Residential aged care services heatwave ready resource

State Government Victoria

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Published by the Ageing and Aged Care
Victorian Government Department of Health
Melbourne Victoria Australia

January 2010
Re printed September 2010
Revised December 2013

Authorised by the State Government of Victoria,
50 Lonsdale Street, Melbourne

This document and appendices (available in PDF and word format) can be downloaded from
http://www.health.vic.gov.au/agedcare/publications/racsheatwave/index.htm

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DISCLAIMER

The heatwave resource material has been specifically designed to assist residential aged care services. The information provided is intended to be helpful and it should not be considered exhaustive. No responsibility is accepted on behalf of the State of Victoria to any person for any losses incurred by those relying solely on the information in the resource material. Specialist advice should always be sought for any particular situation.

Preface

Summer is a time when many Victorians enjoy warm weather and outdoor activities. Experience shows, however, that high summer temperatures can affect the health and wellbeing of the community.

Those most at risk of illness and death during a heatwave are predominantly older people and people with a chronic medical condition or disability, among others.

Preparing the community for heatwaves and associated emergency responses is a priority for the Victorian Department of Health. In January 2009, Victoria experienced a statewide heatwave with temperatures among the highest ever recorded.

With the early arrival of hot weather this year and a high probability of a very hot summer, heatwave preparedness is important for all residential aged care services. Residents in your care are among those most at risk during hot weather.

To support your service's planning and preparations for summer, we are pleased to provide the *Residential aged care services heatwave ready resource*. The resource provides information and resources for residential aged care service providers to assist you to prepare and respond to episodes of extreme heat and help minimise the health impacts of heatwaves on residents.

I encourage you all to work through and make use of the information included in this resource in the interests of the health and safety of your residents and staff.

Professor C.W. Brook PSM
State Health and Medical Commander
Department of Health, Victoria

Acknowledgements

The *Residential aged care services heatwave ready resource* was developed by the Victorian Department of Health's Aged Care Branch, in collaboration with the Public Health Branch, in 2009.

Authors, Ms Judith McInnes and Professor Joseph E Ibrahim, have drawn from previous work completed with the National Health and Medical Research (NHMRC) CRE – Patient Safety Monash University in 2008, with assistance from the Australian Centre for Evidence Based Aged Care (ACEBAC) and the Institute for Social Participation at La Trobe University. In particular, the review of the resource was assisted by Professor Rhonda Nay, Dr Deirdre Fetherstonhaugh and Dr Margaret Winbolt of ACEBAC.

We also acknowledge and value the contributions of the following public sector health service representatives and stakeholders in the review of the resource:

- Janice Hadgraft — Aged and Community Care Victoria
- Raelene Thompson — Aged Care Standards and Accreditation Agency
- Christine Sloman — Ballarat Health Service
- Judith Bloomfield — Ballarat Health Service
- Margaret Turner — Beechworth Health Service
- Dr Susan Hunt — Commonwealth Department of Health and Ageing, Canberra
- Andy Price — Commonwealth Department of Health and Ageing, Victoria
- Jan Bennett — Cooinda Lodge and Andrews House, West Gippsland Healthcare Group
- Peter Armstrong — East Grampians Health Service
- Tineke Carr — Grant Lodge, Djerriwarrh Health Services
- Darren Clarke — Glanville Village, Echuca Regional Health
- Adele Lavis — Grutzner House, Goulburn Valley Health
- Karen Llewellyn — JFK McDonald Wing, Central Gippsland Health Service
- Kathy Ivey — Kingston Centre, Southern Health
- Julie Knoop — Lyndoch Residential Aged Care
- Kellie Williams — Morrie Evans Nursing Home, Benalla and District Memorial Hospital
- Julie Riches — Mount View Nursing Home, Terang and Mortlake Health Service
- Ronaldo Cowcher — Simpkin House, Bendigo Health Services
- Doris Eldridge — St Elmo's Nursing Home, Yarram and District Health Service

Contents

1. Purpose

1. Purpose

All residential aged care services need to consider the risks associated with extreme hot weather and should plan to manage them.

The *Residential aged care services heatwave ready resource* has been prepared to support residential aged care service providers put heatwave plans in place. It has been developed to complement existing requirements of the Commonwealth Department of Social Services for providers to deliver appropriate care and services to residents and provide a safe and comfortable environment for residents, staff and visitors.

The Victorian Government has undertaken significant work aimed at preparing the community for the possible impacts of heatwave. This resource is based on the *Heatwave Plan for Victoria* and provides information on heatwaves, health and older people. It also explores important considerations for boards, company directors and managers of residential aged care services to prepare and respond to heatwaves. It includes a checklist that can be used to assist with preparations for hot summer weather, and templates of heatwave related health information that can be made available to staff, residents and their families.

This is one of a number of resources developed by the Victorian Department of Health to support aged care homes prepare and plan for extreme hot weather events. As days of extreme temperatures usually coincide with days of extreme fire danger, services should use this resource in conjunction with the *Residential aged care services natural hazards ready resource* (Department of Health 2012) and other relevant information when developing or reviewing their heatwave plan.

2. Heatwaves, health and older people

2. Heatwaves, health and older people

Why are heatwaves a problem?

Episodes of very hot weather, also known as heatwaves, can cause illness and death. Even though we often have hot summers in Australia, heatwaves are very dangerous. In January 2009, record breaking temperatures in Victoria led to 374 more deaths than would be expected for that time of year, as well as a sharp increase in admissions to hospital.

The January 2009 heatwave demonstrated that prolonged, extremely high temperatures are a major health hazard for Victorians.

It is expected that climate change will increase the frequency and intensity of heatwaves in Victoria. It is therefore important that the whole community, and particularly residential aged care services, understand the health risks associated with hot weather and act to prepare before each summer to minimise harm to older people.

What types of hot weather are most dangerous?

Several consecutive days with temperatures higher than usual, with hot nights, especially when they occur early in the summer season, are most dangerous. This is due to people not adapting to the warmer weather.

In Melbourne, it has been found that the death rate of older people increases when the average temperature over a 24-hour period (that is, the average of the daytime maximum temperature and the minimum temperature of the following night) reaches 30°C, even if this occurs for just one day. A day that is only moderately hot can be dangerous if followed by a hot night.

In Melbourne, elevated night-time temperatures commonly lead to increased deaths during periods of hot weather.

Key findings of the Chief Health Officer's report on the January 2009 heatwave

- 25 per cent increase in the metropolitan Ambulance Victoria total emergency cases and a 46 per cent increase over the three hottest days
- 34-fold increase in metropolitan Ambulance Victoria cases with direct heat-related conditions (61 per cent in those 75 years and older)
- 12 per cent increase in emergency department presentations, with a greater proportion of acutely ill patients and a 37 per cent increase in those 75 years and older
- eight-fold increase in direct heat-related emergency department presentations (46 per cent in those aged 75 years and older)
- an almost three-fold increase in patients dead on arrival (69 per cent being 75 years and older) at emergency departments
- 374 additional deaths over what would be expected, which was a 62 per cent increase in total all-cause mortality
- the greatest number of deaths occurred in those 75 years or older.

How is the human body affected by heat?

For optimum bodily functioning, body temperature needs to remain within a narrow range. Normally, body temperature varies over the course of the day.

The human body generates heat from muscle activity and metabolism of food. The body can lose heat to the environment in cooler circumstances and gain heat from hot surroundings.

The temperature of the skin determines heat loss or gain, and the body normally cools itself by sweating. Sometimes sweating is not enough and the body temperature rises.

What types of conditions are caused by hot weather?

Fatigue, dehydration and heat-related illnesses can be caused by very hot weather.

People become lethargic to reduce heat producing muscle activity and appetite is suppressed by the brain to reduce heat from the metabolism of food.

Dehydration can occur when fluid intake does not match fluid loss. Even mild dehydration is associated with increased risk of injury and heat-related illness. Mild to moderate dehydration increases work for the heart. It also reduces fluid available for sweating and to circulate to extremities or flush the kidneys.

Heat-related illness occurs when the body is unable to adequately cool itself. Heat-related illness can range from mild conditions, such as rash or cramps, to very serious conditions such as heat exhaustion and heat stroke, which are potentially fatal. Heat may worsen the condition of someone who already has a medical condition, particularly cardiovascular disease and respiratory disease. Prevention is the best way to manage heat-related illness.

