 **Promise Care Services Ltd**

## HEATWAVE

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**Policy Statement**

Severe heat is dangerous to everyone. During a heatwave, when temperatures remain abnormally high over more than a couple of days, it can prove fatal. Climate change means heat waves are likely to become more common in England. Heatwaves can happen with little warning and illness and death can occur within the first couple of days, so it is best to make the following preparations before high temperatures are forecast and ideally, these should be complete by the beginning of June.

The Policy

This policy is intended to set out the values, principles and policies underpinning this organisation’s approach to managing heatwaves. The organisation aims to ensure that Service Users can be assured that the protection of their privacy and confidentiality are given the highest consideration.

Who is at Risk

There are certain factors that increase an individual’s risk during a heat wave. These include:

* Older age: especially those over 75 years old, or those living on their own and who are socially isolated
* Chronic and severe illness: including heart conditions, diabetes, respiratory or renal insufficiency, Parkinson’s disease, or severe mental illness. Medications that potentially affect renal function, sweating, thermoregulation, or electrolyte balance can make this group more vulnerable to the effects of heat
* Inability to adapt behaviour to keep cool: having Alzheimer’s, a disability, being bed-bound, too much alcohol, babies and the very young
* Environmental factors and overexposure: living in a top-floor flat, being homeless, activities or jobs that are in hot places or outdoors and include high levels of physical exertion

During severe hot weather, there is a risk of developing heat exhaustion, heatstroke and other heat-related illnesses including respiratory and heart problems. In a moderate heatwave, it is mainly the above high-risk groups that are affected.

However, during an extreme heatwave fit and healthy people can also be affected.

The Risks

The effects of heat on health

The body normally cools itself using 4 mechanisms:

1. Radiation in the form of infrared rays.
2. Convection via water or air crossing the skin.
3. Conduction via a cooler object being in contact with the skin.
4. Evaporation of sweat.

When the ambient temperature is higher than skin temperature, the only effective heat-loss mechanism is sweating. Therefore, any factor that reduces the effectiveness of sweating such as dehydration, lack of breeze, tight-fitting clothes or certain medications can cause the body to overheat. Additionally, thermoregulation, which is controlled by the hypothalamus, can be impaired in the elderly and the chronically ill, and potentially in those taking certain medications, rendering the body more vulnerable to overheating. Young children produce more metabolic heat, have a decreased ability to sweat and have core temperatures that rise faster during dehydration. Older people appear to be more vulnerable to heat possibly due to having fewer sweat glands, but also because of living alone and being at risk of social isolation.

The main causes of illness and death during a heatwave are respiratory and cardiovascular diseases. Part of this rise in mortality may be attributable to air pollution, which makes respiratory symptoms worse. The other main contributor is the effect of heat on the cardiovascular system. To keep cool, large quantities of extra blood are circulated to the skin. This causes strain on the heart, which for elderly people and those with chronic health problems can be enough to precipitate a cardiac event.

Sweating and dehydration affect electrolyte balance. This can also be a risk for people on medications that control electrolyte balance or cardiac function. Medicines that affect the ability to sweat, thermoregulation or electrolyte imbalance can make a person more vulnerable to the effects of heat. Such medicines include anticholinergics, vasoconstrictors, antihistamines, drugs that reduce renal function, diuretics, psychoactive drugs and antihypertensives.

Evidence also exists that links increased ambient temperatures and associated dehydration with an increase in bloodstream infections caused by Gram-negative bacteria, particularly Escherichia coli. The risk is greatest in individuals aged over 65, emphasising the importance of ensuring adequate fluid intake in older people during periods of raised temperatures to reduce the risk of infection.

The following heat-related illness information describes the effects of overheating on the body, which in the form of heatstroke can be fatal.

