

Disaster Management Branch

SA Health Extreme Heat and Heatwave Strategy

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Government
of South Australia

SA Health

Document Control Information

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SA Health Statement of Reconciliation

SA Health recognises Aboriginal and Torres Strait Islander peoples as the first Australians, and we seek to engage Aboriginal people in decision making processes for matters that affect their lived experiences in the community and through the health system.

Together we will develop services and practices to be non-discriminatory, and inclusive of Aboriginal people, respectful of Aboriginal beliefs and culture, fostering Aboriginal self-determination and producing equitable health outcomes for Aboriginal people of South Australia.

Acknowledgement of Country

We acknowledge and respect the Traditional Custodians on whose ancestral land SA Health provides services.

We acknowledge the deep feelings of attachment and relationship of Aboriginal people to country.

Introduction

Extreme heat and heatwaves have claimed more lives than any other natural hazard in Australia (Coates, et al, 2014).

Extreme heat is when the maximum and/or minimum temperatures are unusually hot for one or two days at a location. A heatwave is when the maximum and the minimum temperatures are unusually hot over a three or more-day period for that location, when considered in relation to the local climate and past weather at the location.

Heatwaves have the potential to adversely affect urban and rural communities, infrastructure, and the natural environment. They cause significant health issues, extensive stock and crop losses, damage to roads, railway lines and bridges, disrupt power supplies, loss of vegetation and contribute to an elevated fire hazard.

Extreme heat and heatwaves directly impact physical health, through heat stress, dehydration, and heat stroke, but may also worsen the symptoms of existing conditions, like cardiac, respiratory, and renal diseases. Extreme heat and heatwaves also affect mental health issues either directly by interacting with certain mental health medications, or indirectly through the psychosocial health of those who may be experiencing disaster events such as drought, floods, or bushfire. Additionally, there is evidence of increased rates of suicide, interpersonal conflicts, irritability, aggression, domestic violence, and violent crimes during heat events.

Extreme heat and heatwaves can also impact anyone wanting to exercise, play sport outside, be physically active for recreation or reduce physical work capacity for those undertaking work outside and in hot environments by exposing them to moderate to high heat stress risk. These conditions can also lead to an increased risk of injuries and accidents, including slips, trips, falls, wounds, lacerations, and burns, through a combination of direct factors like dehydration and indirect factors like impaired cognitive and physical performance. In addition, high minimum temperatures overnight are likely to contribute to a greater impact if communities, infrastructure, and the environment are unable to recover from protracted heat stress. High temperatures can also be exacerbated by high humidity.

Extreme heat and heatwaves place increased demands on the health system and may require changes to processes to maximise the safety of people using health services, clients, staff, and community partners. For example, increased strain on power networks during heatwaves can sometimes cause loss of power for short or long periods of time, and health services can experience a disruption to operations, inhibited delivery of high-quality care, or reduced access to health services for the community and create a financial burden to health care facilities. As with all external events that may challenge the health system, good preparation is essential to minimise risk and ensure a safe and appropriate response.

Purpose

The SA Health Extreme Heat and Heatwave Strategy outlines a series of guiding principles with the aim to reduce the risk of harmful effects of extreme heat and heatwave on the health of the South Australian community and reduce the impact of the associated workload increase / surge workload before, during and after such events, by:

- > ensuring a planned, managed, and effective response to an extreme heat or heatwave event
- > providing a coordinated SA Health communication plan; and
- > promoting community resilience and adaptation to extreme heat conditions.

Target audience

This document provides strategic guidance, and is intended for use across SA Health, including the Department for Health and Wellbeing (DHW), Local Health Networks (LHNs), SA Ambulance Service (SAAS), Wellbeing SA and all other SA Health clinical support services. This document is not mandatory but serves to guide all areas within SA Health in developing and maintaining their localised planning and preparedness to respond to extreme heat and heatwaves, and establish their own procedures, arrangements or plans specific to their context.

This document also recognises and acknowledges the important role the wider health, aged care and disability sectors plays during extreme heat and heatwave events, including Aged Care, General Practice, Pharmacies, Community Health, and Disability services – some of whom are Commonwealth government or non-government organisations (NGOs), as well as private businesses. Guidance for these sector partners is included within this document, for their consideration, as part of their preparedness for extreme heat and heatwaves in South Australia.

Context

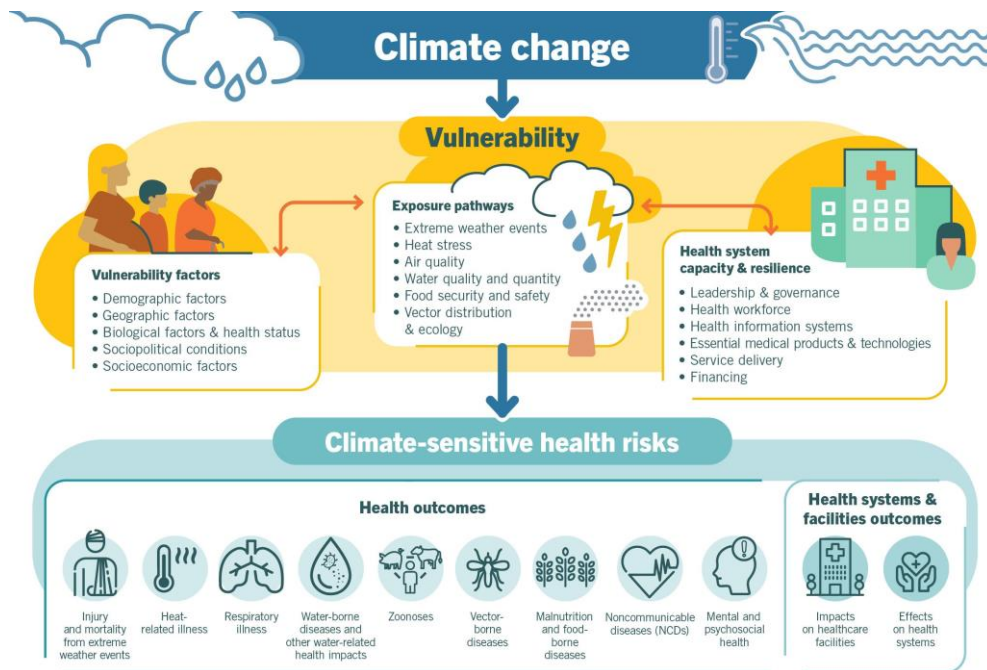
This document acknowledges non-disaster related policy and other legislative requirements that may be relevant during extreme heat or heatwave, including:

- > DHW/LHN/SAAS guidelines for Workforce Health, including remote and/or isolated work, worker wellbeing, work health safety and injury management, WorkFit, and Wellbeing.
- > SA Health Flexible Workplaces Policy, including home based worksite inspection checklist and other LHN dynamic risk assessment procedures for working from home
- > Safe Work Australia – working in the heat: <https://www.safeworkaustralia.gov.au/safety-topic/hazards/working-heat>
- > The principles of infection prevention and control as per the [Australian Guidelines for the Prevention and Control of Infection in Healthcare](#) (where applicable)

Climate change

Climate change has been described by the World Health Organisation (WHO) as the greatest threat to global health in the 21st century, because it threatens the fundamental components of good health, such as clean air, safe water, food supply and secure shelter.

Climate change has both direct and indirect impacts on health and wellbeing, through climate-related extreme events/disasters, and a range of environmental exposures (Beggs, PJ; Zhang, Y, McGushin, A et al, 2022). Individual and population vulnerability to these exposures and events depends on many factors, including location (eg. remoteness from health services), existing health conditions (eg. respiratory, cardiovascular, or mental illness), and socio-economic status.



Source: World Health Organisation

The public health risks related to a warming climate, extreme heat and heatwaves include:

- > Poor health outcomes for vulnerable people (eg. cardiovascular, renal, and respiratory conditions, as well as mental health) compromised by exposure to hotter conditions, including higher risk of death
- > Increase in heat related illness, with no respite from heat with both warmer days and nights
- > Impacts to water quality and water supply
- > Food spoilage (eg. result in food-borne disease like gastroenteritis)
- > Food security, where food quality and yield may reduce due to heat and/or droughts, resulting in famine, nutritional deficiencies, and lowered food production
- > Increase in mortality and morbidity during heatwaves.

These impacts place unprecedented pressure on the health system and exacerbate existing health inequalities, particularly in vulnerable communities — people living in remote areas, those with pre-existing health conditions, socio-economically disadvantaged people, with Aboriginal and Torres Strait Islander people being particularly vulnerable to current and future consequences of a changing climate.

Research shows that Aboriginal and Torres Strait Islander people already currently experience higher rates of climate-sensitive health conditions and socioeconomic disadvantages, which a warming climate and heatwaves will only exacerbate (HEAL Network, 2021 & Standen et al, 2022). It will also affect cultural practices, which are closely related to Aboriginal health and wellbeing.

For the South Australian health system, increase in temperature, together with the intensity and frequency of extreme weather and associated disasters, can impact ambulance callouts and hospital emergency department presentation and/or admission profiles. It will also place a substantial burden upon the health system, in terms of increased number of people in care, workforce capacity and capability, as well as the cost to infrastructure and the overall state economy.

In South Australia, we are already seeing increases in average temperatures, a greater frequency of very hot days, declining rainfall, and rising sea levels. If we do not reduce greenhouse gas emissions, then South Australia will face complex challenges. Climate modelling and future climate scenario projections by the Department for Environment and Water for 2030, 2050 and 2090 predict:

- > An increase in both daily and overnight temperatures, with more frequent and longer heatwaves, with the number of days per year over 40°C projected to more than double.
- > Reduced rainfall, with a likelihood of more frequent and/or intense droughts and associated dust storms.
- > More intense rainfall events, with increased risk of flooding and inundation.
- > Rising sea-levels, with increased coastal erosion and storm surge damage.
- > As well as an increase occurrence of coincident or multiple events or polycrisis (such as a heatwave followed by bushfire or overland flooding combined with storm surge).

For further information please visit the Department for Environment and Water's [latest climate projections for South Australia](#).

Roles and responsibility

SA Health follows legislative frameworks and disaster/emergency plans that incorporate heatwave issues. These include:

- > the [Emergency Management Act 2004](#)
- > the [State Emergency Management Plan](#)
- > the [SA Public Health Act 2011](#)
- > the [Public Health Emergency Management Plan](#)
- > the [Disaster Management in SA Health System Policy](#)
- > the provision of consistent whole of health policy and regulation.

Hazard Risk Reduction Leader

The State Emergency Management Plan ([SEMP](#)) identifies the South Australian State Emergency Service ([SASES](#)) as the Hazard Risk Reduction Leader for Extreme Weather events (including Heatwaves).

The SASES has overall responsibility to ensure that a robust prevention and preparedness approach is adopted by all agencies, as well as identify and communicate how agencies can develop their arrangements to complement a coordinated and consistent approach across government.

Control Agency

The SEMP identifies SASES as the Control Agency for Extreme Weather events (including Heatwaves). The SASES has overall control and responsibility to ensure that all response actions focus on the protection of life and property and to have a situational awareness of the capability of all government agencies during extreme heat events.

SASES will work with the various advisory groups, Hazard Risk Reduction Leaders, Support Agencies and Functional Support Groups to ensure that all aspects of the state's approach to the hazard, including mitigation, response, and recovery measures, are coordinated.

Support Agency

Support agencies support the nominated Control Agency and are subject to direction by the nominated Control Agency. SA Health is a support agency to SASES in relation to Heatwaves, and will provide support to SASES during heatwave events, including regularly reporting, planning, and implementing procedures within SA Health, managing health related risk reduction, and establishing partnerships with stakeholders.

Functional Support Group

Functional support groups (FSGs) perform functional roles and capability that support both the Control Agency and Support Agencies. SA Ambulance Service (SAAS) is the FSG for ambulance

services, and will provide support to SASES during heatwave events, including regularly reporting and maintaining partnerships with stakeholders.