Some heat-related illnesses and common symptoms

- **Heat cramps** are muscle pains or spasms, usually in the abdomen, arms or legs. They may occur after strenuous activity in a hot environment, when the body gets depleted of salt and water. Heat cramps may also be a symptom of heat exhaustion.
- **Heat exhaustion** is a serious condition that can develop into heat stroke. Warning signs may include a pale complexion and sweating, rapid heart rate, muscle cramps and weakness, dizziness and headache, nausea, vomiting or fainting.
- **Heat stroke** is a **life-threatening emergency** and requires urgent attention. Heat stroke occurs when the body is unable to prevent the temperature rising rapidly. Widespread organ injury may occur. The symptoms may appear the same as for heat exhaustion, but the skin may be dry with no sweating and the person's mental condition worsens. They may stagger, appear confused, have a seizure, appear to have a stroke or collapse and become unconscious.

Although heat cramps, heat exhaustion and heat stroke may occur, other conditions are seen far more commonly and may not be recognised as heat-related illness. These include:

- confusion
- kidney stones
- heart complaints
- asthma and other respiratory illness due to poor air quality
- falls
- gastroenteritis (mostly due to poor food handling).

The most common causes of death seen through heatwaves are cardiac, asthma and other respiratory illness, kidney disease, diabetes, nervous system diseases and cancer.

Who is at risk of illness and death from heatwaves?

Anyone can suffer from a heat-related illness. Those most at risk during a heatwave include:

- people over 65 years old
- people with a chronic medical condition, such as heart disease, high blood pressure, diabetes, cancer or kidney disease
- people who have a physical or mental disability
- people who live alone or are socially isolated
- infants.

Why are older people at risk during heatwaves?

Older people have a reduced ability to adapt to summer heat and are more prone to heat stress. They are more likely to have a combination of factors, including the effects of ageing, chronic medical conditions and disability, taking prescribed medication, and social factors.

Age-related changes can reduce the sweating response to hot weather and older people may not drink enough to keep themselves hydrated. Chronic illnesses associated with an increased risk of death during heatwave occur more often in older people. These illnesses and the medications used for their treatment may affect normal responses to heat, mobility, awareness of a hot environment or the ability to care for oneself. Many older people live alone and are unable to reach help during a heatwave.

Age-related changes can reduce the sweating response to hot weather, and older people may not drink enough to keep themselves hydrated.

People with mental health needs

This is another group that are particularly vulnerable probably because of a number of inter-related risks described above. Specifically, they are more likely to live alone, have little social contact, have insecure housing, be taking medication impacting on their body's ability to tolerate heat and may have some limitation in managing their own personal care needs.

3. Heatwave planning

3. Heatwave planning

Defining a heatwave

There is no single internationally accepted definition of a heatwave, so clearly defining a heatwave is difficult. Factors such as humidity, demographics, urban and rural design, individual health factors and acclimatisation mean that similar temperatures might have a different impact on different environments or communities.

Heatwaves are generally described as a period of abnormally and uncomfortably hot weather that can impact on human health, community infrastructure and services. A technical definition is a minimum temperature 'threshold' that is likely to impact on the health of a community.

Victoria's heatwave threshold

There is a well known relationship between elevated night-time temperature and increased mortality and morbidity during periods of hot weather in Melbourne[1]. Calculating the average daily temperature from 9.00 am one day to 9.00 am the following day takes into consideration a hot day followed by a hot night. This lack of 'relief' from the heat appears to result in increased mortality in the elderly[2].

The mean temperature for any given day is the average of the forecast daily maximum temperature and the forecast overnight minimum temperature for that day (which is the daily minimum for the following day).

Calculating the mean temperature

The mean temperature is calculated from the forecast **daily maximum** (in this case Tuesday) and the forecast overnight temperature which is the **daily minimum for the following day** (in this case Wednesday).

An example of this calculation is demonstrated below:

Melbourne

Tuesday

Min: 20 °C

Max: 38 °C

Wednesday

Min: 25 °C

Max: 31 °C

Mean calculation for Tuesday

(38+25)/2 = 31.5°C

The threshold for Melbourne = mean of 30°C

The temperature forecast indicates that the threshold will be exceeded.

This calculation will be repeated for each of the seven days included in the daily forecast.

1 Skinner, Loughnan, Nicholls, Tapper, 2008
2 Loughnan, Nicholls, Tapper, 2009

Victoria's heat health system

In 2009 the Department of Health established the Heat Health Information Surveillance System (HHISS) to monitor the impacts of extreme heat on human health in Victoria. The HHISS operates each year during the summer months.

A heat health temperature threshold is the lower temperature limit, or 'tipping point', above which heat-related illness and death increase substantially.

The heat health temperature thresholds are based on a range of evidence and information and differ across the state to recognise the higher temperatures experienced in northern parts of Victoria. The nine weather forecast districts are the same districts used for total fire bans and fire danger ratings. A heat heath temperature threshold has been established for each of the nine weather forecast districts ranging from 30°C to 34°C.

Impacts of a heatwave

International and Australian experience show that heatwaves increase the incidence of illness and death particularly for people most at risk, which includes frail and older people.

Furthermore, heatwaves rarely occur in isolation. Infrastructure failure or other natural emergencies can add another level of stress on services. For example, power outages will impact on a service's ability to run airconditioners, public transport disruptions may limit the availability of staff, and bushfires could increase vulnerability by reducing air quality.

Heatwaves rarely occur in isolation. Infrastructure failure or other natural emergencies can add another level of stress on services.

Heatwave planning

Although heatwaves do not cause the same physical damage as other extreme weather events, such as floods or storms, the death toll that often accompanies a heatwave is generally substantially higher.

Deaths from heatwave are generally substantially higher than other extreme weather events such as floods or storms.

The World Health Organisation considers heat-related illness and death to be preventable conditions, and supports the introduction of heatwave plans. Heatwave planning is evolving as the impact of extreme hot weather events is better understood.

Protective measures for people at risk are a priority for heatwave plans. Heatwave plans usually include a series of preparatory activities that are put into effect in the time leading up to summer, as well as actions that are implemented during a heatwave.

State heatwave plan

The *Heatwave Plan for Victoria* has been developed by the Victorian Department of Health (the department) to minimise the public health impacts of periods of extreme hot weather. It includes a considerable number of activities that have taken place on a statewide level to prepare for the event of heatwave during the summer season including the:

- Chief Health Officer's *Heatwave in Victoria: an assessment of health impacts*, has informed the development of many heatwave resources and initiatives.
- *Heatwave Planning Guide* has been developed to assist local councils in addressing heatwaves at a community level, as well as funding for pilot heatwave projects involving councils.

- Nurse-on-Call will continue to provide immediate, expert health advice over the phone 24 hours a day, seven days a week.
- Community and seniors registers have been established in communities around Victoria. These registers are one of the multiple channels of reaching older people and those who may be isolated due to disability to support their safety over summer.
- Additional support has been provided to older people through Personal Alert Victoria, the Home and Community Care program, Royal District Nursing Services and Australian Red Cross.
- A suite of communication resources has been developed to encourage and educate individuals and the community to be aware of the impact of extreme heat on human health.
- Public health information and medical advice by general practitioners and pharmacists have been provided in relation to staying safe in hot weather to at risk groups and the general community.
- Heat watch and heat health alert messages and information are being released when heatwaves are forecast.

Heatwaves this summer

The Bureau of Meteorology provides seven-day maximum and minimum temperature forecasts so hot weather and a heatwave conditions can be predicted before the event.

The Department of Health will also consider other factors that may influence vulnerability, such as very high maximum or minimum temperatures and high temperatures over a prolonged consecutive period. High temperature alerts may be issued in these circumstances even if the average temperature threshold is not exceeded.

Heat Health Alert

The Department of Health will issue alerts to notify services and the community that mean temperatures are predicted to reach and exceed heat health thresholds. This alert will allow services to make any preparations necessary to respond to forecast heatwave conditions given the many impacts hot weather can have on human health, normal operations and essential services.

Once a heat health has been notified, residential aged care services should respond in accordance with their heatwave plans.

The heat health alerts are available from the Department of Health website: **www.health.vic.gov/au/chiefhealthofficer/** where a Really Simple Syndication (RSS) feed is available for subscription to receive the heat health alerts directly.

During a heatwave

Public health messages will be made about how to stay safe and healthy.

In the event of prolonged extreme heat or a subsequent, simultaneous event such as major power and public transport failures, extreme demand on essential services, or Code Red fire danger days, Victoria's emergency management arrangements will be activated.

4. Heatwave planning in residential aged care

4. Heatwave planning in residential aged care

All residents in a residential aged care service are potentially vulnerable to heat-related illness as they are generally older than 65 years of age and:

- are likely to have chronic medical conditions such as heart disease, high blood pressure, diabetes, cancer, kidney disease, respiratory disease, parkinson's disease, multiple sclerosis
- may have a health condition that impairs sweating
- may be taking certain medications, such as those that affect fluid balance, cause drowsiness, reduce sweating or interfere with the body's ability to regulate temperature
- may have mental health needs ('psychiatric illnesses') or dementia
- may have limited or poor mobility and/or other physical disability.

