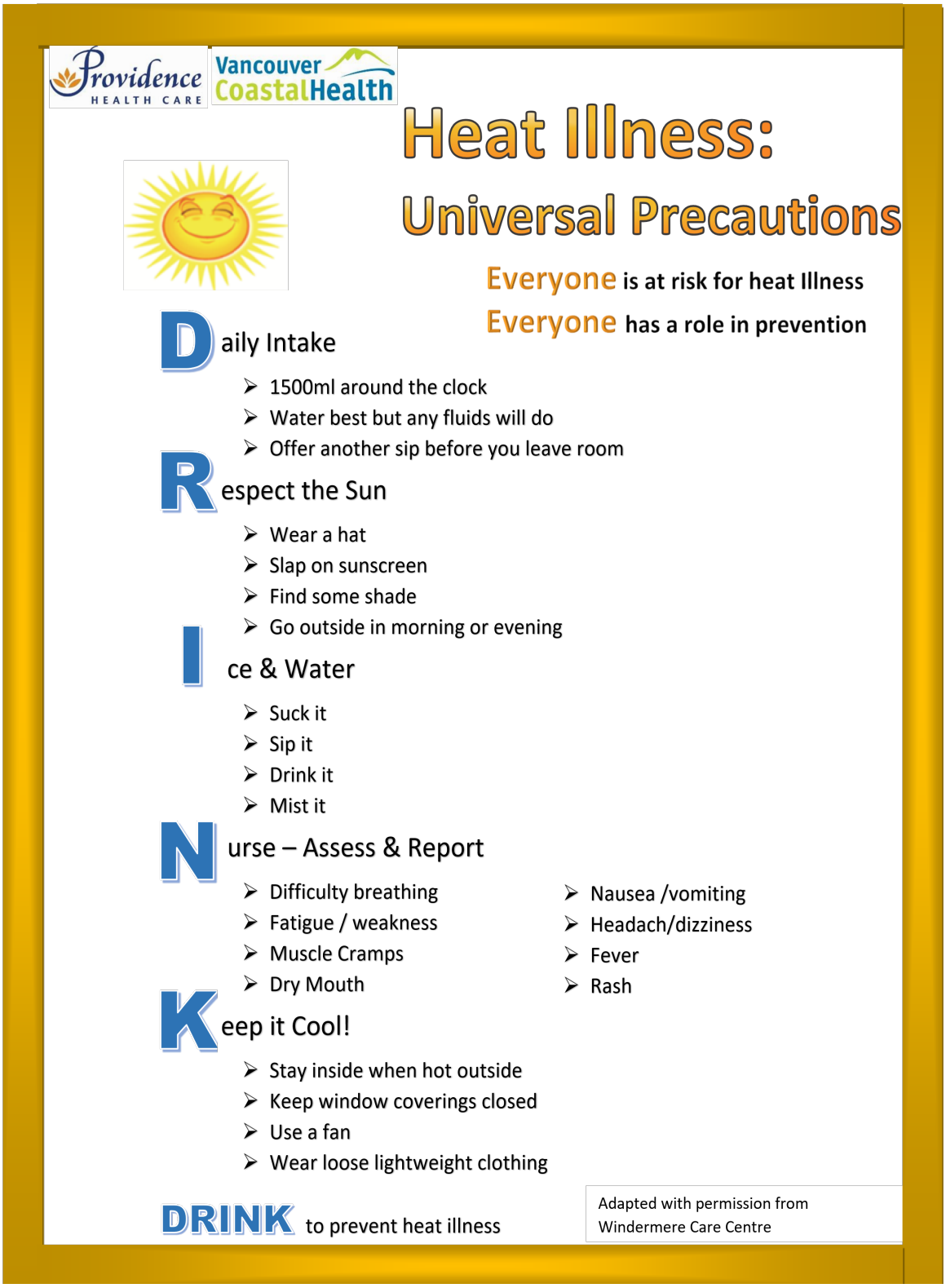
Appendix A: Universal Precautions – Preventing Heat Related Illnesses



Heat Illness:

Universal Precautions

Everyone is at risk for heat Illness

Everyone has a role in prevention

Daily Intake

- 1500ml around the clock
- Water best but any fluids will do
- Offer another sip before you leave room

Respect the Sun

- Wear a hat
- Slap on sunscreen
- Find some shade
- Go outside in morning or evening

Ice & Water

- Suck it
- Sip it
- Drink it
- Mist it

Nurse – Assess & Report

- Difficulty breathing
- Fatigue / weakness
- Muscle Cramps
- Dry Mouth
- Nausea /vomiting
- Headach/dizziness
- Fever
- Rash

Keep it Cool!

- Stay inside when hot outside
- Keep window coverings closed
- Use a fan
- Wear loose lightweight clothing

DRINK to prevent heat illness

Adapted with permission from Windermere Care Centre

Appendix B: The Heat is On - Staying Cool and Safe When the Weather is Hot

Keeping it Cool in the Heat

How:

- Wear loose, lightweight cotton clothing
- Drink cools fluids and eat cool foods
- Apply a cool compress to face and back of the neck or take a cool shower or sponge bath
- Mist your face with cool water.
- Limit activities outdoors to morning and evening
- Wear a hat and sun glasses
- Use sunscreen

Cool places to visit:

- Air conditioned or cool areas in the care home
- Under trees, or in shaded areas of the patio or grounds
- Close to fans

What are Heat Related Illnesses?

Sunburn – reddening and burning or blistering of the skin in sunlight

Heat Rash or Prickly Heat – a red itchy rash

Heat Exhaustion - occurs when the temperature inside the body gets too hot. You may feel sick, tired, have a headache, sweat a lot and feel faint.

Heat Stroke- is a medical emergency. You will feel unwell, tired, confused. You may also vomit or faint.

During periods of extreme heat, if you feel too hot, feel faint or dizzy, thirsty or have a headache please speak with your health care provider at the care home.

If you are family member or visitor concerned about a resident with symptoms of heat illnesses let the care home staff know.

Vancouver CoastalHealth

The Heat is On!

Preventing Heat Related Illnesses

Appendix C: Room Temperature Monitoring

Room Temperature Monitoring Tool

Ideal Temperature not to be higher than 24 °C

Take temperature between 1200 and 1500 hours each day

Room Number	Temp Day 1	Temp Day 2	Temp Day 3	Temp Day 4	Temp Day 5	Temp Day 6	Temp Day 7