Disaster Management Branch (DMB)

Before, during and after an extreme heat or heatwave event, the Disaster Management Branch (DMB) will:

- > Act as the sole representative for SA Health for state level arrangements in relation to Extreme Heat and heatwave, including attendance at the State Emergency Centre (SEC) as required and liaison with the Control Agency for Heat (SASES).
- > Manage and review the Extreme Heat and Heatwaves Strategy for SA Health.
- > Raise awareness of the health impacts of heat and heatwaves, and the SA Health Extreme Heat and Heatwaves Strategy, as subject matter experts, during annual seasonal preparedness.
- > Coordinate and produce heat related information for workforce and community education, including fact sheets, web content for staying healthy in the heat, and the printed *Healthy in the Heat* booklet.
- > Coordinate membership of the SA Health Heatwave email distribution list ([DL:Health heatwave](#)) for all relevant SA Health staff for use by SASES for SA government heatwave and warning messaging.
- > Produce and/or distribute intelligence reports or situational reports, regarding Heatwaves from relevant state and national emergency management sources in a timely manner.
- > Provide ongoing liaison with other emergency services and government agencies, particularly SASES.
- > Coordinate any SA Health debriefs of the incident including all relevant stakeholders once the extreme heat event has concluded.

Phased approach

Before, during and after a heatwave SA Health will follow these disaster management phases – recognised nationally and within the State Emergency Management Plan (SEMP):

Phase	Stage	Activities	Equivalent SEMP phase
Prevention	Prevention	<ul style="list-style-type: none"> > Review SA Health Extreme Heat and Heatwave Strategy > Incorporate any lessons learned from research evidence and/or previous events 	Prevention
Preparedness	Preparedness	<ul style="list-style-type: none"> > No heatwave detected (or lead up to summer hot season) > Raise awareness of heat and heatwaves, through workforce education, communication material and seasonal preparedness > Identify established and informal networks for connecting and engaging with vulnerable groups, including Aboriginal and Torres Strait Islanders and culturally and linguistically diverse (CALD) groups > Reduce the risk through mitigating heatwave effects (health system planning and exercising plans; community education through online heat information and Healthy in the Heat booklet) 	Preparedness

Phase	Stage	Activities	Equivalent SEMP phase
Response	Standby	<ul style="list-style-type: none"> > Intelligence from SASES / Bureau of Meteorology about future weather projections > Surveillance and early warning / public messaging from SASES > Provide key heat health messages through social media > SASES Community Readiness Alert may be issued to prepare the community when a significant heatwave event is on the horizon 	Alert Lean forward
	Action	<p>Three stages:</p> <ul style="list-style-type: none"> > Low Intensity advice warning issued by SASES > Severe Heat - Watch and Act warning issued by SASES > Extreme Heatwave - Emergency warning issued by SASES > Support the Control Agency (SASES) to respond to any disaster event and state emergency activation > Promulgate Control Agency (SASES) community messaging through SA Health social media and other communication channels > Provide consistent public health heat messages through SA Health social media; and during client visits, or through telephone calls or message alerts 	Stand up
	Stand down	<ul style="list-style-type: none"> > Heatwave advice – reduced threat issued by SASES > Heatwave has passed, and post heatwave presentations have ceased 	Stand down
Recovery	Recovery	<ul style="list-style-type: none"> > Support to those affected by a heatwave to achieve a proper and effective level of functioning > Debrief and evaluate actions taken during heatwaves, and include any lessons in future reviews of the SA Health Extreme Heat and Heatwave Strategy 	Recovery

Prevention

The prevention phase aims to prevent or minimise the impacts of future disasters through planning. This is also known as disaster risk reduction. For SA Health, this phase primarily involves reviewing the SA Health Extreme Heat and Heatwave Strategy and includes the following activities:

- > reviewing evidence from research and other jurisdictional activities for learnings
- > collating lessons learned from across the health system
- > engaging key stakeholders
- > identifying vulnerable populations and reviewing evidence and content for these areas
- > integrating evidence and lessons learned into final version.

Preparedness

SA Health asks all health areas and their staff to be mindful of the impact that heat can have on people, service operations and delivery, and service logistics.

The principles of the preparedness phase include:

- > Review operational plans
- > Preparation of community messages and organisational strategies
- > Liaison with other agencies and stakeholders
- > Workforce education
- > Gather intelligence.

LHNs, SAAS and Health Services should develop and/or review their plans contextualised to their service's operational function and capacity that covers seasonal preparedness, and actions to be taken if extreme heat or a heatwave is forecast.

Good preparation is essential to ensure a safe and appropriate response. For information about preparation, please view the specific appendices listed below:

Appendix 2 – [People at risk in heatwaves](#)

Appendix 3 – [Heat-related illness signs, symptoms, and treatment](#)

Appendix 4 – [Guidance for Local Health Networks](#)

Appendix 5 – [Guidance for Primary Health and Community Care Services](#)

Appendix 6 – [Guidance for Mental Health Services](#)

Appendix 7 – [Guidance for Aged Care Services](#)

Appendix 8 – [Guidance for General Practice](#)

Appendix 9 – [Heatwave preparedness checklist for the community](#)

DMB preparedness activities

During the lead up to the summer season, DMB will:

- > Review DMB operational heat action plans/procedures
- > Prepare for and maintain readiness for any anticipated event
- > Revise and update as required:
 - the 'Healthy in the Heat' booklet, and corresponding webpages (in consultation with Corporate Communications Branch)

- Topic-specific fact sheets
- > Arrange distribution of the booklet 'Healthy in the Heat' to government and non-government agencies/organisations and community groups, as per requests received
- > Develop other topic-specific fact sheets according to need
- > Present at and participate in seasonal preparedness workshops coordinated by LHNs, Primary Health Care Networks (PHNs), state emergency services, health related peak bodies, and local government as subject matter experts

LHN-based preparedness activities

During the lead up to the summer season, LHNs should review and/or exercise their emergency/heat plans, undertake seasonal preparedness workshops within their LHNs and undertake any other relevant activities in preparation for an anticipated heatwave event.

Further other guidance, please see [Appendix 4 – Guidance for Local Health Networks.](#)

SA government extreme heat communications plan

A South Australian Government Heatwave Communications Plan has been developed by the SASES as the Hazard Risk Reduction Leader and Control Agency for extreme weather in South Australia. The Plan has been developed to ensure the SA Government is able to effectively respond to heatwave events.

Particular emphasis has been placed on developing strong and consistent key messages across all Functional Support Groups.

SA Health Extreme Heat Communication Plan

The SA Health Extreme Heat Communication Plan (Health in the Heat) supports SA Health's preparedness and response by providing heat health advice to the community on mitigating actions to reduce the impact of potential heat risks.

Promotion in the media will increase awareness of the availability of information and of the importance of looking after self and others during periods of hot weather and extreme heat.

The public health communication objectives of the SA Health Extreme Heat Communication Plan are to:

- > Educate the public about the signs of heat-related illness, what to do if they or someone they know is affected, and how to keep themselves, family, and friends safe during hot weather.
- > Reduce the flow-on demand on hospitals and health services by encouraging people to take measures to prepare, protect themselves and recover from a heatwave.
- > Encourage SA Health staff to protect themselves from the effects of prolonged heat so staffing in hospitals and health services is not adversely affected.
- > Support stakeholders, including General Practitioners (GPs) and community services, so they can engage and communicate with at-risk communities and the broader public about ways to stay healthy in the heat.

Communication objectives during extreme heat are:

- > Raise public awareness about the dangers of heatwaves and the serious effects it can have on the health of individuals.
- > Prepare the South Australian public for a heatwave by providing information about how they can protect themselves and their families and friends, and what to do if they experience a health emergency during a heatwave.
- > To enable SA Health to meet its obligations in supporting the SASES as the Hazard Risk Reduction Leader and Control Agency for extreme weather and hence extreme heat. This includes supporting the SASES Extreme Heat Communications Plan.

SA Health Healthy in the Heat booklets and fact sheets

A comprehensive printed guide *Healthy in the Heat* has been produced by DMB as a SA Health publication for the general public.

It is available as a booklet or can be downloaded from the [SA Health website](#)

Hard copies of the booklet can be ordered by contacting DMB by emailing Health.DisasterManagementBranch@sa.gov.au.

SA Health heat related fact sheets (including translated information)

Additional information has been developed in the form of fact sheets focusing on specific heat topics, or for specific audiences, such as 'pregnancy and hot weather' or 'exercise and hot weather'. The fact sheets are available for download from the [SA Health website](#) and include translated factsheets in 20 different languages to cater for the culturally and linguistically diverse (CALD) communities.

Response

As identified earlier, the response phase has three components – Standby, Action and Stand down, which can occur in series, or change back and forth, depending upon the incident.

Good preparedness is essential to ensure a safe and appropriate response. For information about response actions, please view the specific appendices listed below:

Appendix 4 – [Guidance for Local Health Networks](#)

Appendix 5 – [Guidance for Primary Health and Community Care Services](#)

Appendix 6 – [Guidance for Mental Health Services](#)

Appendix 7 – [Guidance for Aged Care Services](#)

Appendix 8 – [Guidance for General Practice](#)

SA Health – DHW and State Arrangements

When any Severe Heatwave – Watch and Act warning and/or Extreme Heatwave - Emergency Warning has been issued, regardless of region, then heightened situational awareness and ongoing intelligence is gathered by the DMB.

DMB will attend the State Emergency Centre (SEC) as required and liaise with the Control Agency for Heat (SASES).

Understanding and reporting heat impacts to the health system

Heat or heatwave is not routinely flagged in patient medical records and is typically identified through retrospective case-matching or coroner's determination (Franklin et al, 2023). Similarly, heat is not captured in medical records in the days following a heatwave, although it may be a contributing factor to some cardiovascular, renal, and respiratory admissions.

Research (Williams et al, 2018) shows that a reliable and consistent indicator in the surveillance of heatwave impacts to the health system is ambulance call outs. This is because not all call outs result in a hospital admission, so call out data gives a more accurate and consistent picture of "emergency health service utilisation across all regions" including both in the community (call out but no transportation) and in the health system (if the person is taken to hospital).

SA Ambulance Service provides out of hospital demand data, including changes in call demand and transport to hospital (if an entry is made into the SACAD request for ambulance services) to the SASES, as part of their reporting actions as the Ambulance Services Functional Support Group during heatwave events. This data is captured routinely during the daylight savings period (1 October – 7 April) annually but could be extended if heat/heatwaves occur outside this time.

Temperature and triggers for alert levels

See also Appendix 2 – [People at risk in heatwaves](#)

The [Bureau of Meteorology](#) is the Commonwealth government agency responsible for the provision of weather forecasting and climate data across Australia, including South Australia.

The method for determining a heatwave is based on a calculation developed by the Bureau of Meteorology, Adelaide University, SASES and SA Health that measures the excess heat (excess heat factor (EHF)) for a specific area and relates it to the potential community impact of the heat.

EHF is calculated based on average daily temperatures over three consecutive days. This is measured in relation to the local long-term climate (by comparing the three days to a climatological threshold for that particular location) and to the local recent past (by comparing the three days to observed temperatures over the previous thirty days at that particular location).

Using EHF, the heat advice is made relevant to an area experiencing heat that exceeds the norm for that location. To enable systematic communication of the likely impact of a particular heat event in a particular location, the EHF is categorised into one of three warnings; low intensity, severe or extreme as outlined in the table below. The locations or areas are based on the Bureau of Meteorology forecast districts.

Heatwave type	Warning	EHF Severity	Impact
Low intensity heatwave	Advice	0-1	These heatwaves are most common. Most people are expected to cope with this level of heat.
Severe heatwave	Watch and Act	>1<3	These heatwaves are less frequent, and are challenging to vulnerable people, particularly those with pre-existing medical conditions
Extreme heatwave	Emergency Warning	>3	These heatwaves are rare but are dangerous for anyone who does not take precautions to keep cool, even those who are healthy. They also affect the reliability of infrastructure, such as power and transport.

The Bureau of Meteorology posts forecasts of heatwaves up to three days ahead on their website during the heatwave season – see: [Heatwave Service for Australia](#). (link accessed June 2023)

In addition to the above, SASES is provided with heatwave forecast products from the Bureau of Meteorology, who uses these to issue heatwave advice for regional forecast districts. The format of this information provided by the Bureau of Meteorology is shown below.