Responsibilities of residential aged care providers

Residential aged care providers are responsible for protecting the health and safety of residents, staff and visitors, so it is important to have plans in place to manage emergency events including those associated with potential heatwave situations.

In particular, the Commonwealth *Aged Care Act 1997* requires providers to meet the Aged Care Accreditation Standards. Within these, providers are required to demonstrate that residents receive appropriate clinical care and live in a safe and comfortable environment. In addition, there are state-based occupational health and food safety legislation that have implications for residential aged care providers in their heatwave planning arrangements.

Preparing your service for prolonged periods of heat

Ideally, planning for a potential heatwave should be an integrated component of your service's business continuity and emergency management planning arrangements.

Heatwave preparations should consider planned responses in relation to:

- minimising any avoidable adverse health effects of extreme hot weather to residents, staff and visitors
- managing a disruption to essential services such as a power outage, which could severely impact on the care of residents if prolonged.

Heatwave preparations should include activities to minimise any potential adverse health impacts for residents and include contingency planning for possible power outages.

Advance planning is key to effective heatwave management. A heatwave checklist has been developed to support your service with summer preparations (see section 5 of this resource).

The heatwave checklist for residential aged care services includes important considerations relating to:

- policies, procedures and protocols
- resident care needs
- staffing
- environment
- equipment, services and supplies.

Advance planning and preparations are key to effective heatwave management.

Policies, procedures and protocols

Reviewing existing policies, procedures and protocols is an important first step in the development of a heatwave ready plan for your service. In undertaking such a review, it is useful to consider the range of:

- preparatory activities needed in the lead up to summer
- response actions to be implemented during heatwaves
- measures to review the effectiveness of your service's heatwave response including emergency management at the end of each summer.

A key preparatory activity could be the completion of a self-assessment to check that key organisational processes related to the management of extreme heat are in place, and to ensure that contingency plans are developed to respond to issues that could be anticipated in an extreme heat situation.

In addition, staff training combined with effective communication to volunteers, residents and their families about arrangements in place and how they can contribute to the success of your service's plan is essential. The development and distribution of written information about heatwaves and older people is an important communication activity to promote key messages to staff, volunteers, residents and their families (see section 6 of this resource for information to help with this activity).

Staff training combined with effective communication to volunteers, residents and their families about arrangements in place and how they can contribute to the success of your service's plan is essential.

As outlined earlier, the Bureau of Meteorology provides seven-day maximum and minimum temperature forecasts so hot weather and a heatwave can be predicted. It is important that someone is assigned responsibility for monitoring the weather forecast in your service in anticipation of activating your heatwave response plan. Your organisational capability to continue to provide care and services to residents in the event of an emergency situation such as a power outage also needs to be assessed.

It is important that someone is assigned responsibility for monitoring the weather forecast.

Resident care

The effects of heat and stress can quickly escalate to a potentially life-threatening situation for an older person. It is important to have processes in place to identify the care risks that residents may face during periods of hot weather. This could include a comprehensive, individualised health assessment for each resident prior to the summer season.

The health assessment should involve nursing and care staff, the resident's general practitioner, the pharmacist and other allied health professionals. It is important to remember that each resident will respond differently to the effects of heat depending on their individual circumstances. Residents and their families should be consulted and involved in the development of their summer care plans as much as possible. Doing so raises their awareness about the potential risks of heat on their health and they will be more likely to participate in the strategies designed to minimise risks.

A multidisciplinary approach to individual assessment and care planning for residents should be undertaken and documented prior to summer.

Each resident's plan of care for summer should be documented and accessible to all care staff. Strategies need to be in place and understood by all staff so that when hot weather arrives, residents can be kept hydrated and cool, regularly monitored, and assisted appropriately if they become unwell.

During periods of warmer weather, monitoring the whereabouts of residents should also be increased, particularly those residents who are confused and have access to outdoor areas such as courtyards. These areas can become extremely hot and even short periods of time in these areas could put residents at risk of dehydration, heat-related illness and death (for an outline of the dangers of hot weather on resident refer Section 2. Heatwaves, health and older people). Aged care providers need to have strict protocols within each residential aged care facility over resident use of entry/exit points to prevent unsupervised egress during extreme hot weather events.

Other important considerations include the use and storage of medications during hot weather, the supply of suitable resident clothing, planning of appropriate summer menus with easy access to suitable food and drinks, as well as flexibility around residents' activity programs.

Consideration should also be given to visitors and volunteers as many may also be at risk of the effects of heat if they are older, have a medical condition or live alone. Remember pets and animal companions in a residential aged care service, as they also need to be well cared for and hydrated on hot days.

Consider ways of supporting the wellbeing of visitors and volunteers who may also be at risk during periods of prolonged heat.

Medication and hot weather

Care planning for residents during hot weather should include consultation with their general practitioner and pharmacist regarding use and storage of medications, as some prescribed medications can:

- increase the risk of heat-related illness
- be more toxic in hot weather
- be less effective when exposed to high temperatures.

Increased risk of heat-related illness

Some medications can increase the risk of heat-related illness occurring by effects on:

- body temperature control in the brain, for example, antipsychotics like risperidone and olanzapine
- nerves that control sweating and blood vessels, for example, anticholinergics like tricylic antidepressants and benztropine
- blood pressure, heart rate and fluid balance, for example, diuretics ('fluid tablets'), nitrates (GTN) and calcium channel blockers (some types of 'blood pressure tablets').

It is important that at the start or summer, doctors and pharmacists of residents taking medications are consulted to discuss the possible risks of heat-related illness.

Increased risk of drug toxicity

Dehydration and cardiovascular responses to excessive heat exposure can affect drug concentrations and actions. Resident's serum blood levels may require additional monitoring during hot weather to avoid toxicity of medications with a narrow therapeutic index, such as lithium, digoxin and some antiepileptic drugs.

Efficacy of medications

Exposure to high ambient temperatures can adversely affect the efficacy, and may decrease the shelf life, of some medications. It is important that all medications are stored and transported at appropriate temperatures as indicated by manufacturer's instructions on packaging. This is particularly important for medication stored for emergency situations, for example, insulin, adrenalins, analgesics, sedatives and antibiotics.

Exposure of medications to high temperatures in direct sunlight or through close proximity to electrical equipment should also be avoided. Consultation with a pharmacist is recommended to ensure appropriate storage conditions as part of planning for heatwaves and power outages.

Staffing

It is important to provide staff and volunteers with relevant training so they are well prepared to effectively manage any operational and resident care requirements associated with periods of extreme heat. This includes having a sound knowledge of residents' needs for hydration and cooling and referral for medical and/or emergency care if required.

Residential aged care services may need to review staffing arrangements during periods of hot weather and should consider having contingency plans in place to manage increased requirements. In addition, there may be range of issues that impact on usual staffing arrangements, such as personal health concerns, family or community commitments (for example, heat-related school closures and volunteering activities) and public transport difficulties.

Staff can also be at risk of the effects of prolonged heat, particularly if they have health conditions that may be exacerbated. It is important that staff are provided with a safe and comfortable working environment. Residential aged care services may need to consider arrangements to provide increased rest and drink breaks, if required. Even though most residential aged care services have some cooling capacity, not all areas of the facility may be as cool as others. It is important to be aware of those staff working in warmer conditions and monitor for heat effects, particularly if staff are undertaking significant physical activity.

An individual's health risks in extreme heat conditions can be reduced by improved aerobic fitness, loss of excessive weight, control of medical conditions, and undertaking regular moderate exercise in warmer weather to enable the body to adapt and cope better with hot weather.

It is important that staff are provided with a safe and comfortable work environment during periods of extreme heat.

Environment

Services should assess the overall physical environment to determine how prepared the service is for prolonged heat. Residential aged care services should look at what can be done to make the facility cooler, such as getting airconditioners serviced and installing insulation, awnings, shade cloth or external blinds on the sides of the facility facing the sun. It is also important to understand the impact that heat plays in different parts of the building and monitor temperatures throughout the facility during periods of prolonged heat. This includes monitoring outdoor temperatures and being particularly aware of areas such as courtyards where residents with confusion may wander.

Power outages and infrastructure failure are not uncommon during periods of extreme heat. Residential aged care providers should plan for these possibilities and determine how long they could continue to operate and provide for the care and safety of residents and staff without essential services. Part of your service's contingency planning needs to consider the possibility of relocating residents when essential services are disrupted.