Heat-related Illnesses

The main causes of illness and death during a heatwave are respiratory and cardiovascular diseases. Additionally, there are specific heat-related illnesses including:

* Heat cramps – caused by dehydration and loss of electrolytes, often following exercise
* Heat rash – small, red, itchy papules
* Heat oedema – mainly in the ankles, due to vasodilatation and retention of fluid
* Heat syncope – dizziness and fainting, due to dehydration, vasodilatation, cardiovascular disease, and certain medications
* Heat exhaustion – is more common. It occurs because of water or sodium depletion, with non-specific features of malaise, vomiting and circulatory collapse, and is present when the body temperature is between 37°C and 40°C – left untreated, heat exhaustion may evolve into heatstroke
* Heatstroke – can become a point of no return whereby the body’s thermoregulation mechanism fails – this leads to a medical emergency, with symptoms of:
	+ confusion
	+ disorientation
	+ convulsions
	+ unconsciousness
	+ hot dry skin, and
	+ core body temperature exceeding 40°C for between 45 minutes and 8 hours, which can result in cell death, organ failure, brain damage or death – heatstroke can be either classical or exertional (for example, in athletes)

Additional notes: Long-Term and Severe Illness

People with long-term and severe illnesses are likely to be at particular risk, including the following conditions:

* Respiratory disease
* Cardiovascular and cerebrovascular conditions
* Diabetes and obesity
* Severe mental illness
* Parkinson’s disease and difficulties with mobility
* Renal insufficiency
* Peripheral vascular disease
* Alzheimer’s or related diseases

Reducing the Risk Before a Heatwave

Heatwaves can happen suddenly, and rapid rises in temperature affect vulnerable people very rapidly. Make as much use as possible of existing care plans to assess which individuals are at particular risk, and to identify what extra help they might need.

Health and social care providers need to plan to ensure that care and support for people at risk can be accessed in the event of a heatwave. Anyone in a high-risk category who is living alone is likely to need at least daily contact, whether by care workers, volunteers, or informal carers. Older people with long-term or serious illness, mobility problems, or severe mental illness, those who are on certain medications, or those living in accommodations that are hard to keep cool, may need extra care and support.

If you are advising, visiting, supporting, or caring for someone in their own home, these are the steps that should be taken before the hot weather happens. Where possible, involve their family and any informal carers in these arrangements.

Organisation

Check that:

* Extra care and support are available if needed
* The person can contact the primary care team if one of their informal carers is unavailable
* Their care plan contains contact details for their GP, other care workers and informal carers
* There are adequate arrangements for food shopping to reduce having to go out in hot weather

Facilities

Carry out the following:

* Check that fridges and freezers work properly
* Check that the person has light, loose-fitting cotton clothing to wear
* If you plan to move the person somewhere cooler in the event of a heatwave, consider what equipment or help you might need
* If you plan to move the person somewhere cooler in the event of a heatwave, consider what equipment or help you might need
* Where relevant, check that fans and air-conditioning work properly, and replace appliances with energy-efficient models

Environment

Immediate, where required:

* Consider the possibility of moving the person to a cooler room – people living in top-floor accommodation may be at particular risk as heat rises

More routinely:

* Check that the person’s home or room can be properly ventilated without causing any additional health risks, discomfort, or security problems
* Check that any South facing windows, which let in most sunlight, can be shaded, preferably with curtains with pale, reflective linings: metal Venetian blinds and curtains with dark linings absorb heat and may make things worse

Where possible:

* Consider using outside shutters, overhead external shade and using reflective paint
* Planting trees or leafy plants to provide shade and cool the air around the building – and indoor plants also help keep the environment cool

Use of Suncream

We can only advise Service Users of the benefits of using sun cream and staying safe in hot weather.

NHS Suncream and Sun Safety guide advises adults should aim to apply around 6 to 8 teaspoons of sun cream for all-over body coverage.

If sunscreen is applied too thinly, the amount of protection it gives is reduced.

Our staff will advise Service Users not to be out in the direct sun and to have enough shade to be comfortable, however, all Service Users outside in sunny weather risk burning and staff will advise sun cream be applied twice and at least:

* 30 minutes before going out
* just before going out
* Sunscreen should be applied to all exposed skin, including the face, neck and ears, and head if the Service User has thinning or no hair, but a wide-brimmed hat is better.

