

Document level: Trustwide (TW)
Code: EP2
Issue number: 6

CWP Heatwave Plan 2019

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Type of document	Policy
Target audience	All CWP staff
Document purpose	This document is CWP's response to the Heatwave Plan for England 2019

Approving meeting	Emergency Planning Sub Committee	14 th May 2019
Implementation date	May 2019	

CWP documents to be read in conjunction with	
HR6	Mandatory Employee Learning (MEL) policy
GR7	Major Incident Plan
EP1	Business Continuity Management System Policy and Procedures
EP9	Strategic Business Continuity Plan

Document change history	
What is different?	Transferred to new Template
Appendices / electronic forms	N/A
What is the impact of change?	None

Training requirements	No - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Learning and Development (L&D)
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Document consultation	
Clinical Services	Kate Chapman (East), Glenda Bryan (Wirral), Sharon Vernon (West)
Corporate services	Performance & Redesign
External agencies	None

Financial resource implications	None
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External references	
1. NHS England Heatwave Plan 2019	
2. Public Health England Heatwave Plan for England 2019	

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	Yes	Elderly people more likely to suffer from complications due to heatstroke
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	Yes	Client group may be more likely to suffer from complications due to heatstroke
Is there any evidence that some groups are affected differently?	Yes	As above
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable? N/A		
Is the impact of the document likely to be negative?	No	
- If so can the impact be avoided?	No	
- What alternatives are there to achieving the document without the impact?	No	
- Can we reduce the impact by taking different action?	No	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted.		
If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

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1. Introduction

This document is part of Cheshire & Wirral Partnership NHS Foundation Trust's (CWP) response to Public Health England's (PHE) Heatwave Plan for England, which aims to prepare for, alert people to and prevent the major avoidable effects on health during periods of severe heat. It recommends a series of steps for NHS organisations to reduce the risks to health from prolonged exposure to severe heat. This document outlines:

- The Trust's duties and responsibilities during a heatwave;
- The Heat-Health Watch System;
- Those groups at high-risk and vulnerable during should a heatwave occur;
- The main heat-related illnesses;
- Heat protective factors;
- The Trust's action plan.

This document should be read in conjunction with;

- Heatwave documents and information guides published by Public Health England (PHE), which are detailed in section 9 of this document.
- CWP Major Incident Plan
- CWP Strategic Business Continuity Plan
- CWP Business Continuity Management System Policy and Procedures
- Trust Service Line Business Continuity Plans

All documents are available on the Emergency Planning intranet page and / or by contacting the Emergency Planning Team (01244 397 641).

A Heat-Health Watch System operates, based on Met Office forecasts, which will trigger levels of response from the Trust and other health and social care bodies.

1.1 Aim

The CWP Heatwave Plan provides a framework for preparedness, response and recovery, ensuring that CWP is prepared and coordinated to respond in the event of a heatwave.

1.2 Objectives

The objectives of this document are to:

- Provide a framework for advance long-term planning and preparedness, response, and recovery to periods of severe heat;
- Outline the Heat-Health Watch Alert Service Levels and appropriate actions to be taken at each stage;
- Clearly identify the appropriate Trust's roles and responsibilities throughout any periods of severe heat;
- Outline the Trust's internal and external command and control structure for both the response and recovery phases;
- Provide advice and guidance in relation to the high-risk groups, and main heat-related illnesses.

The arrangements outlined here raise Trust awareness of the dangers of excessive heat to health and social care organisations, ensuring that individuals and organisations are prepared to deal with a heatwave when it comes so as to protect the most vulnerable. The plan provides good practice and advice on how to respond to periods of severe heat. It also explains the responsibilities for alerting staff and key Trust stakeholders once a heatwave has been forecast and for advising them how to respond during a heatwave.

The evidence about the risks to health from heatwaves is very extensive from around the world. Excess deaths as a result of periods of severe heat are not just deaths of those who would have died anyway in the next few weeks or months due to illness or old age. There is strong evidence that these summer deaths are indeed "extra" and are the result of heat-related conditions. In contrast to deaths

associated with cold snaps in winter, the rise in mortality as a result of very warm weather follows very sharply – within one or two days of the temperature rising.

This means that:

- By the time a heatwave starts, the window of opportunity for effective action is very short indeed and therefore;
- Advanced planning and preparedness is essential.

We know that effective action, taken early, can reduce the health impacts of exposure to excessive heat. Most of these are simple preventive measures which; to be effective, need to be planned in advance of a heatwave.