In determining the most effective environmental strategies for minimising the impacts of heat, residential aged care providers will need to carefully consider the appropriateness of items such as awnings and vegetation close to the building that could be in conflict with bushfire attack level (BAL) assessments for being bushfire ready.

Equipment, services and supplies

Having the right equipment and plant that are adequately maintained and in good working order is essential during summer, especially during periods of extreme heat where increased demands may be placed on their operation.

It is vital to have contingency plans in place for the possibility of power failure and a prolonged period of time without cooling and refrigeration. Power outages can also impact on the use of resident care equipment including electronic beds, pressure relieving devices, and oxygen concentrators. Power failure may also limit access to resident records and other important information stored electronically. Communication, including staff call systems, may also be compromised.

Having sufficient quantities of appropriate supplies is also an important planning consideration for summer. An inventory of all equipment and supplies that are critical for providing safe, continuous care to residents should be completed and checked regularly against usual stocks so there is sufficient supply of food, drink and resident care requirements in the event of an emergency. This should also account for any potential increase in these requirements that may arise and include items required for emergency/evacuation kits.

Residential aged care providers need to plan for potential disruptions to essential services and determine how long they could continue to operate safely without them.

Fan facts

Fans are commonly used in residential aged care services. While they can help to make people feel more comfortable, it is now known that under certain circumstances fans do not cool people down, and can in fact be dangerous. This includes any fan such as ceiling fans, portable and pedestal fans. Evaporative coolers are a little different in that these are cooling the air and the fan within the cooler helps to circulate the air.

It is therefore important to include 'fan facts' in staff education programs at the commencement of summer.

In particular it should be noted that:

- Fans **do not** cool the air; they just move the air around.
- Fans only help to cool people down by moving cooler air into a room and by causing sweat to evaporate.
- If the air is cooler outside, fans can be used to bring cooler air into a building.
- Fans are not effective in cooling a person down on very humid days and when the indoor air temperature exceeds 35°C. A fan may help when the indoor air temperature is less than 35°C.
- **Do not** use fans in rooms on days of high humidity/temperatures where windows and doors are shut; because this simply circulates the same hot air.

Never use a fan to blow air directly onto a person when the indoor air temperature is above 35°C.

5. Heatwave checklist for residential aged care

5. Heatwave checklist for residential aged care

The checklist included in this section is designed to assist residential aged care providers prepare for summer and periods of extreme heat.

The checklist is not intended to be prescriptive, but rather to act as a prompt and to provide a framework for planning and preparedness activities. It is important to be prepared well ahead of time because heatwaves can happen suddenly. Illness caused by hot weather also can occur very quickly especially in the first few days of a heatwave.

The checklist is best used by multiple personnel to review and prepare their respective work areas for summer. The summary list will help your service to complete a brief overview of key areas to consider and to identify areas for action.

Heatwave checklist for residential aged care

Name of service:	
Person completing checklist:	
Staff consulted:	
Health and safety representatives consulted:	
Date checklist completed:	/ /

	Number of questions	Number requiring action
Policy, procedures, protocols		
Policy	9	
Backup plans/power failure	3	
Monitoring temperatures	3	
Communication	2	
Food services/catering	4	
Resident care needs		
Assessment	5	
Medications	2	
Clothing	1	
Communication	2	
Food and drinks	2	
Activities	1	
Staff		
Staff training	4	
Fatigue	2	
Contact information	1	
Expertise	6	
Environment		
Design and regulations	3	
Windows	3	
Temperature profile	2	
Equipment, services and supplies		
Airconditioning	11	
Fans	3	
Refrigeration and freezers	12	
Thermometers	1	
Supplies	3	

Policy, procedures, protocols

	Questions to consider	Achieved?	Useful tips/resources
	Policy		
1	Does your service have a documented heatwave ready plan and arrangements in place for identifying and assigning responsibility for managing the risks associated with extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Assign roles and responsibilities to all personnel within your service over summer. • Check that staff are aware of their responsibilities. For example monitoring weather forecasts and temperatures, monitoring residents' whereabouts, ensuring residents are hydrated.
2	Has your service completed a self assessment to check that key organisational processes related to managing extreme heat are in place and functioning? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Completion of this checklist would assist in determining your readiness in many key processes. • Conduct a review of your heatwave arrangements prior to summer each year. • Evaluate heatwave response activities at the end of the summer.
3	If the key organisational processes are not in place or functioning, has your service developed an implementation plan so that they are effective when required? If not when will this occur? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider the use of an action plan with required actions, person/position responsible and time for completion. Where possible incorporate these actions into existing business continuity and emergency planning processes.
4	Does your service have staff who are trained, skilled and available to manage extreme heat events if they occur? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Undertake a staff training needs analysis to determine the level of staff knowledge. • Ensure staff have had relevant training and education to equip them for the warmer weather, and incorporate this training into your ongoing training schedule.
5	Does your service have the necessary technical and support service resources to manage extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Update contact lists of suppliers such as airconditioning, refrigeration, power and maintenance. • Check agreements with current suppliers and service providers and review them if needed.

Policy, procedures, protocols

	Questions to consider	Achieved?	Useful tips/resources
	Policy		
6	Does your service have documented, up to date policies and procedures that address the key requirements for managing a period of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Review policies prior to summer, including emergency management policies and procedures. • Develop appropriate work procedures for all personnel areas including nursing and care, lifestyle, catering and maintenance staff etc. • Refer resources noted at the end of this publication and incorporate relevant information into existing plans and/or policies in relation to heatwaves and other emergencies.
7	Are the policies and procedures documented clearly and accessible to all staff at all times? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure staff have read and understand their roles and responsibilities. • Ensure that all staff can access heatwave plan/arrangements even in the event of a power failure. • Ensure that there is a copy available offsite in case of fire or other unforseen circumstance.
8	Are there processes in place for communicating the policies and procedures to all staff, residents and families? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Meetings, newsletters, correspondence, information boards, phone calls are ways of communicating key messages. • Face to face opportunities are important to talk about summer preparedness so that staff, residents and their families have an opportunity to ask questions.
9	Does your service have monitoring processes in place during the warmer weather to **confirm that** procedures are being implemented as planned? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Assign responsibilities to staff for monitoring procedures such as ensuring residents are kept adequately hydrated and temperatures are monitored etc.

Policy, procedures, protocols

	Questions to consider	Achieved?	Useful tips/resources
	Backup plans/power failure		
1	Does your service have contingency measures in place to deal with potential power outages during periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider what will need to happen in case of power failure. • The maintenance program should include checks of the backup generator and ensure it has the capacity to operate during periods of extreme heat (if applicable). • Checking of airconditioning, refrigeration and communication systems is also important. • Register with your power supplier as a service requiring continuous access to power because of the special needs of residents.
2	Does your service perform testing of any contingency measures that are in place to deal with power outages? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Arrangements should be made for access to a backup generator in the event of a power failure, if required. • Review the *Residential aged care services natural hazards ready resource*, Section 3 Business continuity and emergency management. Available at **http://health.vic.gov.au/agedcare/publications/racsnathazards/index.htm**
3	Is the correct technical and operational information available and accessible 24 hours a day to the people who may need it? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Maintain an up to date list of contact numbers for essential service providers, maintenance personnel and staff to assist if services fail. • Ensure easy access to instructions and operational manuals.

Policy, procedures, protocols

	Questions to consider	Achieved?	Useful tips/resources
	Monitoring temperatures		
1	Does your service have a process in place for monitoring forecasted weather conditions so your heatwave response plan can be activated? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Assign responsibility for monitoring daily temperatures and forecasts. • The Bureau of Meteorology predicts long-range forecasts up to seven days in advance. Refer Bureau of Meteorology at **www.bom.gov.au**
2	Does your service have a protocol for regular monitoring of indoor temperatures, in all parts of the facility where staff and residents are located during periods of hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Monitor and record indoor temperature four times each day, in all areas of the facility where residents and staff are located during hot weather. • Reduce indoor temperatures by turning off unnecessary electrical equipment, if safe.
3	Does your service have a protocol for regular monitoring of outdoor temperatures? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Monitor and record outdoor temperatures, particularly those accessed regularly by staff and residents (that is, courtyards and smoking areas). • When outdoor temperature is lower than indoor temperatures windows should be opened to let the cooler air in.
	Communication		
1	Does your service have a plan for communicating the details of an extreme hot weather forecast to all staff? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider a process for ensuring staff and volunteers are aware of predicted hot weather events. • Ensure staff and volunteers are aware of their roles and responsibilities during extreme hot weather.
2	Does your service have a plan for communicating the details of an extreme hot weather forecast to residents and their families? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider a process for ensuring residents and their families are aware of predicted hot weather events. • Consider arrangements for monitoring of visitors who may be affected by extreme heat, and offer drinks and an opportunity for them to stay in airconditioned comfort.