	A	B	C	D	E	F	G	H
1	District	20230219	20230220	20230221	20230222	20230223	20230224	20230225
2	Adelaide Metropolitan	Low Intensity	Low Intensity	Severe	Severe	Low Intensity		
3	Eastern Eyre Peninsula	Low Intensity	Severe	Severe	Severe	Low Intensity		
4	Flinders	Low Intensity	Severe	Severe	Severe			
5	Kangaroo Island	Low Intensity	Low Intensity	Severe	Severe	Low Intensity		
6	Lower Eyre Peninsula	Low Intensity	Severe	Extreme	Severe	Low Intensity		
7	Lower South East		Low Intensity	Severe	Severe	Low Intensity		
8	Mid North	Low Intensity	Severe	Severe	Severe	Low Intensity		
9	Mount Lofty Ranges		Low Intensity	Severe	Severe	Low Intensity		
10	Murraylands		Low Intensity	Severe	Severe	Low Intensity		
11	North East Pastoral	Low Intensity	Low Intensity	Low Intensity	Low Intensity	Low Intensity		
12	North West Pastoral	Severe	Severe	Severe	Low Intensity			
13	Riverland		Low Intensity	Low Intensity	Severe	Low Intensity		
14	Upper South East		Low Intensity	Severe	Severe	Low Intensity		
15	West Coast	Severe	Severe	Severe	Severe			
16	Yorke Peninsula	Low Intensity	Severe	Severe	Severe	Low Intensity		
17								
18								

SASES will issue a State Heatwave Summary when there is a heatwave forecast in any district across the state ahead of the next day (approx. 4:30pm).

This summary is communicated to SA Health via an email to the SA Health Heatwave email distribution list (DL:Health heatwave) ,in addition to other key stakeholder agencies.

An example of the State Heatwave Summary is provided below.



STATE HEATWAVE SUMMARY

Heatwave conditions have been forecast by the Bureau of Meteorology for the following locations on **Wednesday, 22 February 2023**.

Forecast District	Heatwave Forecast
Adelaide Metropolitan	Low Intensity
Eastern Eyre Peninsula	Severe
Flinders	Severe
Kangaroo Island	Low Intensity
Lower Eyre Peninsula	Severe
Lower South East	Low Intensity
Mid North	Severe
Mount Lofty Ranges	Low Intensity
Murraylands	Low Intensity
North East Pastoral	Low Intensity
North West Pastoral	Severe
Riverland	Low Intensity
Upper South East	Low Intensity
West Coast	Severe
Yorke Peninsula	Severe

The State Emergency Service recommends you take action now to make sure that you and your family stay safe.

About Heatwaves

Low-intensity Heatwaves are common in South Australia during summer and most people are able to cope well, but the very young, elderly or those with medical conditions should take care.

Severe Heatwaves are less frequent and are especially challenging for babies and young children, the elderly, pregnant women and those who are already unwell, but even healthy people should take care. The SES will issue a separate Watch and Act message for each area in which a Severe Heatwave is forecast.

Extreme Heatwaves are rare, but are dangerous for anyone who does not take precautions to keep cool, even those who are fit and healthy. People who work or exercise outdoors are particularly at risk. The reliability of infrastructure, like power and transport, can also be affected. The SES will issue a separate Emergency Warning message for each area in which an Extreme Heatwave is forecast.

This message was issued by the **State Emergency Service**.

Advice Messages and Warnings

The SASES will supplement the issue of the *State Heatwave Summary* with tailored advice messages and warnings to affected communities (districts) during the period of the heatwave.

For example, during a heatwave where the intensity is *Severe* in one district, the SASES will issue a warning for that particular district. This warning is aligned to the standardised Australian Warnings Systems (AWS) and includes public information and calls to action to prepare for and manage response to heat, and heat impacts during that period. An example of the standardised AWS warnings for heatwave and an example of SASES warnings are provided below.



Heatwave – Advice - (Yellow)

A heatwave has started. There is no immediate danger. Stay up to date in case the situation changes.



Heatwave - Watch and Act - (Orange)

There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family.



Heatwave - Emergency Warning - (Red)

An Emergency Warning is the highest level of heatwave warning. You may be in danger and need to take action immediately. Any delay now puts your life at risk.



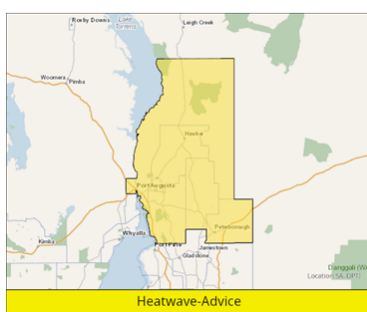
LOW-INTENSITY HEATWAVE ADVICE

This Heatwave Advice message is issued for the Flinders forecast District.

A heatwave is more than just hot weather. When it is hot during the day and it does not cool down at night, it is hard for your body to cool itself. Whilst most people will cope with a low-intensity heatwave, babies, and young children, the elderly, pregnant women and people who are already unwell are at increased risk and can become ill. The forecast is for this heatwave to get worse in the next few days. Take action now to make sure you and your family stay well during this heatwave event.

What you should do:

- The very young, older people and those who are already unwell are most at risk - check on them regularly.
- Never leave children, or pets, alone in a car and make sure your pets and animals have shade and water too.
- Keep cool and drink plenty of water, even if you are not feeling thirsty.
- Cool your home as much as possible: turn fans and air-conditioners on early in the day to stop the heat from building up.
- With even hotter weather on the way, plan now for how you will manage: make sure you have enough food, water, medications and pet food so you will not need to go out in the heat.



This message was issued by the State Emergency Service.



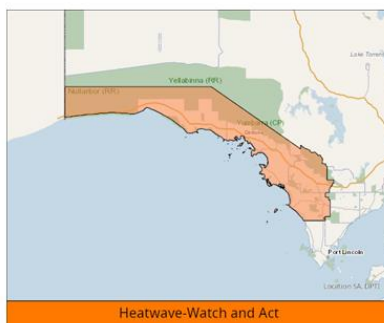
SEVERE HEATWAVE WATCH AND ACT

This Heatwave Watch and Act message is issued for the West Coast forecast district

A heatwave is more than just hot weather. When it is very hot during the day and it does not cool down at night, it is hard for your body to cool itself. Babies, and young children, the elderly, pregnant women and people who are already unwell are especially at risk in a severe heatwave, but even healthy people should take care. Take action to make sure you and your family stay well during this heatwave event.

What you should do:

- Keep cool by staying indoors as much as possible and turn fans and air-conditioners on early in the day to stop the heat from building up in your home.
- Make sure you are drinking plenty of water, even if you do not feel thirsty. Carry a water bottle with you if you go out.
- Never leave children, or pets, alone in a car.
- The very young, older people and those who are already unwell are most at risk - check on them regularly.
- Make sure your pets and animals have shade and water too.



This message was issued by the State Emergency Service.



EXTREME HEATWAVE EMERGENCY WARNING

This Heatwave Emergency Warning message is issued for the Lower Eyre Peninsula forecast district

An Extreme Heatwave is very dangerous. When we experience unusually high night and daytime temperatures, over several days, there is no chance for your body to recover. This is dangerous for anyone who does not take precautions to keep cool—even those who are healthy. People who work or exercise outdoors are particularly at risk. The reliability of infrastructure, like power and transport, can also be affected. Take action now to make sure you and your family stay well during this heatwave event.

What you should do:

- Staying indoors is the coolest option. If you want to exercise, scale back your routine or restrict your activities to early morning or in the evening when it is cooler.
- It is important to drink plenty of water, but if you are taking any prescribed medicines, check with your doctor for any additional advice.
- Do you use public transport? Plan ahead to avoid travelling in the heat if at all possible, keep to shaded areas while waiting for buses, trains or trams, drink plenty of water and give consideration to vulnerable passengers including the elderly.
- Hot weather places significant demand on the electricity system, because of both higher demand and its effect on generators and transmission lines. Be prepared for outages by keeping your mobile phone charged and make sure you have some ice, a torch and a battery powered radio for emergency information.
- Children love to cool down in a sprinkler, but check the temperature of the water when you turn it on, as water from hoses left out in the sun can be dangerously hot.



This message was issued by the State Emergency Service.

Source: SASES warnings issued in February 2023

Media and Communications

In the days leading up to the heatwave, social media posts and pro-active media opportunities aimed to increase awareness of the availability of information and of the importance of looking after self and others during periods of extreme heat.

During heatwave event SA Health Corporate Communications staff will liaise with SASES and SAAS communications teams to ensure consistency of message and information across government agencies.

SA Health will promulgate the Control Agency messaging and alerts through the SA Health social media pages.

SA Health may be called upon to provide heat health information in a Press Release or attend a press conference together with SASES.

Other Public Awareness

The South Australian Government's across-government messaging service may also release an all-government email to provide information to all SA Government employees regarding key messages and warnings throughout the hot season.

OFFICIAL

Notification

for South Australian public sector employees

Extreme heatwave warning for South Australia

The SA State Emergency Service (SASES) has issued an extreme heatwave emergency warning for parts of South Australia.

You should pay attention to the warnings for where you live, work and travel. For information about areas most affected, visit www.ses.sa.gov.au

Be vigilant and take extra care of yourself and others during the expected extreme conditions.

Help yourself

- Drink plenty of water, wear loose and light clothing, and use your air conditioning and fans.
- Plan ahead and avoid any non-essential activities during the hottest part of the day (including travel), whether for work or for personal reasons.
- Contact your GP or visit www.healthdirect.gov.au if you are feeling unwell. For immediate medical attention, phone 000.

Help others

- Check on family, neighbours and others at risk from the heat (pregnant women, babies and young children, frail persons, anyone with health issues).
- Ensure your agency and colleagues implement appropriate work safe practices to protect from the heat.
- Keep an eye out for any heat-affected and at-risk members of the community to offer them a seat, shade, a cool drink, or help to obtain medical attention if needed.
- Welcome members of the public into government building foyers and offer them access to relevant facilities, where practical.
- Register at-risk people for the Red Cross Telecross REDi service (who check on them during heatwaves) by phoning 1800 188 071.
- Keep an eye out for animals affected by heat. If you are concerned, contact your vet or call the RSPCA on 1300 477 722.

For more information about what to do before, during and after a heatwave, please visit the [SASES website](http://www.sases.sa.gov.au).

For more weather information, please visit the [Bureau of Meteorology \(BOM\)](http://www.bom.gov.au).

Other organisations, such as local government and non-government organisations can monitor heatwave warnings and social media messaging through visiting the [SASES website](http://www.sases.sa.gov.au).

SA Ambulance Service

SAAS have a Heatwave Event Procedure that outlines heatwave identification and notification arrangements in South Australia, assists SAAS planning to meet predictable increased demand for ambulance services, and safeguards the health of SAAS staff by making them aware of forecast / current heat conditions and required actions.

SAAS response to heatwave events is based on planning, being well prepared and monitoring activities based around potential impacts upon the community, increased demand for ambulance services, staff safety and potential infrastructure impacts.

SAAS provides as much information as possible supported by checklists of required actions BEFORE Heatwave and DURING Heatwave. These include Command, Incident Management Team (IMT) and Business Continuity actions during Heatwave WARNINGS.

The Heatwave Event procedure ensures SAAS are prepared and can:

- > Support community messages and strategies
- > Maximise the use and effectiveness of staff, vehicles, and equipment
- > Support enhanced crew welfare and support; and
- > Reduce non-essential patient transport.

The SAAS level of response during heatwaves will be determined by advice from the Bureau of Meteorology and SASES, and demand for ambulance services at the time.