1.3 De-escalation and Recovery

At the start of the recovery process, it is vital that a clear recovery strategy is developed and agreed by the Trust Accountable Emergency Officer. This strategy is to be appropriately communicated to all health economy partners;

The recovery strategy will need to cover the following key objectives;

- Ensure all clinical service leads and BCP leads carry out an impact assessment of the heatwave period and report to the Accountable Emergency Officer;
- Ensure all clinical service leads and BCP leads develop a recovery action plan in accordance with the CWP recovery strategy;
- Ensure that all staff are informed of the CWP recovery strategy;
- Consider the financial implications for the organisation. All services are to ensure that they can provide an audit trail of activity and behaviour throughout this phase.

The Accountable Emergency Officer will carry out a full debrief of the heatwave period to incorporate:

- What elements of the response went well;
- What are areas for development;
- Recommendations for improvement for future instances of heatwave ;
- Any other comments.

A full debrief report including recommendations and a summary of the lessons identified will be produced by the CWP emergency planning team for the operations board and made available to all CWP stakeholders.

The full debrief and publication of the subsequent report will take place by the end of the heat-health watch period and reported to the Emergency Planning Sub-Committee.

1.4 Scope

This document will inform CWP staff of the preparedness, response and recovery requirements to respond to a heatwave.

Response and recovery to a heatwave should not be in isolation of Wirral, West Cheshire and East Cheshire health and social care economy responses.

Response to periods of severe heat should be in line with the arrangements detailed within Trust Business Continuity Plans. All Business Continuity Plans are available to staff on the CWP Intranet site.

1.5 Testing and validation

This plan will be tested and validated through exercises developed as part of CWP's annual emergency planning training and exercising programme, the responsibility for which lies with the Emergency Planning Sub-Committee. The plan will be reviewed as necessary following the publication of any subsequent National Plan and in light of learning from incidents, exercises and comments received.

2. Procedure

2.1 Plan Activation

The CWP Heatwave Plan is to be followed in the event of a heatwave. It can be recommended that at heat-health watch level three, the following arrangements are to be considered by the Accountable Emergency Officer;

- Implementation of a Major Incident Team.

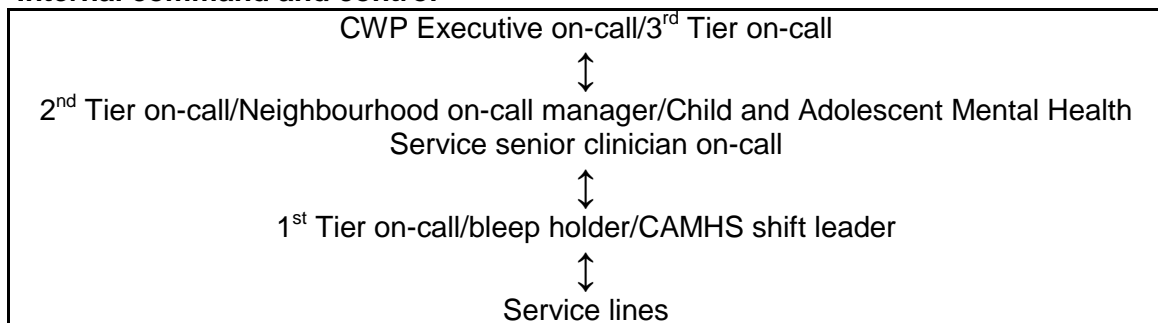
Activation of this plan does not result in CWP declaring a Major Incident.

Note that the CWP Accountable Emergency Officer and/ or Executive On-call will activate the CWP Major Incident Plan where required.

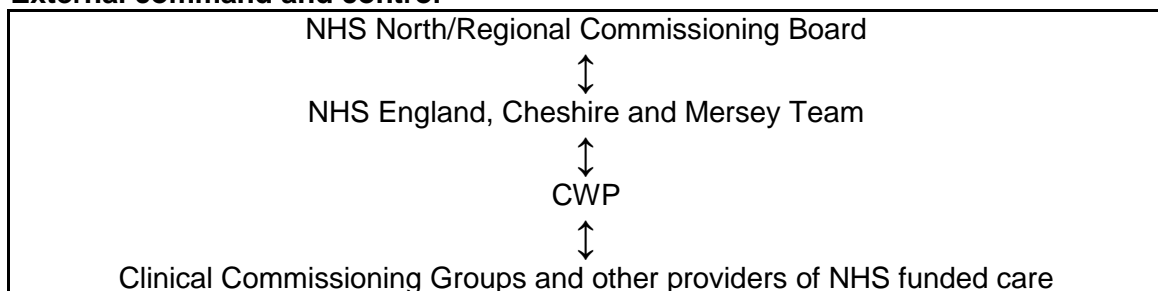
It can be recommended that local Business Continuity plans be activated in order to maintain continuity of services. Activations of such plans are service specific and the current Business Continuity Management System arrangements apply.