Policy, procedures, protocols

	Questions to consider	Achieved?	Useful tips/resources
	Food services/catering		
1	Does your service have a protocol in place to ensure an increased availability and supply of cool drinks for residents, staff and visitors during periods of extreme hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Involve your catering service in planning and preparing for warmer weather. • Ensure an adequate supply of water, other drinks, icy poles, ice cream, jellies, custard or ice for residents and staff. • Ensure residents and staff with special dietary needs are catered for. For example, use special cordials to make icy poles for diabetic residents, and ensure thickened drinks are available for those who need them. • Consider consulting a dietician and/or speech pathologist when developing protocols.
2	Have residents and staff been consulted about their preferences for drinks and food to be consumed during periods of extreme hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• If residents are offered preferred drinks they are more likely to consume them. • Monitor residents taking diuretics and discuss monitoring and administration requirements with their general practitioner. • Discuss and monitor intake of caffeinated and alcoholic beverages.
3	Has your service developed a summer menu which allows for flexibility and adaptation during periods of extreme hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Plan to have high-water content meals that are light during hot weather. This also reduces the need for hot ovens and hot food. • Consider consulting with a dietician and/or a speech pathologist about suitable foods and fluids.
4	Does your service have plans in place for safe storage of food and drinks in the event of refrigerator/freezer power failure during periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Refer to *Food Safety in Emergency Situations*. Available at **http://www.health.vic.gov.au/foodsafety/bus/emergency_situations.htm**

Residents' care needs

	Questions to consider	Achieved?	Useful tips/resources
	Assessment		
1	Does your service have processes in place for proactively assessing individual resident's health care needs in preparation for a summer and periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Assess residents' care needs with the involvement of all the care team including nursing and care staff, the general practitioner and allied health professionals. • Update existing care plans or develop individual summer management plans for each resident, particularly for those most at risk during periods of extreme heat. Many issues may impact on their ability to cope such as medical conditions, level of dependency, prescribed medications, etc. • Ensure summer care plans are accessible and used by all staff as required.
2	Are residents and their families actively included in the care assessment process and in preparations for extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Involving families in the assessment is an opportunity to provide reassurance that preparation for heatwaves is regarded as an important issue by your service, and strategies to minimise harm to residents are in place. • Provide families with information: see section 6 Information for carers and families.

Residents' care needs

	Questions to consider	Achieved?	Useful tips/resources
	Assessment		
3	Does the health care assessment process include consideration of the risks and prevention of dehydration? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Determine residents' usual patterns of fluid intake, preferred fluids, ability to access fluids, ability to drink fluids, need for aids such as straws and special cups. • Monitor residents' consumption of alcoholic or caffeinated beverages as this can increase dehydration risks. • Monitor residents taking diuretics (fluid tablets) and discuss monitoring and administration requirements with their general practitioner. • Refer resident to dietician, occupational therapist, speech pathologist if necessary, for advice regarding drinking aids and support where needed. • Refer to: SCORE Strengthening care outcomes for residents with evidence, Draft standardised care process: dehydration. Available at **http://www.health.vic.gov.au/agedcare/downloads/score/dehydration_scp.pdf**
4	Does your service have protocols to monitor and provide additional care and support for residents identified at most risk of heat-related effects? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• All residents are vulnerable to heat-related illness, including residents who are reliant on staff and more independent residents, depending on the clinical assessment of their needs and health status (refer question 1 above). • If there are concerns about residents' hydration, consider how you monitor their intake. • Closely monitor residents who are acutely unwell, particularly those with current problems such as infections and gastroenteritis. • Consider needs of residents' carers and visitors in extreme heat; that is, provide refreshments and encourage them to stay at the facility and cool off, if required.

Residents' care needs

	Questions to consider	Achieved?	Useful tips/resources
	Assessment		
5	Do residents' care plans include instructions on what to do if they become unwell if they have been identified at risk of heat effects? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consult the resident's general practitioner and involve them in the resident health assessment. • Ensure emergency contact numbers for general practitioners, family and other emergency services are up to date and available. • Review residents' advanced care directives and any arrangements for hospital transfer if required.
	Medication		
1	Does your service have processes in place to consult with general practitioners and pharmacists regarding the use of residents' prescribed medications during periods of extreme hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Check those medications that can increase the risk of heat-related illness by interfering with the way in which the body controls temperature. • Residents' blood levels may require more frequent monitoring for some drugs due to the possibility of drug toxicity during hot weather.
2	Does your service have processes in place regarding the storage of residents' prescribed medications during periods of extreme hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• All medications should be stored and transported at appropriate temperatures, as indicated by manufacturer's instructions. • Do not leave medications in direct sunlight, as exposure to excessive heat can reduce their effectiveness and shelf life. • Establish protocols for storage of medications in the event of power failure.

Residents' care needs

	Questions to consider	Achieved?	Useful tips/resources
	Clothing		
1	Does each resident have an adequate supply of light, loose-fitting cotton clothing to wear in hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Families can help by ensuring their relative has an adequate supply of appropriate clothing for hot weather. • Make suggestions for suitable day and night wear, as heat from the skin may be trapped by excessive layers or thick clothing.
	Communication		
1	Does your service have processes in place to ensure preparations and requirements for planning and responding to periods of extreme heat are effectively communicated between management, nursing and care staff, residents and their families? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure all contact details are up to date. • Provide families with written information – refer section 6. • Discuss with families how they might help. • Include relevant communication with staff at meetings, training and through memos.
2	Are the communication processes between management, nursing and care staff and residents and their families adequate to explain what is needed when additional actions are required? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• For residents who become unwell, usual notification protocols should be followed.

Residents' care needs

	Questions to consider	Achieved?	Useful tips/resources
	Food and drinks		
1	Does your service have summer menus designed in consultation with residents to include light, high water-content food during periods of extreme hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• It is important to consult with residents as they are more likely to consume food and drinks that they enjoy.
2	Does your service have processes in place for increased availability and supply of cool drinks for residents, staff and visitors during periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure access and availability of water, ice, icy-poles, ice cream, jellies, custards and thickened drinks, including consideration of residents with special dietary needs and food and fluid modification. • Ensure staff are available to assist dependent residents to increase fluid intake. • Provide drinks to residents' carers and visitors and encourage them to stay at the facility to cool off, if required.
	Activities		
1	Is the activities program able to be adjusted for hot weather events, particularly if scheduled outdoor events coincide with hot weather days? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Be aware of the hotter times of day and limit resident exposure if possible. • Buses and cars can heat up rapidly to extremely dangerous temperatures if airconditioning fails for any reason.

Staff

	Questions to consider	Achieved?	Useful tips/resources
	Staff training		
1	Does your service undertake a training needs analysis and provide relevant training so that staff are well prepared to manage and respond during periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Provide staff and volunteers with relevant information regarding heatwaves – refer section 6. • Consider the following topics in staff training sessions: · prevention of illness during the hot weather · how to keep residents cool · how to prevent, assess and respond to dehydration · procedures for residents who become ill during hot weather · familiarisation with use of airconditioning, refrigerators, fans, environmental thermometers · familiarisation with all protocols to be put into place before and during a heatwave, including backup responses in case of power failure · how to keep themselves well while working in extreme heat.
2	Does your service training plan include cyclical seasonal needs? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Include seasonal preparedness education in your training program for all staff and volunteers at the beginning of summer. • Ensure there is adequate opportunity for staff to ask questions and make suggestions. • Consider the use of scenario-based discussions with staff for training purposes, such as what to do in the event of a power outage. • Evaluate the adequacy of the training.

Staff

	Questions to consider	Achieved?	Useful tips/resources
	Staff training		
3	Does your service training plan align with service polices and procedures for managing during periods of extreme heat including staff use of equipment and implementing preventative measures? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Train all staff in identifying and preventing the health impacts on residents, visitors and themselves (that is, maintaining hydration, staying cool, monitoring the situation, etc). • Ensure staff are trained in the use of equipment to monitor residents' health status, such as blood pressure machines, thermometers, stethoscopes and urinalysis equipment. • Train staff on the use of cooling alternatives and options to airconditioning, fans, refrigerators.
4	Does your service have plans in place to ensure sufficient staff are available during periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Residents' care needs may be increased during hot weather and additional staff may be required. • Staff availability may be altered during extreme weather conditions as staff may have other personal/family issues. • School closures and potential transport disruption could impact on staff availability.
	Fatigue		
1	Does your service have plans in place that anticipate issues such as staff fatigue? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider adjustments to staff rosters and/or allocated breaks and responsibilities during periods of extreme hot weather. • Consider the staffing impacts of extra tasks that may be required, such as providing extra fluids to residents, monitoring residents more frequently and checking temperatures in the facility.
2	Does your service provide for increased availability and supply of cool drinks and light cold meals for staff during periods of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Encourage staff to consume appropriate food and adequate drinks during hot weather. • Ensure staff can have frequent breaks in a cool area, during which time they are able to rest and have access to cool drinks.