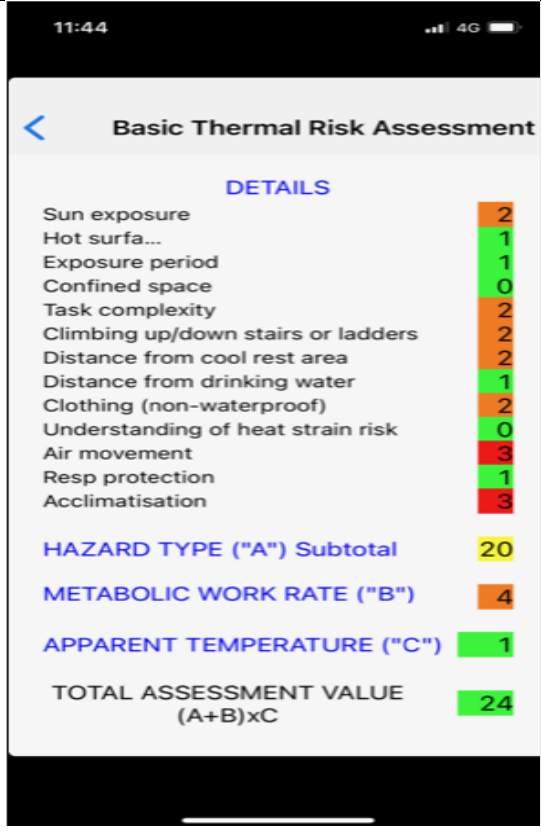

SAAS is also committed to providing and maintaining a safe and healthy work environment by actively mitigating risks associated with working in conditions where heat is a contributing factor.

A SAAS Working in Heat Conditions Procedure is currently being implemented to provide systems, processes, and tools to reduce the risk to staff health to as low as is reasonably practicable. This includes a self-assessment process using the Thermal Self-Assessment Tools (TSAT) to enable staff to assess their level of heat related risk at any point in time.

The TSAT is an app designed to identify relevant signs and symptoms of heat-related illness taking into consideration Hazard Type, Metabolic Work Rate and Apparent Temperature.

The TSAT can be used any time individuals are concerned about their pre-shift or ongoing fitness for duty as a result of heat related factors, to determine the most appropriate risk treatments, at individual and operational levels.

Example of the App

TSAT Example	
LOW Level Risk results using TSAT	LOW Risk Category
	

SA Health Local Health Networks (LHNs)

LHNs need to ensure that they have satisfactory plans, processes and arrangements in place that consider responsibility and risks during extreme heat or heatwave events to safeguard continued quality service delivery.

LHN plans need to consider (but are not limited to) the following:

- > Developing plans, processes and responses that ensure:
 - the wellbeing of their patients, especially their most vulnerable clients
 - potential surge in workload, including workforce capacity and wellbeing
 - potential and/or actual loss of essential services or infrastructure (due to increase temperature or potential power outages)
- > Alerting and notification to key personnel of Heatwave Watch and Act and/or Emergency Warnings
- > Pre-determined key actions for both a Heatwave Watch and Act as well as an Emergency Warning event
- > Manage requests for relevant capacity and capability from State Command in a timely manner
- > Potential and/or actual reduction in service delivery (clinical and/or non-clinical) to ensure that a degree of capability and capacity is maintained both within a site and also across their Network.

LHNs are to advise State Commander Health (via established disaster escalation protocols) of any significant, noteworthy heat related events or occurrences that cause either: an acute surge in workload (ie. mass gatherings / sporting events influx to an Emergency Department, etc) or where an unplanned loss of service delivery occurs (loss of essential services / accommodation / air-conditioning or infrastructure). This information will be useful as part of situational awareness and inform capacity and capability reporting to the SES, as the Control Agency for Heat under state arrangements.

For further guidance see Appendix 4 – [Guidance for Local Health Networks](#)

Rural and Remote Aboriginal Community Controlled Health Services (ACCHOs)

Aboriginal Community Controlled Health Services (ACCHOs) are responsible for the operational processes and clinical care in their clinics, including during times of extreme heat and heatwaves. They are supported by the Aboriginal Health Council of South Australia Limited (AHCSA) as the peak body representing Aboriginal community-controlled health and substance misuse services in South Australia at state and national levels.

Further information includes:

- > Aboriginal Health Council of SA (AHCSA) - <https://ahcsa.org.au/>
- > **Nganampa Health Council** - <https://www.nganampahealth.com.au/>
- > See also Appendix 5 – [Guidance for Community Care Services](#)

Cultural considerations

During times of extreme heat and heatwaves, it is recognised that developing effective and culturally sensitive messaging or accessing culturally appropriate services is key to ensuring that all people in South Australia are prepared to respond to the public health threats related to heat.

For example, when public health messaging urges the community to drink more and use fans/air conditioners to remain cool, it is important to acknowledge that in some regional areas, including the unincorporated areas of South Australia managed by the Outback Communities Authority, water, and energy security, as well as suitable social housing that supports keeping cool will need to be reviewed and improved.

In addition, effective communication of public health information to culturally, ethnically, and linguistically diverse (CALD) communities requires providing it in a language they understand; at a level they comprehend, and from a source they trust. Hence SA Health [Heat Factsheets and Translated Factsheets](#) are provided in a number of languages. In addition, SA Health provides the following state-wide health service specifically for newly arrived refugees and asylum seekers.

- > **Refugee Health Service (RHS)** - <https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/services/health+services+for/refugee+health+service>

Department for Human Services, including Disability

The Department for Human Services (DHS) has a broad mandate to work with those who, through circumstance, may have limited resources, be isolated, vulnerable, or at risk of harm and to connect them to choices and opportunities. DHS has an Extreme Heat Plan, the purpose of which is to reduce the risk of harmful effects of extreme heat on vulnerable DHS clients.

DHS provides its vulnerable clients with SA Health information on managing health in extreme heat as well as partnering with the Australian Red Cross to provide the Telecross REDi (SA) service, that supports at-risk and isolated people by calling them daily during declared heatwaves. People in the community who are at risk during extreme heat events and require phone support during these periods are encouraged to register for the service by calling 1800 188 071 or emailing telecrossredi@redcross.org.au.

DHS ensures Disability Services staff are provided with up-to-date advice on State Emergency Services (SES) alerts and sun and heat safe practices when providing care and support to South Australians with disabilities. Communication with frontline staff focuses on prevention of heat-related illness through staying informed, keeping hydrated, and avoiding non-essential activities during the hottest part of the day.

SA Housing Authority

The SA Housing Authority activates a Code Red in response to extreme weather (Heatwave) to reduce the harmful effects on people rough sleeping by:

- > connecting them with support services
- > providing additional services including extended operating hours for services, increased shelter options, additional food services, sunscreen etc.

SA Housing Authority coordinates Code Red extreme weather responses across South Australia in partnership with other service providers. When a Code Red or Code Blue response is activated, homelessness services will visit known rough sleeper locations to make people aware of the supports available to them.

Aged Care

Aged Care service providers play an integral role in taking steps to prepare their sites, staff, and care recipients for heatwave conditions. Care recipients, including those receiving care in their own home or in a residential care home are potentially vulnerable to heat-related illness and service providers should have procedures in place to minimise any avoidable adverse health effects and manage any possible disruption to essential services, such as power and water.

For further guidance – Appendix 7 – [Guidance for Aged Care Services](#)

Consideration for people using mental health services

Information in this section is in accordance with established Mental Health Clinical Program policy, including the CALHN Extreme Heat Management for Mental Health Consumers Procedure.

Vulnerability to heat stress and heat exhaustion in extreme heat conditions is more likely when there is a diagnosis of mental illness. As such a lower activation threshold is attributed to people registered to mental health services. Vulnerability may be exacerbated by:

- > Medication prescribed for mental and physical illness,
- > Other co-morbidities, and
- > Living/environmental conditions.

The principles outlined support people accessing SA Health Mental Health Services receive a heat vulnerability assessment and information on how to manage in extreme heat. In addition, if a person is assessed as vulnerable, they will receive increased monitoring during an extreme heat event to reduce the risk of harmful effects of extreme heat. Activation of monitoring, for mental health services will begin on day three of a low intensity heatwave, lasting five days or more, and on day one of a severe or extreme heatwave lasting three days or more.

Each LHN is responsible for ensuring that arrangements to support people accessing mental health services are developed and that they are in alignment with and supportive of this document.

Mental Health teams within all LHNs have a sound understanding of people experiencing mental health distress and a key part of the initial assessment and ongoing clinical relationship is to ensure that the person and any relevant risk factors are known and understood by the respective clinical teams.

It is agreed and acknowledged that the following principles accurately reflect the key operational strategies for mental health teams during extreme heat events:

- > Mental Health executive staff in LHNs will receive notification via the Heatwave distribution list (DL) notification process
- > Heatwave Watch and Act Warning - event actions are determined by the LHN extreme heat plan including the determination to stand down an activation, if required.
- > Heatwave Emergency Warning - event actions are determined by the LHN extreme heat plan and State Command will advise when a reduced threat has been issued by SASES.
- > The welfare of people accessing mental health services is of priority and the LHN mental health clinicians / teams will ensure that ongoing, dynamic assessments are undertaken in relation to people and their welfare during extreme heat events.

To support the above, people registered to mental health services will have a heat vulnerability assessment conducted by Mental Health Services staff using the Heat Vulnerability Assessment Tool (HVAT) on CBIS/CCCME. If assessed as vulnerable, then a heat vulnerability alert must be registered on CBIS/CCCME. All people registered to mental health services will also be provided with a written information package on managing health during extreme heat events.

It is the mental health services responsibility to ensure identified vulnerable people are contacted during an extreme heat activation. If a person accessing mental health services is assessed as vulnerable and requires contact, mental health staff will register the person within local structures to ensure that they are contacted.

A Mental Health Service Clinician Heatwave Checklist is included for information purposes see [Appendix 6](#).

Recovery

SA Health recovery strategies

LHNs are to ensure that recovery strategies are considered and documented in their respective Extreme Heat Plans.

Considerations may include (but are not limited to):

- > ensuring that infrastructure is inspected, maintained, and repaired post extreme heat event use
- > restoring reduced / altered service delivery strategies
- > welfare assessments to relevant clients and staff to ensure post event recovery.

Recovery - Disaster Management Branch

- > Advise of a reduced threat any of Heatwave Watch and Act and/or Emergency Warning period
- > Maintain a heightened situational awareness of event recovery impacts and consequences across SA Health, in conjunction with internal and external stakeholders
- > Coordinate an SA Health debrief of the incident including all relevant SA Health stakeholders once the extreme heat event has concluded to discuss how they dealt with it, what went well, and what could be improved.

Security, Emergency and Recovery Management Team (DPC)

The Security, Emergency and Recovery Management Team is a unit within the Department for Premier and Cabinet that works across government and non-government sectors increasing the State's disaster recovery capacity.

As the Control Agency for extreme weather response, SASES has responsibility for ensuring that there is a seamless transition from response to recovery and for liaising with the State Coordinator and State Recovery Coordinator to facilitate this transition.

SA Health will participate in any State Recovery meetings, as required.

Appendix 1 Workgroup members and References

SAH Extreme Heat Strategy Workgroup Members

Member	Health area
Vicki Sellick, Climate Adaptation, Intel & Prevention Manager (Chair)	Disaster Management Branch, Public Health Division, DHW
Lisa Wilton, Advanced Nurse Consultant, Mental Health GP Shared Care	Office of the Chief Psychiatrist, DHW
Janette Stephens, Operations Manager, Emergency Mgt Planning	SA Ambulance Service
Darren Daff, Nursing Director, Partnerships and Design	State Health Control Centre / SA Virtual Care Service
Christina Retsas, Operations Planning Officer, Emergency Management and Hazard Planning (member until July 2023) Molly Gifford, State Planning Officer	SA State Emergency Service (SES)
David Simon, Director Scientific Services	Health Protection and Regulation, Public Health Division, DHW
Bek Huppatz, Manager, Marketing Communications	Corporate Communications, DHW
Kerri Reilly, Manager	Aboriginal Health Division, System Strategy and Governance, DHW
Blesson Varghese, Senior Project Officer, Injury Surveillance & Prevention, Epidemiology Branch	Prevention and Population Health Directorate, Wellbeing SA
Louise Wadsworth, Acting Advanced Nurse Manager Strategic Projects	Rural Support Services, SA Health (located in Barossa Hill Fleurieu LHN)
Greg Kemp, Disaster Resilience and Corporate Risk Coordinator	Riverland Mallee Coorong Local Health Network (RMCLHN)
Monique Anninos, Nursing Director Access and Flow	Women's and Children's Health Network (WCHN)
Kathy Williams, Manager Ageing Policy and Projects	Office for Ageing Well
Kimberly Humphrey, Public Health Medical Consultant (from late August 2023)	Public Health Division, DHW

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Appendix 2 – People at risk in heatwaves

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

Any individual, regardless of age, sex, or health status, can develop heat stress if engaged in intense physical activity and/or exposed to environmental heat.