Sun cream needs to be reapplied liberally and frequently, and according to the manufacturer's instructions. For Service Users who require assistance staff will wear PPE and apply following the requirements as set by the manufacturer.

It is also recommended to reapply sun cream every 2 hours, as the sun can dry it off the skin.

The suncream should have;

* a sun protection factor (SPF) of at least 30 to protect against UVB
* at least 4-star UVA protection, and;
* Be in date
* It should be sweat-proof or waterproof, and have;
* UVA protection can also be indicated by the letters "UVA" in a circle, which indicates that it meets the EU standard.

It is also important to use sun cream as some medications increase sensitivity to the sun. Some of these include:

* antibiotics
* antifungals
* antihistamines
* cholesterol-lowering drugs
* diuretics
* non-steroidal anti-inflammatory drugs

If a Heatwave is Forecast for Your Area

1. Make sure you have taken the steps outlined above.
2. Monitor the current situation by checking the Met Office’s heatwave alert level or listening to local weather news.
3. Make sure you know what advice to give people at risk – a public information leaflet with tips on what to do in a heatwave is available from the UK Health Security Agency (UKHSA) website as part of the suite materials published with the Heatwave plan for England.
4. Suggest that people at particular risk consult their GP about possible changes to their treatment and/or medication.

During a Heatwave

How to Keep Out the Heat

1. Keep curtains on windows exposed to the sun closed while the temperature outside is higher than it is inside.
2. Once the temperature outside has dropped lower than it is inside, open the windows – this may require late-night visiting and such advice needs to be balanced by any possible security concerns.
3. Water external and internal plants and spray the ground outside windows with water (avoid creating slip hazards) to help cool the air (however, check local drought water restrictions before using a hosepipe).
4. Advise the person to stay out of the sun, especially between the hours of 11 am and 3 pm.
5. Advise them to stay in the shade and to wear hats, sunscreen, thin scarves, and light clothing if going outside.

How to Keep Body Temperatures Down

1. Ensure that the person reduces their levels of physical exertion.
2. Suggest they take regular cool showers or baths, or at least an overall body wash.
3. Advise them to wear light, loose cotton clothes to absorb sweat and prevent skin irritation.
4. Suggest that they sprinkle their clothes with water regularly and splash cool water on their face and the back of their neck. A damp cloth on the back of the neck helps with temperature regulation.
5. Recommend cold food, particularly salads and fruit with a high water content.
6. Advise them to drink regularly, preferably water or fruit juice, but avoid alcohol and caffeine (tea, coffee, colas).
7. Monitor their daily fluid intake, particularly if they have several carers or are not always able to drink unaided.

Provide Extra Care

After taking the above steps:

* Keep in regular contact throughout the heatwave, and try to arrange for someone to visit at least once a day or regularly talk to Service Users to ensure they feel ok
* Keep giving advice on what to do to help keep cool
* During extended periods of raised temperatures ensure that persons over the age of 65 are advised to increase their fluid intake to reduce the risk of blood-stream infections caused by Gram-negative bacteria

Be Alert

As well as the specific symptoms of heat exhaustion and heatstroke, watch out for signs that could be attributed to other causes, such as:

* Difficulty sleeping, drowsiness, faintness, and changes in behaviour
* Increased body temperature
* Difficulty breathing and increased heart rate
* Dehydration, nausea, or vomiting
* Worsening health problems, especially of heart or respiratory system

Emergency Treatment

If you suspect someone has heatstroke, call 999.

While waiting for the ambulance:

1. Take the person’s temperature.
2. If possible, move them somewhere cooler.
3. Cool them down as quickly as possible by giving them a cool shower, sprinkling them with water or wrapping them in a damp sheet, and using a fan to create an air current.
4. Encourage them to drink fluids if they are conscious.
5. Give them a saline drip and oxygen if they are unwell.
6. Do not give aspirin or paracetamol.

Medications

The following information describes the medications that are likely to provoke or increase the severity of a heatstroke. Those drugs are theoretically capable of increasing risk in susceptible individuals. It may be worth carefully reviewing the medication such individuals are taking and assessing the risks and benefits of any changes to their regime.