Staff

	Questions to consider	Achieved?	Useful tips/resources
	Contact information		
1	Is there a process in place for ensuring contact details of all staff are up to date and accessible to those who organise staff rosters for the service? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure staff contact details are in hard copy as well as electronic format and that this information is accessible to those who need it.
	Expertise		
1	Have all staff attended training so they are skilled to perform their duties in extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Train all staff to ensure they understand the risks and their roles in identifying and preventing the health impact on residents, visitors and themselves.
2	Are all staff of the facility oriented to the facility policies regarding hydration of residents? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Refer to SCORE Strengthening care outcomes for residents with evidence, Draft standardised care process: dehydration. Available at **http://www.health.vic.gov.au/agedcare/downloads/score/dehydration_scp.pdf**
3	Are all staff of the facility oriented to the facility policies regarding cooling? Comment:	☐ Yes ☐ Action required ☐ Not applicable	

Staff

	Questions to consider	Achieved?	Useful tips/resources
	Expertise		
4	Are all staff of the facility oriented to the facility's policies regarding operation of equipment including airconditioners, fans, refrigerators and room thermometers? Comment:	☐ Yes ☐ Action required ☐ Not applicable	
5	Are all staff of the facility oriented to the facility's policies regarding relocation and emergency evacuation preparedness? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Refer to the *Residential aged care services natural hazards ready resource.* Available at **http://health.vic.gov.au/agedcare/publications/racsnathazards/index.htm**
6	Are all staff of the facility oriented to the facility's policies regarding residents' referral for medical care? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider this in relation to residents who may be at risk of heat-related illness and consult with each resident's general practitioner before summer about what to monitor, and when to report care issues to them and/or seek emergency assistance.

Environment

Note: It is important that when residential aged care services are considering their environment that they tailor heatwave plans and response actions to be consistent with being bushfire ready. Some recommendations relevant to reducing the effects of extreme hot weather on resident health compete with what is desirable to reducing the bushfire risk. Read this section in consultation with the *Residential aged care services bushfire ready resource* (**http://www.health.vic.gov.au/bushfire/downloads/racs_bushfire_resource.pdf**) and undertake a bushfire attack level (BAL) assessment. For example trees and leafy plants close to a building help to keep a building cool but may increase the bushfire risk.

	Questions to consider	Achieved?	Useful tips/resources
	Design and regulations		
1	Has the organisation completed an environmental assessment of the facility that considers shade, airconditioning, power supply and generation, water cooling, insulation etc? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Conduct an assessment of the building before summer. • Review effectiveness and capacity of the building to remain cool during periods of extreme hot weather. • Identify risks associated with infrastructure failure that could impact on care and services to residents.
2	Does your service have strict controls in place to monitor resident use of entry/exits to prevent unsupervised egress during extreme weather events? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Residents most at risk are identified. • Staff understand the risks of residents exposure to the elements while outside. • Appropriate numbers of staff are available to supervise and monitor residents whereabouts.

Environment

	Questions to consider	Achieved?	Useful tips/resources
	Design and regulations		
3	Is the facility designed to provide a cool environment in the residents' rooms and in communal living areas? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• One of the most significant impacts to the climate within a building is its initial position, design and structure. Building design considerations to reduce heat exposure include: · location of windows to maximise breeze · insulation of roof, walls and floors · double glazing and/or tinting of glass windows and doors · minimise car parking spaces and concrete areas close to buildings · a lighter colour roof will assist in the reflection of heat · planting trees. • Considerations for keeping existing buildings cool include: · developing cool garden space adjacent to building · using water features, wall gardens, roof gardens and indoor plants · creating external shading using non-metal blinds/coverings, trees, leafy plants · sealing doors and windows to prevent heat entry · monitoring heat entry during periods of extreme heat · ventilation of roof to allow the outflow of heat build up · using light reflecting paints and building materials · double glazing for domed skylights · replacing heat producing lights to low temperature LED lights. **Note: this section should be read in conjunction with the *Residential aged care services natural hazards ready resource*.**

Environment

	Questions to consider	Achieved?	Useful tips/resources
	Windows		
1	Can all windows be shaded on the inside of the building? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Use curtains or blinds made of pale coloured fabric, with reflective lining. • Check that these can all be closed or opened safely. • Ensure that all cords are secured to the wall, and not left dangling.
2	Can all windows be shaded adequately on the outside of the building? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Shade windows using sun-blinds, trees or leafy plants. • Consider window tinting film. • Avoid metal shutters as these become very hot. • Remember to assess what may be required for reducing bushfire risk.
3	Can all windows in the facility be opened? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Keep windows open while outside temperatures are lower than inside temperatures. • Ensure all staff know where keys are to unlock windows, if locks are used. • Be mindful of security considerations when windows are open. • Ensure open windows will not fall and cause injury.
	Temperature profile		
1	Has an assessment of the temperature profile of the facility been conducted, with particular attention paid to identifying the parts of the building that are cooler or warmer? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Install indoor thermometers throughout the facility to allow regular monitoring of the temperature. • Digital, large print thermometers are relatively inexpensive. • Take note of the location of heat-generating equipment such as hot water heaters. Avoid having resident rooms near such equipment.
2	Has a cool part of the facility been identified that could be used as a cool shelter in the event of power failure and/or loss of airconditioning? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider how residents could be moved to, and accommodated in a cooler area if available and necessary.

Equipment, services and supplies

	Questions to consider	Achieved?	Useful tips/resources
	Airconditioning		
1	Are there sufficient airconditioning units to properly provide a cool environment in all parts of the facility, including common rooms and resident bedrooms? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• It is important that residents can be sheltered from the heat at night. Exposure to elevated night-time temperatures, particularly after a hot day, is known to be a risk factor for heat-related death.
2	Is there a documented review of the airconditioning equipment? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider establishing a dedicated folder containing all information about airconditioning equipment, including: instructions for use, contact details of suppliers and maintenance companies, supplier of parts and maintenance history. • Create a chart showing the location of all airconditioning units in the facility, location of control panels and location of remote control devices.
3	Is there a maintenance program in place to maintain the airconditioning equipment? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider having all airconditioners checked and maintained by October each year. • Ensure accurate records of maintenance activities for both preventative and reactive maintenance are kept. • Have details of a repair company in a designated site; for example, a dedicated folder for airconditioning equipment.
4	Is all airconditioning equipment currently operating effectively? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure regular testing arrangements are in place before and during summer.
5	When the airconditioning equipment operates at full capacity does it provide sufficient cooling? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Monitor internal temperatures when the airconditioning is operating in periods of extreme heat to determine effectiveness.

Equipment, services and supplies

	Questions to consider	Achieved?	Useful tips/resources
	Airconditioning		
6	If additional airconditioning equipment is being purchased or upgraded will this be ready in time for summer? Comment:	☐ Yes ☐ Action required ☐ Not applicable	
7	Are all staff familiar with, and able to reliably use, the airconditioning equipment? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• At the beginning of summer, conduct sessions for all staff explaining the location and operation of all airconditioners, and the protocol to follow if airconditioning fails. • Ensure that all staff know how to use remote control devices and wall controls. • Ensure that all staff know where any remote control devices are kept. • If controls to airconditioning units are locked ensure access is available 24 hours a day.
8	Are there emergency provisions and back up systems available in case of airconditioning equipment failure? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Refer *Residential aged care services natural hazzards ready resource*, section 8: Supplies, equipment and services, and Appendices. Available at **http://health.vic.gov.au/agedcare/publications/racsnathazards/index.htm** • Ensure a pre-prepared emergency/evacuation kit containing relevant information and equipment is available and within easy access for staff.
9	Does the design of the airconditioning equipment enable early detection of any problems? If so, would this be obvious to staff? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Check visual displays, lights, etc on equipment.
10	Is the airconditioning equipment designed so that in the event of it failing it is easily repaired or replaced during a period of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	