Anyone can suffer from heat-related illness, but those most at risk are:

- > people who are dehydrated, including fit healthy people
- > older people, particularly those living alone and with pre-existing health conditions, those living without air conditioning; and/or unwilling to use their air conditioners due to cost of electricity
- > infants and young children
- > pregnant women
- > people who are breastfeeding
- > people with certain health conditions, particularly mental illness, heart disease, kidney disease, diabetes and hypertension
- > people with conditions that impair sweating including cystic fibrosis, skin disorders, scleroderma, congenital impairment of sweating
- > people of all ages who are undertaking extended or heavy physical activity, like playing sports, or working outdoors or in hot environments
- > those taking certain medications that as a side effect impairs their body's ability to control body temperature.

Advice from [Victoria Department of Health](#) includes:

Mechanisms for medication increasing the risk of heat-related illness

Mechanisms	Drug class or sub-class	Examples
Reduced vasodilation	Beta-blockers	Atenolol, metoprolol, propranolol
	Triptans	Sumatriptan, zolmitriptan
Decreased sweating	Anticholinergics	Tricyclic antidepressants
		Amitriptyline, clomipramine, dothiepin
		Sedating antihistamines
		Promethazine, doxylamine, diphenhydramine
		Phenothiazines
		Chlorpromazine, thioridazine, prochlorperazine
	Beta-blockers	Other anticholinergics
		Benztrapine, hyoscine, clozapine, olanzapine, quetiapine, oxybutynin, solifenacin
Increased heat production	Beta-blockers	Atenolol, metoprolol, propranolol
	Antipsychotic drugs	Clozapine, olanzapine, quetiapine, risperidone
Decreased thirst	Stimulants	Amphetamines, cocaine, thyroxine
	Antipsychotics	Haloperidol, droperidol
Dehydration	Angiotensin-converting enzyme (ACE) inhibitors	Enalapril, perindopril, ramipril
	Alcohol	
	Diuretics	Furosemide, hydrochlorothiazide, acetazolamide, aldosterone
Aggravation of heat illness by worsening hypotension in vulnerable patients	Stimulant laxatives	Senna extract, bisacodyl
	All antihypertensives, particularly vasodilators (nitrates, calcium channel blockers)	
	Nitrates	GTN, isosorbide monnitrate
Increased toxicity for drugs with a narrow therapeutic index in dehydration	Calcium channel blockers	Amlodipine, felodipine, nifedipine
	Various	Digoxin, immunosuppressants, lithium, metformin, warfarin

Factors that contribute to heat-related illness:

- > Older people (especially those living alone) may be more susceptible to heat-related illness than younger people because their body may not adjust well to sudden or prolonged temperature change. They may be more likely to have a chronic medical condition and be taking medication that may interfere with the body's ability to regulate temperature.
- > The presence of frailty, limited mobility without aid, or conditions like dementia or mental illness can also impact capacity to safely self-manage in hot weather.
- > Dehydration – to keep healthy, the body temperature needs to stay around 37°C. The body cools itself by sweating, which normally accounts for 70 to 80% of the body's heat loss. Dehydration results in a reduced ability to sweat and a resultant rise in body temperature. Dehydration may occur through inadequate fluid intake, impaired thirst mechanism, be as a result of exercise (especially in hot weather), severe diarrhoea or vomiting, drinking alcohol, and taking certain medications (for example, diuretics).
- > Some medications can increase the risk of heat-related illness. The [SA Health Choice and Medication](#) site contains further information on some of these medications and further advice can be obtained from prescribing doctor or pharmacist.

Some medications may be rendered less effective or more toxic when exposed to extreme heat or sunlight and therefore their storage is important. This information may be contained on the packaging and additional information provided by a pharmacist.

Potential for direct heat related injuries

- > Severe burn injuries can result from contact with hot surfaces including footpaths, roads, metal structures etc. There is some evidence to show both intended and unintended injury rates at a population level rise with extreme heat. Australian studies including falls, wounds, lacerations, and amputations along with burns increase during high temperatures and extreme heat.
- > People who rely on a wheelchair, walker, or any metal equipment should ensure it is sheltered from direct sunlight because it can rapidly heat up, posing a risk of burns upon contact.
- > Occupational injury rates can be negatively affected by extreme heat due to fatigue, loss of concentration, or reduced cognitive function and fine motor skills, or altered behaviour, interacting with existing physical hazards in the workplace, example, fall from ladders due to dizziness.
- > There is some evidence that presentations for musculoskeletal sport-related injuries may decrease in extreme-heat, due to implementation of risk management strategies, resulting in cancellations or shortened playing times.

Acute, chronic, and severe illness

Increased vulnerability resulting from acute, chronic, and severe illness may affect people:

- > with a high temperature from an existing infection
- > with heart or breathing problems, diabetes, respiratory or renal insufficiency, serious mental illness, or who are above a healthy weight
- > taking certain types of medications that can make them more vulnerable to the heat
- > who use medical equipment (eg. ventilators, oxygen, gastric tubes)
- > individuals with problematic alcohol or other drug use, such as amphetamines

Inability to keep cool

The body's ability to thermo-regulate is critical during periods of extreme heat. The following are examples of people who may be at increased risk due to their body's inability to keep cool:

- > infants and children under five years
- > anyone confined to bed

- > people with Dementia or Alzheimer's.
- > people with neurodivergence eg. Autism Spectrum Disorder; Attention Deficit Hyperactivity Disorder

Disability

People living with a disability are at an increased risk during extreme heat, such as those:

- > who are non-ambulatory (unable to walk)
- > with physical/intellectual disabilities that impair their capacity to self-manage
- > with sensory impairments (blind/visually impaired or deaf/hard of hearing)
- > with cognitive disorders
- > with mobility issues

Environmental factors (including working in the heat)

Environmental factors that may contribute to increase impact of extreme heat/heatwave include:

- > wearing inappropriate clothing
- > being outdoors during the hottest part of the day (usually in mid or late afternoon)
- > engaging in activities in places with no cooling, or outdoors, and which includes high levels of physical exertion (eg. gardeners or labourers)
- > working conditions, such as air temperature, air flow, humidity, radiant heat sources, work requirements and the workplace itself
- > living in a confined space with no ventilation
- > those who may live on their own, are socially and/or geographically isolated
- > crowded living conditions
- > living on the top floor of a house or apartment building.

Social factors

- > pregnancy
- > individuals with substance misuse issues
- > people who are socially and economically disadvantaged
- > people experiencing homelessness
- > people who live alone or who are socially isolated
- > people who are unable to readily access health-related information and advice

In addition, please read: [Information for health professionals](#) produced by NSW Health

Appendix 3 – Heat-related illness signs, symptoms, and treatment

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

In very hot weather, you can get burnt from contact with the hot ground in seconds. If someone has collapsed outdoors, try to place something between them and the hot ground (like a towel or blanket) to prevent burns, or if safe to do so, move them into the shade or onto the grass.

KNOW THE SIGNS HEAT EXHAUSTION

- Headaches
- Nausea and vomiting
- Fatigue, weakness and restlessness
- Thirsty
- Anxiety
- Poor coordination
- Weak, rapid pulse
- Sweating heavily
- Raised body temperature



WHAT TO DO


- Lie down in shade or air-conditioning
- Drink plenty of water
- Keep cool with a cold compress, shower or bath

sahealth.sa.gov.au/healthyintheheat

Government of South Australia
SA Health

KNOW THE SIGNS HEAT STROKE

- Headaches
- Nausea and vomiting
- Rapid pulse
- Extremely thirsty
- Dry, swollen tongue
- Disoriented, dizzy or delirious, slurred speech
- Body temperature more than 40°C
- Convulsions, seizures or coma
- May be sweating; skin may feel deceptively cool




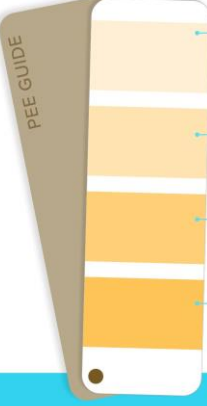
WHAT TO DO

- Call 000 immediately**
- Reduce temperature until ambulance arrives

sahealth.sa.gov.au/healthyintheheat

Government of South Australia
SA Health

healthy hydration IN THE HEAT

HYDRATED
You are drinking enough water – keep drinking water at the same rate

SOMEWHAT DEHYDRATED
Drink a large glass of water now

DEHYDRATED
Drink 2 to 3 glasses of water now

VERY DEHYDRATED
Drink a large bottle of water straight away

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HEALTHY IN THE HEAT

sahealth.sa.gov.au/healthyintheheat

- Drink water
- Stay cool with a fan or air conditioner
- Avoid going out in the heat
- Seek shade
- Hot cars can be deadly
- Cool off with a shower or bath
- Look out for family and friends
- Wear lightweight, long sleeved, light coloured, loose fitting clothes outside

Illness	Symptoms	Treatment
Dehydration	<p>Profuse sweating</p> <p>Increase in body temperature</p> <p>Lethargy and tiredness</p> <p>Loss of appetite</p> <p>Being thirsty</p> <p>Irritability</p> <p>Medium to dark urine</p>	<p>On feeling unwell, cease activity and go to a cool shaded place</p> <p>Drink plenty of fluids (avoid caffeine and alcohol)</p> <p>Try to keep cool by:</p> <ul style="list-style-type: none"> - turning on a fan or air-conditioner - using a spray bottle of water on the face and body <p>If remaining unwell, seek medical advice as soon as possible</p>
Heat rash: caused by inflammation of the sweat glands	<p>Erythematous (abnormal) papular rash, pruritis, secondary infection</p>	<p>Rash subsides with no specific treatment. Minimise sweating by staying in a cool place, taking frequent showers, and wearing light clothes.</p> <p>Keep the affected area dry.</p> <p>Topical antihistamine and antiseptic preparations can be used to reduce discomfort and prevent secondary infection.</p>
Heat Cramps	<p>Muscle spasms</p> <p>Painful muscle cramps in the limbs or abdomen Twitching</p> <p>Moist cool skin</p>	<p>On feeling unwell, cease activity and go to a cool shaded place</p> <p>Drink plenty of fluids (avoid caffeine and alcohol)</p> <p>Try to keep cool by:</p> <ul style="list-style-type: none"> - turning on a fan or air-conditioner - using a spray bottle of water on the face and body to cool down, or use a wet towel - having a cool shower or bath <p>Lie in a cool place with legs supported and slightly elevated</p> <p>Massage limbs gently to ease the spasms, or firmly if cramped, then apply ice packs</p> <p>If remaining unwell, seek medical advice as soon as possible</p>
Heat Syncope (fainting or a sudden temporary loss of consciousness, with or without	<p>Dizziness and Fainting</p>	<p>May be aggravated by cardiovascular disease, and certain medications</p> <p>On feeling unwell, cease activity and go to a cool shaded place</p> <p>Drink plenty of fluids (avoid caffeine and alcohol)</p>