Medications Likely to Provoke or Increase the Severity of Heatstroke

*Those causing dehydration or electrolyte imbalance*

Diuretics, especially loop diuretics.
Any drug that causes diarrhoea or vomiting (colchicine, antibiotics, codeine).

*Those likely to reduce renal function*

NSAIDs, sulphonamides, indinavir, cyclosporin.

*Those with levels affected by dehydration*

Lithium, digoxin, antiepileptics.

*Those that interfere with thermoregulation*

By central action:

* neuroleptics, serotoninergic agonists

By interfering with sweating:

* anticholinergics
	+ atropine
	+ tricyclics
	+ H1 (first generation) antihistamines
	+ certain antiparkinsonian drugs
	+ certain antispasmodics
	+ neuroleptics
	+ disopyramide
	+ antimigraine agents

Vasoconstrictors

*Those reducing cardiac output*

By modifying basal metabolic rate:

* Beta blockers
* Diuretics
* Thyroxine

*Drugs that exacerbate the effects of heat*

By reducing arterial pressure:

* All antihypertensives
* Antianginal drugs

*Drugs that alter states of alertness*

Including those in section 4 (Central Nervous System) of the British National Formulary. Particularly 4.1 (Hypnotics and Anxiolytics) and 4.7 (Analgesics).

Further Information

The Heatwave Plan for England

The full Heatwave Plan and accompanying outline the responsibilities of health and social care organisations at different stages during a heatwave.

NHS Choices

NHS Choices can provide additional advice on heatstroke and other heat-related conditions. We have also recommended that patients and the public can phone NHS 111 or their GP if they are concerned about their health or others.

Information on Alert Levels

The heatwave alert levels will be triggered by temperature thresholds (see Annexe 1 of the Heatwave Plan) set according to regional variations. Therefore, the Met Office will be the first place where the alert level is available. The alert level will also subsequently be displayed on the Department of Health, UKHSA and NHS Choices websites.

Information on Air Quality

If you would like more information about air pollution in the UK or health advice for those who may be particularly sensitive to air pollution:

* automated freephone recorded information service run by Defra on 0800 55 66 77, or the Defra website – these provide regular updates on levels of particulate matter (PM10), sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide in local areas.

Additional information on air quality can be found on BBC Weather.

Advice to those with respiratory problems is consistent with the advice to all others during a heatwave – to keep windows shaded and closed when outside temperatures are hotter during the daytime to reduce heat (and ozone) entering the home; and opening windows at night or when it is cooler outside, to aid cooling of their home.

Ozone is the main air pollutant that affects respiratory symptoms and has a diurnal variation, peaking during the hottest period of the day and dropping to very low levels at night. Other air pollutants tend to be at lower levels indoors, and therefore the other main advice to those with respiratory problems is to restrict going outside, especially during the hottest period of the day.

Sun protection

Ten ways to minimize Ultraviolet Ray (UVR)-induced skin and eye damage:

1. Take sensible precautions to avoid sunburn, particularly in children.
2. Remember that a suntan offers only modest protection against further exposure – it is not an indication of good health.
3. Limit unprotected personal exposure to solar radiation, particularly during the 4 hours around midday, even in the UK.
4. Seek shade but remember sunburn can occur even when in partial shade or when cloudy.
5. Remember that overexposure of skin and eyes can occur while swimming and is more likely when there is a high level of reflected UVR, such as from snow and sand.
6. Wear suitable headwear, such as a wide-brimmed hat, to reduce exposure to the face, eyes, head, and neck.
7. Cover skin with clothing giving good protection - examples are long-sleeved shirts and loose clothing with a closed weave.
8. Sunglasses should exclude both direct and peripheral exposure of the eye to UVR – that is, be of a wraparound design.
9. Apply sunblock or broad-band sunscreens with high sun protection factors (at least SPF15) to exposed skin. Apply generously and reapply frequently, especially after activities that remove them, such as swimming or towelling.
10. Remember that certain individuals have abnormal skin responses to UVR and may need medical help. Certain prescribed drugs, medicines, foods, cosmetics, and plant materials can also make people more sensitive to sunlight.