Equipment, services and supplies

	Questions to consider	Achieved?	Useful tips/resources
	Airconditioning		
11	Are the airconditioning equipment displays and controls working properly? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure testing arrangements are in place.
	Fans		
1	Are any fans used during hot weather in the facility? This includes ceiling, portable and pedestal fans? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Check that fans and other equipment are electrically safe for use. • Refer to section 4 Fan facts.
2	Do staff know where fans are located and how to operate them? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider safety aspects if using portable or pedestal fans, for example to ensure no tripping hazards with cords or the fans falling.
3	Are staff aware of and do they understand the limitations of relying on fans during hot weather? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Use Fan facts for summer preparation education session. • Fans **do not** cool the air; they just move the air around. • Fans help to cool people down by moving cooler air into a room and by helping their sweat to evaporate. • Fans are not effective in cooling a person down on very humid days and when the indoor air temperature exceeds 35°C. A fan may help when the indoor temperature is less than 35°C. • Do not use fans in closed rooms where windows and doors are shut. **Never use a fan to blow air directly onto a person when the indoor air temperature is above 35°C.**

Equipment, services and supplies

	Questions to consider	Achieved?	Useful tips/resources
	Refrigerators and freezers		
1	Are the refrigerators and freezers currently able to keep all required items at appropriate temperatures, including medications, drinks for residents and staff, food for residents and staff? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Be aware that extreme heat may affect the efficiency of the performance of refrigerators and freezers.
2	If the refrigerators and freezers were required to operate at full capacity during very hot weather would they be able to keep all the required items at an appropriate temperature, including medications, drinks for residents and staff, food for residents and staff? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure refrigerators and freezers are adequate for keeping all required items cool. • Minimise the amount of opening and closing of doors. • Consider monitoring temperatures more regularly during extreme heat. • Data shows that there is an increase in gastroenteritis illnesses when the weather is warmer.
3	Does the performance of the refrigerators and freezers meet current codes, specifications and regulations? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• This is important because of the need to ensure food safety and to be able to provide cool fluids. • Check that refrigerators and freezers are energy efficient and able to keep functioning in extreme conditions.
4	Is there a documented review of the refrigerators and freezers? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider establishing a dedicated folder containing all information about refrigeration equipment, including instructions for use, contact details of suppliers and maintenance companies, supplier of parts, maintenance history. • Create a chart showing location of refrigerators and freezers in the facility.
5	Is there a maintenance program in place to maintain the refrigerators and freezers? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure fridges and freezers are incorporated into the facility maintenance and calibration program. • Establish a schedule for defrosting refrigerators (if applicable). • Monitor and record temperatures.

Equipment, services and supplies

	Questions to consider	Achieved?	Useful tips/resources
	Refrigerators and freezers		
6	Do all the refrigerators and freezers currently work properly? Comment:	☐ Yes ☐ Action required ☐ Not applicable	
7	If additional refrigeration equipment is being purchased or upgraded will this be ready in time for summer? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider purchasing energy efficient refrigeration to enable it to function optimally in extreme conditions.
8	Are all staff familiar with, and able to reliably use, the refrigerators and freezers? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Include information about operation and location of refrigerators and freezers in pre-summer education sessions for staff.
9	Are there emergency provisions and backup systems available in case of refrigeration failure? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• It is particularly important to have a plan to manage the storage of medications at an appropriate temperature in case of refrigeration or power failure. • Refer to *Food Safety in Emergency Situations*. Available at **http://www.health.vic.gov.au/foodsafety/bus/emergency_situations.htm**
10	Are the refrigerators and freezers designed to enable early detection of any problems and make this obvious to the staff? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Check visual displays or the internal thermometer regularly during periods of hot weather.
11	Are the refrigerators and freezer designed so that in the event of them failing they are easily repaired or replaced during a period of extreme heat? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Ensure easy access can be gained to this equipment, rather than built in.

Equipment, services and supplies

	Questions to consider	Achieved?	Useful tips/resources
	Refrigerators and freezers		
12	Are all the refrigerator and freezer displays and controls working properly? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider placing a sign on refrigerators, freezers and cool room doors to remind staff to avoid opening doors unnecessarily during hot weather.
	Thermometers		
1	Are reliable, easy to read, wall thermometers placed in locations within the facility to allow regular monitoring of the temperature of areas inhabited by residents and staff? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Consider having thermometers in each room of the facility. • Develop a protocol to check indoor temperature on a regular basis, up to four times each day during a heatwave. • Large print, digital wall thermometers are easiest to use.
	Supplies		
1	Has an inventory of essential and emergency supplies been completed for food, drinks, linen, residents' care and hygiene requirements prior to summer? Comment:	☐ Yes ☐ Action required ☐ Not applicable	• Refer *Residential aged care services natural hazzards ready resource* section 8: Supplies, equipment and services, and Appendix 2. Available at **http://health.vic.gov.au/agedcare/publications/racsnathazards/index.htm** • Ensure a pre-prepared emergency/evacuation kit containing relevant information and equipment is available and within easy access for staff.
2	Are stocks checked regularly so that sufficient supplies of essential and emergency stocks are on hand in the event of an emergency? Comment:	☐ Yes ☐ Action required ☐ Not applicable	
3	Does your contingency plan include alternatives for critical equipment, services and supplies in the event of an emergency, including after hours arrangements? Comment:	☐ Yes ☐ Action required ☐ Not applicable	

6. Heatwave information for staff, residents and their families

6. Heatwave information for staff, residents and their families

The information in this section will be of assistance to residential aged care services that may want to develop brochures, flyers or posters for staff, volunteers, residents and their families to promote increased awareness about heatwaves and what they can do. This section includes:

- Ten common myths and misunderstandings – this information is probably most suitable for staff
- information for residents
- information for carers and families.

You may wish to tailor the information provided to include specific issues related to your service. To maximise use of the information it is best presented in large, clear print and, depending on your service you might consider providing this information in different community languages.

Heatwave information for residential aged care

10 common myths and misunderstandings

Myth 1: We often have hot weather in Australia, so it won't hurt us.

Fact: Heatwaves do cause illness and death in Australia.

Even though we experience a lot of hot weather in Australia, heatwaves are still very dangerous for many people in our community. A little known fact is that heatwaves have caused more deaths in Australia over the past 200 years than floods or cyclones.

In January 2009, a heatwave in Victoria led to 374 more deaths than expected for that time of year, with most of these deaths being of those aged over 75 years.

People who are most vulnerable to harm from heatwaves are older people or the very young, those who are already unwell or frail, those who have a reduced ability care for themselves, those who live alone and have little social contact, and those who have limited access to resources such as airconditioners, shelter, transportation, cool spaces and drinking water.

People at risk during hot weather include those:

- aged 65 years and older
- with chronic medical conditions
- who have a physical or mental disability
- taking certain medications, such as those for high blood pressure or mental illness.

Myth 2: One hot day won't do any harm.

Fact: One hot day can be dangerous, especially if it occurs early in summer or even before summer commences.

Studies have shown that even one very hot day, especially if occurring early in the summer, and if followed by a hot night, can be very dangerous. It is important not to be complacent, even if summer hasn't started. Heatwaves tend to produce more severe impacts in the early summer season, as acclimatisation increases people's ability to cope with heat later in the season.

Myth 3: The temperature needs to be really high to be a danger to health.

Fact: The temperature does not need to be really high to be a danger to health.

Studies in Melbourne have shown that the average temperature over 24 hours is the most important temperature measure. In Melbourne, it has been found that the death rate of older people increases when the mean temperature over a 24 hour period (that is, the average of the daytime maximum temperature and the minimum temperature of the following night) reaches 30°C, even if this occurs for just one day. An increase in death rates is also seen when there are elevated night-time temperatures. Therefore, even a day that is not extremely hot can be dangerous if followed by a hot night.

Myth 4: Old people often say they feel cold rather than hot, so they are less likely to be harmed by hot weather.

Fact: Older people are at risk of illness and death during heatwaves, even if they are not aware of feeling overly hot.

Even if a resident says they are not hot, and may dress for cooler weather, the important thing to keep in mind is the ambient temperature to which they are exposed.

Heat loss from the skin may be trapped by excessive layers or thickness of clothing, so residents should have suitable clothes for hot days. Relatives and friends can help by ensuring residents have an adequate supply of loose, cotton, light-coloured clothing for day and night wear, as well as a sun hat.

Myth 5: When an older person is not thirsty they don't need to drink any more in hot weather.

Fact: Older people still need to drink extra fluids during hot weather even if they don't feel thirsty.

Age-related changes are known to decrease the amount of fluid older people drink in response to feeling thirsty. It is important to provide drinks that are palatable, and to make sure they are readily available and accessible. Icy-poles or ice chips may provide an alternative source of liquid. Some older people may require drinking aids such as straws and special cups, or may require thickened liquids on the advice of dieticians and/or speech therapists. A few simple measures may increase the opportunity for an older person to frequently sip a drink during hot weather, decreasing the chance of dehydration.