CWP has tried and tested command and control arrangements in place. The CWP Heatwave Planning lead will be the Service Director CWP West (Accountable Emergency Officer).

2.2 Internal command and control



2.3 External command and control



3 Duties and responsibilities

CWP will:

- Provide a service to patients and deliver to the service standards agreed locally;
- Work closely with other health and social care organisations to ensure comprehensive preparedness, response and recovery arrangements are delivered across the health economy;
- Set an appropriate framework for preparedness, response and recovery, including relevant command arrangements, to meet the service demands in the event of a heatwave;
- Communicate appropriately with all stakeholders, raising awareness about actions in the event of a heatwave;
- Debrief in the event of a heatwave and ensure lessons identified are imbedded into future planning.

Chief Executive and Directors:

The Chief Executive has overall responsibility for ensuring that the organisation complies with the statutory duties under the Civil Contingencies Act 2004, complies with the NHS England Emergency Preparedness Framework (2015) and Health and Social Care Act (2012). All Directors have a responsibility to be familiar with the Business Continuity Management System Policy and Procedures, and to ensure that Business Continuity Management (BCM) becomes part of the everyday culture for the organisation.

The Executive Team will also ensure that contracts with suppliers of critical goods and services must include a requirement for the supplier's business continuity processes to be approved and exercised to the satisfaction of this organisation.

The Chief Executive is responsible for nominating spokespersons and approving press releases, statements and stories to be used in media handling.

Director of Operations;

The Lead Director, supported by the Executive Team, must ensure that the CWP Heatwave Plan is implemented and to nominate a responsible officer, to be known as the Accountable Emergency Officer, and adequate resources from within the organisation to ensure that business continuity plans are implemented where required.

Accountable Emergency Officer:

The Accountable Emergency Officer leads on the development of Emergency Planning and Business Continuity Planning and is supported by the Emergency Planning Sub-Committee to ensure that emergency preparedness and business continuity arrangements are in place and are robust across Service Lines and Corporate Services.

- Provide operational leadership in the event of a heatwave ensuring that the frameworks for emergency preparedness, resilience and response are met;
- Provide appropriate assurances to the health economy partners;
- Liaise with the CWP Executive's On-call as appropriate;
- Liaise with the communications team as required;
- Represent CWP at Health Tactical Coordinating Group and Strategic Coordinating Group where required;
- Participate in health economy conference calls where required.

CWP Executive On-call will;

- Liaise with the Accountable Emergency Officer as appropriate;
- Participate in out of hours health economy conference calls where required.

CWP Executive's On-call will support all services in the event of a heatwave as appropriate but will not be seeking to make operational decisions on a daily basis; this is to be done by the operational managers in each service.

Director of Finance will;

- Ensure that revenue-generating and cash collection activities are maintained at the normal level in the face of a heatwave.
- Establish effective business continuity planning to combat heat-related threats to these operations, so as to reduce, or remove the impact and/or duration of such threats.
- Ensure the people; processes and technology required are in place to maintain normal services for revenue and cash generation during a heatwave.
- Define and execute policy of managed communication with customers and prospects, in the event that a heatwave deemed to require it.
- Communicate and implement CWP Heatwave Plan to ensure resilience of Finance activities against potential threats to normal service in the event of a heatwave.

- Define the operational response to a heatwave in Finance.
- Minimise the impact and duration of a heatwave affecting this service.
- Ensure effective operational practices are in place and well-rehearsed to ensure swift restoration of normal service following a heatwave.
- Establish and maintain necessary arrangements to enable financial commitments to be met in a heatwave.
- Re-negotiate financial facilities and arrangements as necessary to minimise the effects of a heatwave on the organisation.
- Managing all exceptional financial transactions during a heatwave, including all insurance and banking matters arising.

Associate Directors will;

- Communicate and implement CWP Heatwave Plan to ensure resilience of Human Resources activities against a heatwave threat to normal service.
- Define the operational response to a heatwave in this area.
- Minimise the impact and duration of a heatwave affecting the service.
- Ensure effective operational practices are in place and well-rehearsed to ensure swift restoration of normal service following a heatwave.
- Ensure the welfare needs of staff are met during a heatwave
- Source interim or replacement staff as appropriate to the situation.