<p>mental confusion)</p>		<p>Try to keep cool by:</p> <ul style="list-style-type: none"> - turning on a fan or air-conditioner - using a spray bottle of water on the face and body to cool down, or use a wet towel - having a cool shower or bath <p>Lie in a cool place with legs supported and slightly elevated</p> <p>If heat cramps present, massage limbs gently to ease the spasms, or firmly if cramped, then apply ice packs</p> <p>If remaining unwell, seek medical advice as soon as possible</p>
<p>Heat Exhaustion</p>	<p>Headaches</p> <p>High temperature</p> <p>Profuse sweating</p> <p>Cold, clammy pale skin</p> <p>Fatigue, weakness, and restlessness</p> <p>Nausea and vomiting</p> <p>Weak but rapid pulse</p> <p>Poor coordination</p> <p>Circulatory collapse</p>	<p>May be aggravated by cardiovascular disease, and certain medications</p> <p>On feeling unwell, cease activity and go to a cool shaded place</p> <p>Drink plenty of fluids (avoid caffeine and alcohol).</p> <p>Try to keep cool by:</p> <ul style="list-style-type: none"> - turning on a fan or air-conditioner - using a spray bottle of water on the face and body to cool down, or use a wet towel - having a cool shower or bath <p>Put cool packs under the armpits, in the groin or on the back of the neck (or all three places) to reduce body heat</p> <p>Lie in a cool place with legs supported and slightly elevated</p> <p>If heat cramps present, massage limbs gently to ease the spasms, or firmly if cramped, then apply ice packs</p> <p>If remaining unwell, seek medical advice as soon as possible</p> <p>If vomiting continues, seek medical assistance immediately by calling 000 for an ambulance</p>
<p>Heatstroke</p>	<p>Confusion, headaches, dizziness, and nausea</p> <p>Skin flushed, hot and unusually dry</p> <p>Intense thirst</p>	<p>This is an extreme medical emergency. Ring 000 immediately for an ambulance!</p> <p>May be aggravated by cardiovascular disease, and certain medications</p> <p>While waiting for the ambulance to arrive:</p>

	<p>Dry, swollen tongue</p> <p>Sudden rise in high body temperature (40°C+)</p> <p>Disorientation, delirium</p> <p>Slurred speech</p> <p>Aggressive or bizarre behaviour</p> <p>Sleepiness</p> <p>Convulsions</p> <p>Unconsciousness may develop rapidly</p> <p>Seizures or coma</p>	<ul style="list-style-type: none"> > If possible, move the person to somewhere cool and keep them still > Loosen their clothes, sprinkle them with cool water, or wrap them in a damp sheet > Place cool, damp cloths in their armpits, on the back of their neck and on their forehead to cool them down as quickly as possible > Use a fan to help cool them down if one is available > Do not give aspirin or paracetamol to a person affected by heat <p>If the person is conscious:</p> <ul style="list-style-type: none"> > Try to keep them calm > Give them small sips of water or fruit juice > Stay with them until the ambulance arrives <p>If the person is unconscious:</p> <ul style="list-style-type: none"> > Check their airway is clear > Monitor their pulse rate > Stay with them until the ambulance arrives
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Appendix 4 – Guidance for Local Health Networks

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

[adapted from *Heat Health Preparedness Guidance*, Department of Health, Victoria, 2022]

- > Understand the mechanisms of heat illnesses, clinical manifestations, diagnosis, and treatment
- > Recognise the early signs of heat-related illness, including heatstroke which is a medical emergency.
- > Be aware of the risk factors in heat-related illness
- > Consider holding a team/staff meeting prior to summer to increase staff awareness and to conduct any training related to heat and the health of both staff and patients.
- > Educate those at risk, and their carers, about how to look after themselves during hot weather, particularly in regional areas.
- > Consider developing a list of at-risk clients and how you will ensure that this list is accessible to relevant staff, particularly in regional areas.
- > Consider rescheduling activities to earlier times of the day when it is cooler, postponing appointments to another day, or cancelling activities completely (eg. exercise classes) to prevent clients and staff from travelling in the heat. You can also consider switching face-to-face appointments to a phone call where appropriate to limit travel for both staff and clients.
- > Ensure the LHN/Hospital is heat-friendly for patients and staff, with a cool waiting room, drinking water, blinds closed to block the sun, and regular staff breaks for hydration.
- > Develop and implement a communication policy to keep staff updated if extreme heat or a heatwave is forecast.
- > Consider sharing information about heat health with your clients through written information, videos, social media, and information sessions, this includes:
 - The [SA Health Healthy in the Heat](#) website
 - The online [Healthy in the Heat Booklet](#), or order printed copies by emailing: Health.DisasterManagementBranch@sa.gov.au
 - Viewing or printing [SA Health Heat Factsheets and Translated Factsheets](#)
 - Viewing or printing the [Easy English Heatwaves](#) document produced by SASES
 - [Register with the free Red Cross Telecross REDi service on 1800 188 071 - this service supports people by calling them daily during declared heatwaves.](#)
 - Visit the [SASES website](#) to review heatwave warnings or heatwave advice video

Self-assessment checklist for Local Health Networks / Hospitals

Considerations for your extreme heat and heatwave plan	Y/N
Does your LHN or hospital have an extreme heat plan, that includes responsibilities and risks?	
Are relevant staff aware of your plan, how to access it and what it contains?	
Are there processes in place for communicating the plan to all staff, residents, and families?	
Has your plan been reviewed since the last summer season? Date of last review:	
Is it integrated with your LHN or hospital's emergency and disaster response plan?	
Is there an emergency department/urgent care centre sub-plan?	

Is there a clear escalation protocol to notify executive team members of extreme heat/heatwaves, disruptions to service delivery and criteria to request activation of a IMT response?	
Does your heat plan specify how you will monitor the forecast for extreme heat or heatwave conditions? (ie. SASES heatwave warnings, or Bureau of Meteorology heatwave warnings)	
Does your extreme heat plan specify actions for a forecast single day of extreme heat?	
Does your extreme heat plan specify actions for a forecast multi-day heatwave?	
Considerations for patient care in your extreme heat plan	Y/N
Does it address increasing inpatient bed capacity during extreme heat and heatwave conditions?	
Does it address processes for proactively assessing people's health care needs in preparation for and during extreme heat? Or people's needs living in the community, with community delivered services in the home?	
Do discharge planning considerations for at-risk patients include weather conditions such as extreme heat and heatwave? (eg. consider providing taxi vouchers, or discharging patients during cooler times of the day)	
Does it address switching outpatient appointments to telehealth where possible?	
Does it consider advising on medication review for at-risk patients?	
Considerations for staff in your extreme heat plan	Y/N
Does your plan ensure have staff who are trained, skilled and available to manage extreme heat events if they occur, including knowledge of plans and pre-summer exercising of plans?	
Does it cover advice for all staff to keep themselves safe (eg. hydration, regular breaks, travel to and from work?)	
Are staff trained to recognise at-risk patients and the management of heat-related illness?	
Does it have arrangements to consider increasing staffing during forecast extreme heat or heatwaves, and on the days that follow?	
Considerations for power outages in your extreme heat plan	Y/N
Do you have a plan/s for an alternate power supply in the event of a power outage?	
Do you have a plan/s for failure of air-conditioning?	
Do you have plan/s for appropriate and safe storage of medications, food, and drinks during heatwaves, or in event of power outages during periods of extreme heat?	
Additional considerations for emergency department/urgent care centre subplans	Y/N
Does the subplan consider increasing capacity to treat emergency patients (eg. by using other areas such as outpatient clinics)?	

Does it consider access to hydration and cooling (eg. a water station, fans, air-conditioning) for patients and visitors, including in the waiting room and in ambulance ramping areas?	
Does it cover the health and safety of community partners (e.g., SA Ambulance Service and SA Police)?	
Have you got sufficient quantities and storage for equipment, supplies, medication during periods of extreme heat?	

Appendix 5 – Guidance for Community Care Services

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

“[adapted from Heat Health Preparedness Guidance, Department of Health, Victoria, 2022]

For Aboriginal Community Controlled Health Services, also seek local knowledge and input from Elders to create culturally safe and accessible services to assist community members experiencing heat-related illness.

- > Understand the mechanisms of heat-related illness, clinical manifestations, diagnosis, and treatment.
- > Recognise the early signs of heat-related illness, including heatstroke which is a medical emergency.
- > Be aware of the risk factors in heat-related illness
- > Be aware of the potential side effects of medicines and consider optimal dosing during periods of hot weather. Advise clients how to store and take medication during the heat.
- > Consider including heat advice and a pre-summer medical assessment into routine care and care plans for at-risk people, including using a heat vulnerability screening tool or checklist.
- > Be aware of how to initiate proper cooling and resuscitative measures.
- > Consider holding a team/staff meeting prior to summer to increase staff awareness and to conduct any training related to heat and the health of both staff and clients.
- > Consider sharing information about heat health with your clients through written information, videos, social media and information sessions, this includes:
 - The [SA Health Healthy in the Heat](#) website
 - The online [Healthy in the Heat Booklet](#), or order printed copies by emailing: Health.DisasterManagementBranch@sa.gov.au
 - Viewing or printing [SA Health Heat Factsheets and Translated Factsheets \(in a number of different languages\)](#)
 - Viewing or printing the [Easy English Heatwaves](#) document produced by SASES
 - [Register with the free Red Cross Telecross REDi service on 1800 188 071 - this service supports people by calling them daily during declared heatwaves.](#)
 - Visit the [SASES website](#) to review heatwave warnings or heatwave advice video
- > Recognise the symptoms of and provide appropriate treatment for mild heat-related conditions, such as dehydration and heat cramps. In cases of suspected heat exhaustion or heat stroke, immediately refer for medical assessment at the nearest emergency department/via 000.
- > Remind staff how to look after themselves during extreme heat and heatwaves (eg. provide advice on staying hydrated, advice to stay cool while travelling to and from work and encourage regular breaks).
- > Plan for staff shortages during periods of extreme heat and heatwaves, and increased demand for services, including on the days that follow the heat.
- > Prepare for changes to service delivery
- > Consider rescheduling appointments to earlier times of the day when it is cooler, postponing appointments to another day, or cancelling activities completely (eg. exercise classes) to prevent clients and staff from travelling in the heat. You can also consider switching face-to-face appointments to a phone call where appropriate to limit travel for both staff and clients.
- > Educate those at risk, and their carers, about how to look after themselves during hot weather.
- > Reinforce to carers the importance of also caring for themselves, especially during the heat.
- > Have phone numbers of key resources within easy access – emergency departments, SA Ambulance, SA Virtual Care Service or Royal District Nursing Service (RDNS).

- > Consider developing a list of at-risk clients and how you will ensure that this list is accessible to relevant staff.
- > Check they have appropriate follow-up and supports in place, including that their care plan contains heat-specific advice, contact details for their doctor and their other care workers, and there are adequate arrangements for food shopping to reduce having to go outdoors during the heat.
- > Advise clients and staff about drinking recommendations appropriate to their health status, particularly those who have a decreased perception of thirst. Fluids are not just limited to water; they can be icy poles, fruit juice or cordial. Salt tablets, sports drinks or electrolyte-carbohydrate supplements offer no benefits and may be harmful because of high osmotic load. Excessive drinking of pure water can lead to severe hyponatraemia, potentially leading to complications like stroke and death.
- > Educate clients about adjusting their behaviour to stay cool by planning their day to avoid being outside during the hottest part of the day, reducing excessive clothing, using electric fans, applying damp towels containing ice to the skin, and taking cool showers. If they must leave the house, advise them to also wear a hat and sunscreen and take water.
- > Ensure the clinic is heat-friendly for clients and staff, with a cool waiting room, drinking water, blinds closed to block the sun, and regular staff breaks for hydration.
- > Consider putting up posters and having printed information in your clinic which are available from the SA Health's website
- > Develop and implement a communication policy to keep staff updated if extreme heat or a heatwave is forecast.
- > Have a prepared and practiced heat plan and response to a heat or heatwave warning.
- > Plan to hold an evaluation meeting with staff after an extreme heat event or heatwave to discuss how they dealt with it, what went well, and what could be improved. Prepare at-risk clients and their carers.