Some people may be on fluid restricted diets, in which case it is very important to discuss their ideal fluid intake during hot weather with their doctor.

Myth 6: Windows should always be kept closed on hot days and then opened at night.

Fact: Regardless of the time of day, if the air outside a building is cooler than the air inside the building, opening windows will allow cooler air to move in.

It is a good idea to have a thermometer that measures indoor and outdoor temperatures, so that the correct decision can be made about opening windows.

Myth 7: Older people who have an airconditioner are safe in the hot weather.

Fact: People who have an airconditioner may actually not use it.

In past heatwaves in other countries it has been found that many older people who died had airconditioners but didn't actually use them. Older people may not use an airconditioner because they are worried about the cost of electricity or they don't know, or can't remember how to use the airconditioning.

Spending time in a cooler space for as long as possible on a hot day is very important since this is known to be protective against heat-related illness. Taking the time to help an older person use their airconditioner may be life-saving.

Myth 8: Fans keep the air cool.

Fact: Fans move air around but do not cool the air.

A fan by itself cannot cool the air, only an airconditioner or a cool breeze can do this. 'Fans' includes ceiling and portable fans, not evaporative coolers.

Fans move air across our skin and help to speed up the evaporation of sweat, which can help to cool us down. This process is less effective if the weather is very humid, and if the indoor temperature of the air rises above 35°C.

Remember:

- Fans **do not** cool the air; they just move the air around.
- Fans only help to cool people down by moving cooler air into a room and by causing sweat to evaporate.
- If the air is cooler outside, fans can be used to bring cooler air into a building.
- Fans are not effective in cooling a person down on very humid days and when the indoor air temperature exceeds 35°C. A fan may help when the indoor temperature is less than 35°C.
- **Do not** use fans in rooms on days of high humidity/temperatures where windows and doors are shut; because this simply circulates the same hot air.
- **Never use a fan to blow air directly on to a person when the indoor air temperature is above 35°C.**

Myth 9: If a room is dark it will be cool.

Fact: A dark room can still become very hot.

Sitting in a dark room with the windows shut and the curtains and blinds drawn may be cool for a while but can become dangerously hot. Also a darkened room can increase the risk of a person falling and may create confusion for those with dementia.

If possible, monitor the temperature of a room and compare this to the temperature outside. If it is cooler outside, open the windows and doors to allow cooler air in. Ensure a suitable drink is close at hand to allow regular fluid intake.

Myth 10: Young, fit people won't be harmed by hot weather.

Fact: Young, fit people can become ill during a heatwave.

Anyone can become ill if exposed to very hot weather, especially if they are very active, don't drink enough, and are not in the shade.

If you are a carer of an older person, it is important that you also look after yourself by drinking adequate fluid, wearing a hat and loose-fitting, light-coloured clothing, staying indoors during the hottest part of the day, and spending several hours in a cool environment.

Heatwave information for residential aged care

Information for residents

What is a heatwave?

- A heatwave is a period of excessively hot weather.

Why are heatwaves a problem?

- Heatwaves can cause people to become ill, and sometimes die.
- Heatwaves are most dangerous if they occur early in the summer season, if they last for several days, and if they include hot nights.
- Heatwaves can cause fatigue, heat rash, heat cramps, heat exhaustion and heat stroke. Heat exhaustion and heat stroke can lead to death.
- Heatwaves also cause death by causing a worsening of existing health problems, especially heart or lung disorders.

Who is most at risk?

In an aged care service, all residents are at risk of heat-related illness.

Those residents most at risk are:

- aged 65 years or older
- overweight or obese
- people with a chronic disease, such as heart disease, high blood pressure, diabetes, cancer, kidney disease
- people unable to care for themselves
- people with a health condition that impairs sweating, such as scleroderma, extensive scarring from burns
- people with limited mobility or confined to bed
- people with dementia or psychiatric illness
- people taking medications that interfere with the body's ability to regulate temperature.

What you can do during excessively hot weather.

✓ Wear light coloured, loose-fitting cotton clothing

This could include:

- For women: sleeveless summer dresses and summer night wear.
- For men: short-sleeved shirt, shorts, summer cotton socks and summer pyjamas.

✓ Sip cool water or other drinks as recommended by care staff

✓ Tell the care staff if you feel distressed

- Rapid breathing or difficulty breathing
- Weakness, dizziness, fainting, nausea, vomiting
- Fatigue, headache, confusion.

✓ Stay out of the sun

✓ Spend at least 3 hours in an airconditioned space

Want to know more?

- Ask care staff or a healthcare professional
- Visit the Better Health Channel website: **http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Heat_stress_and_heat-related_illness**

Heatwave information for residential aged care

Information for carers and families

What is a heatwave?

- A heatwave is a period of excessively hot weather.

Why are heatwaves a problem?

- Heatwaves can cause people to become ill, and sometimes die.
- Heatwaves are most dangerous if they occur early in the summer season, if they last for several days, and if they include hot nights.
- Heatwaves can cause fatigue, heat rash, heat cramps, heat exhaustion and heat stroke. Heat exhaustion and heat stroke can lead to death.
- Heatwaves also cause death by causing a worsening of existing health problems, especially heart or lung disorders.

Who is most at risk?

In an aged care facility, all residents are at risk of heat-related illness.

Those residents most at risk are:

- aged 65 years or older
- overweight or obese
- people with a chronic disease, such as heart disease, high blood pressure, diabetes, cancer, kidney disease
- people unable to care for themselves
- people with a health condition that impairs sweating, such as scleroderma, extensive scarring from burns
- people with limited mobility or confined to bed
- people with dementia or psychiatric illness
- people taking medications that interfere with the body's ability to regulate temperature.

What you can do to assist your family member during excessively hot weather.

✓ Provide an adequate supply of light coloured, loose-fitting cotton clothing

This could include:

- For ladies: sleeveless summer dress and summer night wear.
- For men: short-sleeved shirt, shorts, cotton summer socks and summer pyjamas.

✓ Encourage and assist with sipping cool water or other drinks as recommended by care staff

- Offer assistance
- Ensure drinks are within reach
- Fill up water jugs.

✓ Look for any signs of distress and if present report this to care staff immediately

- Rapid breathing or difficulty breathing
- Weakness, dizziness, fainting, nausea, vomiting
- Fatigue, headache, confusion.

✓ Take care of yourself!

- Stay out of the sun
- Avoid travelling in the hottest part of the day
- Spend at least three hours in an airconditioned space
- Have plenty to drink
- Avoid strenuous activity.

Want to know more?

- Ask care staff or a healthcare professional
- Visit the Better Health Channel website at **http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Heat_stress_and_heat-related_illness**

7. Other useful information

7. Other useful information

The following resources are available on-line

Heatwave planning

Victorian Government health information includes a range of heatwave information. Available at **<http://www.health.vic.gov.au/environment/heatwave/>**, including:

- *Heatwave Plan for Victoria*
- *Heatwave Planning Guide: Development of heatwave plans in local councils in Victoria*
- *January 2009 Heatwave in Victoria: an assessment of health impacts*, 2009. Available at **<http://www.health.vic.gov.au/chiefhealthofficer/publications/heatwave.htm>**
- *Residential aged care services natural hazzards ready resource*, 2012. Available at **<http://health.vic.gov.au/agedcare/publications/racsnathazards/index.htm>**

Bureau of Meteorology, available at **<http://www.bom.gov.au>**

Victorian Managed Insurance Authority, at **<http://www.vmia.vic.gov.au>**

Particularly risk publications at **<http://www.vmia.vic.gov.au/display.asp?entityid=4991>**

Heatwave health and support

Victorian Government health information

- Better Health Channel, search for heat stress information. Available at **<http://www.betterhealth.vic.gov.au>**
- Chief Health Officer information. Available at **<www.health.vic.gov.au/chiefhealthofficer>**
- Environmental Health information. Available at **<www.health.vic.gov.au/environment/heatwave>**
- *Food Safety in Emergency Situations.* Available at **<http://www.health.vic.gov.au/foodsafety/bus/emergency_situations.htm>**
- SCORE Strengthening care outcomes for residents with evidence, Draft standardised care process: dehydration. Available at **<http://www.health.vic.gov.au/agedcare/downloads/score/dehydration_scp.pdf>**
- Well for Life Fact Sheet 14: *Drinking and fluids: maintaining hydration*. Available at **<http://www.health.vic.gov.au/agedcare/publications/wellforlife.htm>**

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