Neighbourhood On-call Manager/2nd tier On-call Managers will;

- Evaluate the nature and scale of the response required; and escalate and deescalate as appropriate;
- Communicate with the Accountable Emergency Officer and / or CWP Executive On-call as necessary;

CWP Major Incident Team will;

- Support the Accountable Emergency Officer;
- Maintain the command and control reporting requirements;
- Ensure requests for information are met;
- Relocate to a geographical location most appropriate to supporting the Accountable Emergency Officer where required;
- Complete sitreps where required;

Business Continuity Leads will;

- Evaluate the nature and scale of the response required; and escalate and deescalate as appropriate;
- Communicate with the Accountable Emergency Officer and / or CWP Executive On-call as necessary;
- Ensure that heatwave-related risk assessments and business impact analyses are undertaken for each service and risks entered onto the organisational/departmental risk register
- Ensure that the heat-related training of key staff within each Department is undertaken, including giving a documented localised induction to staff involved in the process
- Ensure that staff are aware of the need to escalate to the appropriate on-call Manager in the event of any disruption to service

Heads of Operations will;

- Evaluate the nature and scale of the response required; and escalate and deescalate as appropriate;
- Communicate with the Accountable Emergency Officer and / or CWP Executive On-call as necessary;
- Plan maintenance, policy, review and testing activities relevant to the Service Line / Service Unit, together with BCP Lead.

- Implement the CWP Heatwave Plan and local BCPs in response to a heatwave affecting the Service Line, together with BCP Lead.
- Ensure all relevant departments within the Service Line are able to discharge their individual responsibilities to normal service levels.

Heads of Clinical Services will;

- Evaluate the nature and scale of the response required; and escalate and deescalate as appropriate;
- Communicate with the Accountable Emergency Officer and / or CWP Executive On-call as necessary;
- Communicate and implement the CWP Heatwave Plan to ensure resilience of service provision against potential heat-related threats to normal service.
- Define the operational response to a heatwave.
- Minimise the impact and duration of heatwave affecting the service.
- Ensure effective operational practices are in place and well-rehearsed to ensure swift restoration of normal service following a heatwave.
- Communicate policy and plans with existing employees together with Line Managers during supervision.
- Ensure policy and plans are highlighted during local induction for all new employees by the relevant manager.

The Emergency Planning Team will;

- Monitor emails and communications from all health economy partners;
- Report to and support the Accountable Emergency Officer as appropriate;
- Maintain an overview of the Met Office and Environment Agency weather forecasts as required;
- Respond to requests for information from the health economy where required;
- Form part of the Major Incident Team as required.

The Associate Director of Communications will;

- Ensure a nominated spokesperson is provided.
- Provide press releases, statements and stories to be used in media handling to the Chief Executive.
- Ensure staff, service users and other stakeholders are informed of situations, as directed by the Major Incident Management Team.
- Notify stakeholders when normal services will be/have been restored and what (if anything) will be done to avoid the same scenario happening in the future.
- Define key messages for staff, service users and partners.
- Ensure that regional and national communications strategies are adhered to as necessary;
- Advise managers on how to inform the public, patients and staff of issues in the event of a heatwave.

All employees will;

- Be familiar with the CWP Heatwave Plan and its associated documents and must be aware of the plans that affect their service and their role following invocation of the business continuity plan.
- Communication with existing employees will be by the Clinical Service Manager and Line Managers via supervision.
- Policy and plans will be highlighted during local induction for all new employees by the relevant manager.
- Any staff who are sub-contracted; bank or agency workers; volunteers; trainee students etc. (NB this list is not exhaustive) will be supported to comply with the policy and plans by the relevant manager.

4 Heat-health watch alert system

4.1 Introduction

From June 2019 the Met Office will operate an alerting system to forecast the possibility and severity of heatwaves which comprises of 5 main levels (Levels 0-4) – each of which should trigger certain actions. This system will be based on Met Office forecasts according to the threshold temperatures set for each part of the country. During normal office hours these alerts will be sent to the emergency planning team who will then forward all level 2 and above alerts to BCP Leads and to Communications Team for alerting staff as appropriate.

The table below is a summary of these levels and the actions required.