Self-assessment checklist for Community Care Services

Considerations for your extreme heat and heatwave plan	Y/N
Does your service/facility have a documented heat and heatwave plan, that includes responsibilities and risks?	
Are relevant staff aware of your plan, how to access it and what it contains?	
Are there processes in place for communicating the plan to all staff, affected people, and their families?	
Has your plan been reviewed since the last summer season? Date of last review:	
Is it integrated with your service/facility emergency and disaster response plan?	
Is it integrated with necessary technical and support services resources/plans to manage extreme heat?	
Is it integrated with an plans for contingency measure in place to deal with potential power outages during periods of extreme heat?	
Is there a clear escalation protocol to notify executive team members of extreme heat, heatwaves, and/or disruptions to service delivery?	
Does your heat plan specify how you will monitor the forecast for extreme heat or heatwave conditions? (ie. SA SES heat and heatwave warnings, or Bureau of Meteorology heatwave warnings)	

Does your extreme heat plan specify actions for a forecast single day of extreme heat?	
Does your extreme heat plan specify actions for a forecast multi-day heatwave?	
Considerations for client care in your extreme heat plan	Y/N
Does it address processes for proactively assessing clients' health care needs in preparation for and during extreme heat?	
Does it incorporate measure to ensure an increased availability and supply of cool drinks for clients, staff, and visitors during periods of extreme heat?	
Does it consider risk assessment, monitoring and additional care or support for at-risk patients, and escalation plans should they become unwell?	
Does it incorporate arrangements to appropriately identify and manage patients experiencing heat-related illness (eg. fluids, cooling, observation, specific treatments as indicated).	
Considerations for staff in your extreme heat plan	Y/N
Does your plan ensure have staff who are trained, skilled and available to manage extreme heat events if they occur, including knowledge of plans and pre-summer exercising of plans?	
Does it cover advice for all staff to keep themselves safe (eg. hydration, regular breaks, safety when travelling to and from work?)	
Are staff trained to recognise at-risk patients and the management of heat-related illness?	
Does it have arrangements to consider increasing staffing during forecast extreme heat or heatwaves, and on the days that follow?	
Considerations for power outages in your extreme heat plan	Y/N
Do you have a plan/s for an alternate power supply in the event of a power outage?	
Do you have a plan/s for failure of air-conditioning?	
Do you have plan/s for appropriate and safe storage of medications, food, and drinks during heatwaves, or in event of power outages during periods of extreme heat?	
Additional considerations	Y/N
Have you assessed the overall physical environment of your facility to determine how prepared it is for prolonged heat? And what could be done to make your clinic cooler (eg. servicing air conditioners, insulation, awnings, shade cloth, more trees and green walls)?	
Have you considered access to hydration and cooling (eg. a water station, fans, air-conditioning) for clients and visitors, including in the waiting room and transport/access areas?	
Have you got sufficient quantities and storage for equipment, supplies, medication during periods of extreme heat?	

Appendix 6 – Guidance for Mental Health Services and Clinician Heatwave Checklist

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

[adapted from *Heat Health Preparedness Guidance*, Department of Health, Victoria, 2022]

- > Remind yourself and staff about the physical and mental health effects of extreme heat, including an increased risk of suicide, mental health-related hospital admissions and mental health-related emergency department presentations, and which person's might be at higher risk of heat related harm.
- > Consider the effect that heat may have on prescribed medications that may be taken by people. Some medications may have drug levels that are affected by dehydration (eg. lithium) or may interfere with thermoregulation (eg. selective serotonin reuptake inhibitors, antipsychotics). Furthermore, some medications may also be less effective or more toxic when stored at high temperatures.
- > Consider the risk of unplanned alcohol or drug withdrawal if people are unable to cope with the heat to be able to use public transport to access alcohol or drugs, including prescribed medication and opioid maintenance therapy.
- > Be aware of the potential side effects of medicines and consider optimal dosing during periods of hot weather. Advise people how to store and take medication during the heat.
- > Consider including heat advice and a pre-summer medical assessment into routine care and care plans for at-risk people.
- > Understand the mechanisms of heat illnesses, clinical manifestations, diagnosis, and treatment.
- > Recognise the early signs of heat-related illness, including heatstroke which is a medical emergency.
- > Be aware of the risk factors in heat-related illness
- > Be aware of how to initiate proper cooling and resuscitative measures.
- > Consider holding a team/staff meeting prior to summer to increase staff awareness and to conduct any training related to heat and the health of both staff and people registered to the mental health services.
- > Consider sharing information about heat health with people registered to the mental health services. through written information, videos, social media, and information sessions, this includes:
 - The [SA Health Healthy in the Heat](#) website
 - The online [Healthy in the Heat Booklet](#), or order printed copies by emailing: Health.DisasterManagementBranch@sa.gov.au
 - Viewing or printing [SA Health Heat Factsheets and Translated Factsheets \(in a number of different languages\)](#)
 - Viewing or printing the [Easy English Heatwaves](#) document produced by SASES
 - [Register with the free Red Cross Telecross REDi service on 1800 188 071 - this service supports people by calling them daily during declared heatwaves.](#)
 - Visit the [SASES website](#) to review heatwave warnings or heatwave advice video
- > Recognise the symptoms of and provide appropriate treatment for mild heat-related conditions, such as dehydration and heat cramps. In cases of suspected heat exhaustion or heat stroke, immediately refer for medical assessment at the nearest emergency department/via 000.
- > Remind staff how to look after themselves during extreme heat and heatwaves (eg. provide advice on staying hydrated, advice to stay cool while travelling to and from work and encourage regular breaks).
- > Plan for staff shortages during periods of extreme heat and heatwaves, and increased demand for services, including on the days that follow the heat.

- > Prepare for changes to service delivery
- > Consider rescheduling appointments to earlier times of the day when it is cooler, postponing appointments to another day, or cancelling activities completely (eg. exercise classes) to prevent people and staff from travelling in the heat. You can also consider switching face-to-face appointments to a phone call where appropriate to limit travel for both people and staff .
- > Educate those at risk, and their carers, about how to look after themselves during hot weather.
- > Reinforce to carers the importance of also caring for themselves, especially during the heat.
- > Have phone numbers of key resources within easy access – emergency departments, SA Ambulance, SA Virtual Care Service or Royal District Nursing Service (RDNS).
- > Utilise CBIS and CCCME to develop the list of heat vulnerable people and ensure that this list is kept up to date utilising the alerts. Ensure the list is accessible to relevant staff during times of heat activation.
- > Check they have appropriate follow-up and supports in place, including that their care plan contains heat-specific advice, contact details for their doctor and their other care workers, and there are adequate arrangements for food shopping to reduce having to go outdoors during the heat.
- > Advise people on drinking recommendations appropriate to their health status, particularly those who have a decreased perception of thirst. Fluids are not just limited to water; they can be icy poles, fruit juice or cordial. Salt tablets, sports drinks or electrolyte-carbohydrate supplements offer no benefits and may be harmful because of high osmotic load. Excessive drinking of pure water can lead to severe hyponatraemia, potentially leading to complications like stroke and death.
- > Educate people to adjust their behaviour to stay cool by planning their day to avoid being outside during the hottest part of the day, reducing excessive clothing, using electric fans, applying damp towels containing ice to the skin, and taking cool showers. If they must leave the house, advise them to also wear a hat and sunscreen.
- > Ensure the facility is heat-friendly for people visiting and staff, with a cool waiting room, drinking water, blinds closed to block the sun, and regular staff breaks for hydration.
- > Consider putting up posters and having printed information in your clinic which are available from the SA Health's website.
- > Develop and implement a communication policy to keep staff updated if extreme heat or a heatwave is forecast.
- > Have a prepared and practiced heat plan and response to a heat or heatwave warning.
- > Plan to hold an evaluation meeting with staff after an extreme heat event or heatwave to discuss how they dealt with it, what went well, and what could be improved.

Mental Health Clinician Heatwave Checklist

Please use this checklist to assess your case load of people experiencing mental health distress's readiness to manage in a heatwave.

NB: Child and Adolescent Mental Health Services as part of the Women's and Children's Health Network are encouraged to undertake this assessment. It is considered optional, as their clients are generally children and adolescents who either live with their family or are under the care of a responsible adult or other agency, but for those clients who have alternative guardianship and may have complex needs this assessment is similarly encouraged.

Ensuring that children and adolescents that may not have a mental health plan are part of the consideration for this plan and utilisation of the check list. High risk clients and those that are considered as vulnerable (absconding, transient) should consider using the checklist and plan as part of any management plans.

Checklist	Y/N
I am aware of people who are most at risk during a heatwave.	
I have completed the Heat Vulnerability Assessment Tool (HVAT) on CBIS/CCCME for all people on my mental health case load.	
I have completed a CBIS/CCCME heat vulnerability alert for all people requiring one.	
All people I am working with have a heatwave safety plan in place and documented in their CBIS/CCCME care plan and in the medical record.	
I have the contact details of Carers or relatives who will be checking on identified vulnerable people during a heatwave.	
I am aware of the medications that the people I case manage are taking and have given them appropriate advice regarding medication management throughout the heatwave.	
I have educated people I am working with regarding keeping safe and cool in the heat and provided them with the 'Top Tips to Staying Cool' information sheet and the 'SA Health Healthy in the Heat booklet'.	

Appendix 7 – Guidance for Aged Care Services (community and residential)

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

[adapted from *Heat Health Preparedness Guidance*, Department of Health, Victoria, 2022]

- > Understand the mechanisms of heat illnesses, clinical manifestations, diagnosis, and treatment.
- > Recognise the early signs of heat-related illness, including heatstroke which is a medical emergency.
- > Be aware of the risk factors in heat-related illness.
- > Consider holding a team/staff meeting prior to summer to increase staff awareness and to conduct any training related to heat and the health of both staff and residents/clients.
- > Consider sharing information about heat health with your residents/clients through written information, videos, social media and information sessions, this includes:
 - The [SA Health Healthy in the Heat](#) website
 - The online [Healthy in the Heat Booklet](#), or order printed copies by emailing: Health.DisasterManagementBranch@sa.gov.au
 - Viewing or printing [SA Health Heat Factsheets and Translated Factsheets](#)
 - Viewing or printing the [Easy English Heatwaves](#) document produced by SASES
 - [Register with the free Red Cross Telecross REDi service on 1800 188 071 - this service supports people by calling them daily during declared heatwaves.](#)
 - Visit the [SASES website](#) to review heatwave warnings or heatwave advice video
- > Recognise the symptoms of and provide appropriate treatment for mild heat-related conditions, such as dehydration and heat cramps. In cases of suspected heat exhaustion or heat stroke, immediately refer for medical assessment at the nearest emergency department/via 000.
- > Educate those at risk and their carers about how to look after themselves during hot weather.
- > Reinforce to carers the importance of also caring for themselves, especially during the heat.
- > Have phone numbers of key resources within easy access – emergency departments, SA Ambulance, SA Virtual Care Service or Royal District Nursing Service (RDNS).
- > Consider developing a list of at-risk residents/clients and how you will ensure that this list is accessible to relevant staff.
- > Consider rescheduling activities to earlier times of the day when it is cooler, postponing appointments to another day, or cancelling activities completely (eg. exercise classes) to prevent clients and staff from travelling in the heat. You can also consider switching face-to-face appointments to a phone call where appropriate to limit travel for both staff and clients.
- > Ensure the care home is heat-friendly for residents/clients and staff, with a cool areas, drinking water, blinds closed to block the sun, and regular staff breaks for hydration.
- > Consider putting up posters and having printed information in your care home/service that are available from the SA Health website (note that these are available in a range of community languages).
- > Develop and implement a communication policy to keep staff updated if extreme heat or a heatwave is forecast.
- > Have a prepared and practiced heat plan and response to a heat or heatwave warning.