Advice templates: examples

The advice cards which follow should be read in conjunction with the main Heatwave plan for England.

The Heatwave plan describes the heatwave alert service which operates in England from 1 June to 15 September each year. During this period, the Met Office may forecast heatwaves, as defined by forecasts of day and night-time temperatures and their duration.

The heatwave alert service (also known as ‘heat-health watch’) comprises 5 main levels (Levels 0 to 4). Level 0 is year-round long-term planning so that long-term actions are taken to reduce the harm to the health of severe heat when it occurs. Levels 1 to 3 are, based on threshold day and night-time temperatures as defined by the Met Office. These vary from region to region, but the average threshold temperature is 30ºC during the day and 15ºC overnight. Level 4 is a judgement at the national level made because of a cross-government assessment of the weather conditions. Details of individual regional thresholds are given in Annexe 1 of the Heatwave plan.

Level 0: Long-term Planning to Reduce Risk from Heatwaves

Long-term planning includes year-round joint work to reduce the impact of climate change and ensure maximum adaptation to reduce harm from heat waves. This involves influencing urban planning to keep housing, workplaces, transport systems and the built environment cool and energy efficient.

Level 1: Heatwave and Summer Preparedness and Long-Term Planning

During the summer months, social and healthcare services need to ensure that awareness and background preparedness is maintained by implementing the measures set out in the Heatwave plan.

Level 2: Alert and Readiness

This is triggered as soon as the Met Office forecasts that there is a 60% chance of temperatures being high enough on at least 2 consecutive days to have significant effects on health. This will normally occur 2 to 2 days before the event is expected. As death rates rise soon after temperature increases, with many deaths occurring in the first 2 days, this is an important stage to ensure readiness and swift action to reduce harm from a potential heatwave.

Level 3: Heatwave Action

This is triggered as soon as the Met Office confirms that threshold temperatures have been reached in any one region or more. This stage requires specific actions targeted at high-risk groups.

Level 4: National emergency

This is reached when a heatwave is so severe and/or prolonged that its effects extend outside health and social care. The decision to go to a Level 4 is made at the national level and will be taken considering a cross-government assessment of the weather conditions, coordinated by the Civil Contingencies Secretariat (Cabinet Office).

Related Policies

Risk Assessment

Health and Safety

Adult Safeguarding

**Related Guidance**

GOV.UK: Guidance: Heatwave Plan for England

https://www.gov.uk/government/publications/heatwave-plan-for-england

GOV.UK: Supporting vulnerable people before and during a heatwave: for health and social care professionals

https://www.gov.uk/government/publications/heatwave-plan-for-england/supporting-vulnerable-people-before-and-during-a-heatwave-for-health-and-social-care-professionals

NHS: Heat Exhaustion and Heat Stroke

https://www.nhs.uk/conditions/heat-exhaustion-heatstroke/

Health Partners: Medicines can Increase Risk of Heatstroke

https://www.healthpartners.com/hp/about/press-releases/medicines-can-increase-risk-of-heat-stroke.html

Met Office, Heat-Health Alert

https://www.metoffice.gov.uk/weather/warnings-and-advice/seasonal-advice/heat-health-alert-service

GOV.UK: UK Health Security Agency

https://www.gov.uk/government/organisations/uk-health-security-agency

Department for Environment, Food and Rural Affairs: UK Air Information Resource

https://uk-air.defra.gov.uk/

BBC Weather

https://www.bbc.co.uk/weather

NHS: Sunscreen and Sun Safety

https://www.nhs.uk/live-well/seasonal-health/sunscreen-and-sun-safety/

Training Statement

All staff, during induction, are made aware of the organisation's policies and procedures, all of which are used for training updates. All policies and procedures are reviewed and amended where necessary and staff are made aware of any changes. Observations are undertaken to check skills and competencies. Various methods of training are used including one-to-one, online, workbook, group meetings, individual supervision and external courses are sourced as required.

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