Self-assessment checklist for Aged Care Services

Considerations for your extreme heat and heatwave plan	Y/N
Does your service/care home have a documented heat and heatwave plan, that includes responsibilities and risks?	
Are relevant staff aware of your plan, how to access it and what it contains?	
Are there processes in place for communicating the plan to all staff, residents/clients, carers, and families?	
Has your plan been reviewed since the last summer season? Date of last review:	
Is it integrated with your service/facility emergency and disaster response plan?	
Is it integrated with necessary technical and support services resources/plans to manage extreme heat?	
Is it integrated with any plans for contingency measure in place to deal with potential power outages during periods of extreme heat?	
Is there a clear escalation protocol to notify executive team members of extreme heat, heatwaves, and/or disruptions to service delivery?	
Does your heat plan specify how you will monitor the forecast for extreme heat or heatwave conditions? (ie, SA SES heat and heatwave warnings, or Bureau of Meteorology heatwave warnings)	
Does your extreme heat plan specify actions for a forecast single day of extreme heat?	
Does your extreme heat plan specify actions for a forecast multi-day heatwave?	
Considerations for client/resident care in your extreme heat plan	Y/N
Does it address processes for proactively assessing resident's/client's health care needs in preparation for and during extreme heat?	
Does it incorporate measures to ensure an increased availability and supply of cool drinks for residents/clients, staff, and visitors during periods of extreme heat?	
Does it consider risk assessment, monitoring and additional care or support for at-risk residents/clients, and escalation plans should they become unwell?	
Does it incorporate arrangements to appropriately identify and manage residents/clients experiencing heat-related illness (eg. fluids, cooling, observation, specific treatments as indicated).	
Considerations for staff in your extreme heat plan	Y/N
Does your plan ensure have staff who are trained, skilled and available to manage extreme heat events if they occur, including knowledge of plans and pre-summer exercising of plans?	
Does it cover advice for all staff to keep themselves safe (eg. hydration, regular breaks, safety when travelling to and from work?)	
Are staff trained to recognise at-risk residents/clients/staff and the management of heat-related illness?	

Does it have arrangements to consider increasing staffing during forecast extreme heat or heatwaves, and on the days that follow?	
Considerations for power outages in your extreme heat plan	Y/N
Do you have a plan/s for an alternate power supply in the event of a power outage?	
Do you have a plan/s for failure of air-conditioning?	
Do you have plan/s for appropriate and safe storage of medications, food, and drinks during heatwaves, or in event of power outages during periods of extreme heat?	
Additional considerations	Y/N
Have you assessed the overall physical environment of your care home/service to determine how prepared it is for prolonged heat? And what could be done to make your care home cooler (eg. servicing air conditioners, insulation, awnings, shade cloth, more trees and green walls)?	
Have you considered access to hydration and cooling (eg. a water station, fans, air-conditioning) for residents/clients and visitors, including in the waiting room and transport/access areas?	
Have you got sufficient quantities and storage for equipment, supplies, medication during periods of extreme heat?	

Appendix 8 – Guidance for General Practice

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

[adapted from *Heat Health Preparedness Guidance*, Department of Health, Victoria, 2022]

For your practice:

- > Periods of extreme or prolonged heat can affect health by causing direct heat-related illness and by precipitating or exacerbating other medical conditions.
- > Those particularly at risk of heat-related illness include the older persons, children, those with significant comorbidities, those with cognitive impairment and those who have inadequate social supports. Recent evidence suggests unborn babies are at high risk from exposure to extreme heat.
- > Some prescribed medications can increase the risk of heat-related illness or may be less effective or more toxic when stored at high temperatures.
- > Health professionals can reduce the likelihood or severity of health-related illness by identifying those vulnerable and implementing strategies to minimise the risk. For example, health professionals can educate at-risk patients and their carers about how to stay healthy in the heat by adjusting their behaviour, using fans or air-conditioners, storing and taking medications, and drinking fluids.
- > Pre-summer planning may assist in reducing the health impacts on patients, carers, and staff.
- > Consider sharing information about heat health with your patients through written information, videos, social media, and information sessions, this includes:
 - The [SA Health Healthy in the Heat](#) website
 - The online [Healthy in the Heat Booklet](#), or order printed copies by emailing: Health.DisasterManagementBranch@sa.gov.au
 - Viewing or printing [SA Health Heat Factsheets and Translated Factsheets \(in a number of different languages\)](#)
 - Viewing or printing the [Easy English Heatwaves](#) document produced by SASES
 - [Register with the free Red Cross Telecross REDi service on 1800 188 071 - this service supports people by calling them daily during declared heatwaves.](#)
 - Visit the [SASES website](#) to review heatwave warnings or heatwave advice video
- > Consider the following resources:
- > [Extreme Heat and the Risk to your Health: an article for health practitioners](#)
- > [SA Health: Heat and hot weather for health professionals](#)
- > [Australian Journal of General Practice: Preventing heat-related disease in general practice](#)
- > [See also:](#) Appendix 2 – People at risk in heatwaves and Appendix 3 – Heat-related illness signs, symptoms, and treatment

Checklist for reviewing patients in your practice

Considerations for identifying patients at risk in your practice	Y/N
Are staff trained to recognise at-risk patients and the management of heat-related illness?	
Consider developing a list of at-risk clients and how you will ensure that this list is accessible to relevant staff. Are you able to identify any of your patients at risk of heat-related illness: Individual characteristics (older persons, infants, young children, overweight/obese, pregnant, or breastfeeding, low cardiovascular fitness, not acclimatised)	
Chronic illness (heart disease, hypertension, diabetes, cancer, kidney disease, alcohol and other substance use, mental illness, dementia)	
Conditions that impair sweating (heart disease, dehydration, extremes of age, skin disorders, congenital impairment of sweating, cystic fibrosis, quadriplegia, scleroderma, people taking medications with anticholinergic effects)	
Acute illness (dehydration, infection)	
Impairment of activities of daily living (Poor mobility, cognitive impairment)	
Social factors (Live alone or socially isolated, low socioeconomic status, homeless, dependant on power for critical medical equipment)	
Occupation / recreation (Exercising vigorously in the heat or working outside/in a hot environment)	
Consider including heat-related content in assessment tools and management plans for vulnerable patients. For example: <ul style="list-style-type: none"> consider adding a question in the over-75 health assessment that asks a patient to consider their personal care during extreme heat. consider including heat wave management in the chronic disease management plan for those with the chronic illness listed above 	
Considerations for educating patients	Y/N
For those patients at risk: <ul style="list-style-type: none"> have you discussed heat and heat advice with patients as part of a pre-summer medical assessment, and do they have a heat plan for the coming season? Do these plans have appropriate follow-up and supports in place, including that their care plan contains heat-specific advice, contact details for their doctor and their other care workers, and there are adequate arrangements for food shopping to reduce having to go outdoors during the heat 	
Do they know how to adjust their behaviour to keep cool? (eg. reduce excessive clothing, use cooling devices at home planning their day to avoid being outside during the hottest part of the day, reducing excessive clothing, using electric fans, applying	

damp towels containing ice to the skin, and taking cool showers. If they must leave the house, advise them to also wear a hat and sunscreen.)?	
Do they know to increase fluids during hot weather, and what types of fluids? (Remember to discourage avoidance of fluids due to continence issues and advise patients on drinking recommendations appropriate to their health status, particularly those who have a decreased perception of thirst. Fluids are not just limited to water; they can be icy poles, fruit juice or cordial. Salt tablets, sports drinks or electrolyte-carbohydrate supplements offer no benefits and may be harmful because of high osmotic load. Excessive drinking of pure water can lead to severe hyponatraemia, potentially leading to complications like stroke and death.	
Do they know how to store and take their medication during hot weather?	
For patients that have carers, are the carers aware of their heat plan and keeping cool?	
Consider providing written information /booklets/ factsheets, with more details about staying healthy in the heat	
Considerations for optimising medical management	Y/N
Be aware of the potential side effects of medicines and consider optimal dosing during periods of hot weather – see Appendix 3.	
Be aware that high temperatures can adversely affect the efficacy of drugs.	
Discuss with or monitor fluid intake and drug therapy, especially in older people and those with significant comorbidities.	
Assess patients who are experiencing heat-related illness, and manage as appropriate (for example, fluids, cooling, observation, specific treatments as indicated).	
Have a low threshold for admission to hospital, referral to ED or Priority Care Centres, and/or urgent respite placement for vulnerable individuals.	

Checklist for reviewing your practice

Considerations for you and your staff related to knowledge	Y/N
Are staff trained to recognise at-risk patients and the management of heat-related illness?	
Be aware of the mechanisms of heat illness, clinical manifestations, diagnosis, and treatment.	
Recognise the early signs of heatstroke, which is a medical emergency.	
Be aware of how to initiate proper cooling and resuscitative measures.	
Be aware of the risk factors in heat-related illness.	
Considerations for your practice and systems	Y/N
Remember the practice is a community service that may have additional responsibilities during extreme heat.	

Visit the SASES website to review heatwave warnings	
Consider rescheduling appointments to earlier times of the day when it is cooler, postponing appointments to another day. Also consider switching face-to-face appointments to a telehealth option where appropriate, to limit travel for both staff and clients.	
Ensure the practice is heat-friendly for patients and staff, with a cool waiting room, water available, blinds closed to block the sun and staff breaks for drinks.	
Have you assessed the overall physical environment of your practice to determine how prepared it is for prolonged heat? And what could be done to make your facility cooler (eg. servicing air conditioners, insulation, awnings, shade cloth, more trees and green walls)?	
Have phone numbers of key resources within easy access – emergency departments, SA Ambulance, SA Virtual Care Service or Royal District Nursing Service (RDNS).	
Have you got sufficient quantities and storage for equipment, supplies, medication during periods of extreme heat?	
Have you appointed a person responsible for planning a heat response, and communicated that to staff? Consider developing a heat plan, triage policy and holding a team meeting to discuss the practice's response to heat and/or refresh practice staff prior to summer.	
Does your plan ensure have staff who are trained, skilled and available to manage extreme heat events if they occur, including knowledge of plans and pre-summer exercising of plans?	
Does it cover advice for all staff to keep themselves safe? (eg. hydration, regular breaks, safety when travelling to and from work and encourage regular breaks).	
Does it have arrangements to consider increasing staffing during forecast extreme heat or heatwaves, and on the days that follow?	
Develop and implement a communication policy to keep staff updated if extreme heat is forecast.	
Prepare for changes to service delivery and plan for staff shortages during periods of extreme heat and heatwaves, and increased demand for services, including on the days that follow the heat.	
Are staff trained to recognise at-risk patients and the management of heat-related illness?	
Do you have a plan/s for an alternate power supply in the event of a power outage? And who to contact, or what to do with vaccine fridges?	
Do you have a plan/s for failure of air-conditioning?	
Do you have plan/s for appropriate and safe storage of medications, food, and drinks during heatwaves, or in event of power outages during periods of extreme heat?	

Appendix 9 – Heatwave preparedness checklist for the community

[content from this appendix will be available in a separate downloadable factsheet, booklet, or checklist for ease of use]

Before summer begins:

- > Access detailed information about staying healthy in the heat from:
 - The [SA Health Healthy in the Heat](#) website
 - Follow SA Health on social media to receive posts about staying healthy in the heat
 - The online [Healthy in the Heat Booklet](#), or order printed copies by emailing: Health.DisasterManagementBranch@sa.gov.au
 - Viewing or printing [SA Health Heat Factsheets and Translated Factsheets \(in a number of different languages\)](#)
 - Viewing or printing the [Easy English Heatwaves](#) document produced by SASES
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 - Visit the [SASES website](#) to review heatwave warnings or heatwave advice video

[adapted from *Beat the heat*, NSW Health, 2021]

Heatwave preparedness checklist	Y/N
If you have a health condition and/or regularly take medication, have you checked with your doctor to discuss your heat risks before summer starts?	
Have you put together a small emergency kit in case of power failure, including a torch, batteries, a first aid kit, and a list of important telephone numbers?	
Have you thought about how you will look after your pets and keep them healthy and cool when the weather gets very hot?	
Monitor the weather, you can watch the news, visit the Bureau of Meteorology or SA State Emergency Service website	
Do you know who you will call for help (make a list of names and contact details)?	
Do you know who you will check on, such as neighbours, friends, relatives and those isolated?	
Do you understand how to manage your medical condition in the heat?	
Have you stored enough medication at the right temperature?	
Check fridges, freezers, fans and air-conditioners work well?	
Have you prepared cool packs and made ice cubes?	
Check you have enough food and drinking water, so you are less likely to need to go out when it is really hot	
Have you created cool rooms and cross breezes in your house?	
Have you protected windows from the sun by using blinds or curtains	
Do you know your local cool public places?	
Be bushfire prepared	

For more information

Disaster Management Branch
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11 Hindmarsh Square, Adelaide
Karna Country
Health.DisasterManagementBranch@sa.gov.au
www.sahealth.sa.gov.au



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