Level 0 Long-term planning <i>All year</i>
Level 1 Heatwave and summer preparedness programme <i>1 June – 15 September</i>
Level 2 Heatwave is forecast – Alert and readiness <i>60% risk of heatwave in the next 2-3 days</i>
Level 3 Heatwave action <i>Temperature reached in one or more Met Office National Severe Weather Warning Service regions</i>
Level 4 Major incident – Emergency response <i>Central Government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health</i>

Providers – health and social care staff in all settings (community, hospitals and care homes)

Level 0	Level 1	Level 2	Level 3	Level 4
<p>Long-term planning <i>All year</i> <i>See accompanying document 'Making the Case! For more details</i></p>	<p>Heatwave and Summer preparedness programme <i>1 June – 15 September</i></p>	<p>Heatwave is forecast – Alert and readiness <i>60% risk of heatwave in the next 2–3 days</i></p>	<p>Heatwave Action <i>Temperature reached in one or more Met Office National Severe Weather Warning Service regions</i></p>	<p>Major incident – Emergency response <i>Central Government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health</i></p>
<p>Professional Staff (all settings):</p> <ul style="list-style-type: none"> • Develop systems to identify and improve resilience of high-risk individuals • Request an HHSRS assessment from EH for clients at particular risk. • Encourage cycling/walking where possible to reduce heat levels and poor air quality in urban areas. 	<p>Professional Staff (all settings)</p> <ul style="list-style-type: none"> • Identify high-risk individuals on your caseload and raise awareness of heat illnesses and their prevention among clients and carers (see key public health messages – section 8) • Include risk in care records and consider whether changes might be necessary to care plans in the event of a heatwave (e.g. initiating daily visits by formal or informal care givers for those living alone) 	<p>Professional staff (all settings):</p> <ul style="list-style-type: none"> • Check high-risk people have visitor/ phone call arrangements in place • Reconfirm key public health messages to clients • Check client’s room temperature if visiting 	<p>Professional staff (all settings):</p> <ul style="list-style-type: none"> • Visit/phone high-risk people • Reconfirm key public health messages to clients • Advise carers to contact GP if concerns re health 	<p>NATIONAL EMERGENCY</p> <p>Continue actions as per Level 3 unless advised to the contrary</p> <p>Central government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health and if requiring coordinated multi-agency response</p>
<p>Care Homes and Hospitals</p> <ul style="list-style-type: none"> • Work with commissioners to develop longer term plans to prepare for heatwaves • Make environmental improvements to provide a safe environment for clients in the event of a heatwave • Prepare business continuity plans to cover the 	<p>Care Homes and Hospitals</p> <ul style="list-style-type: none"> • Ensure business continuity plans are in place and implement as required; ensure appropriate contact details are provided to LA/NHS emergency planning officers to facilitate transfer of emergency information • Identify or create cool rooms/areas (able to be 	<p>Care Homes and Hospitals</p> <ul style="list-style-type: none"> • Check indoor temperatures are recorded regularly during the hottest periods for all areas where patients reside • Ensure cool areas are below 26°C • Review and prioritise high-risk people • Ensure sufficient cold water 	<p>Care Homes and Hospitals</p> <ul style="list-style-type: none"> • Activate plans to maintain business continuity – including a possible surge in demand • Check indoor temperatures are recorded regularly during the hottest periods for all areas where patients reside • Ensure staff can help and 	

<p>event of a heatwave (e.g. storage of medicines, computer resilience, etc)</p> <ul style="list-style-type: none"> • Work with partners and staff to raise awareness of the impacts of severe heat and on risk reduction awareness (key public health messages section 8) 	<p>maintained below 26°C) • Install thermometers where vulnerable individuals spend substantial time</p>	<p>and ice</p> <ul style="list-style-type: none"> • Consider weighing clients regularly to identify dehydration and rescheduling physio to cooler hours • Communicate alerts to staff and make sure that they are aware of heatwave plans • Ensure sufficient staffing • Implement business continuity 	<p>advise clients including access to cool rooms, close monitoring of vulnerable individuals, reducing internal temperatures through shading, turning off unnecessary lights/equipment, cooling building at night, ensuring discharge planning takes home temperatures and support into account</p>	
<p>High-risk Groups Community: Over 75, female, living on own and isolated, severe physical or mental illness; learning disability, urban areas, south-facing top flat; alcohol and/or drug dependency, homeless, babies and young children, multiple medications and over-exertion Care home or hospital: over 75, female, frail, severe physical or mental illness; learning disability; multiple medications; babies and young children (hospitals).</p>				
<p>*Because Level 2 is based on a prediction, there may be jumps between levels. Following Level 3, wait until temperatures cool to Level 1 before stopping Level 3 actions. ** Level 4: A decision to issue a Level 4 alert at national level will be taken in light of a cross-government assessment of the weather conditions, co-ordinated by the Civil Contingencies Secretariat</p>				

For the North West of England the system will be activated if during the day the temperature reaches 30°C (86°F) or 15°C (59°F) during the night.

5. Procedure for CWP at each alert level

Levels and responsibilities

The following provides more detailed information on the national heat-health watch levels and the responsibilities of CWP. More details on other agencies responsibilities can be found in the Heatwave Plan for England.

5.1 Level 0: Long-term planning

5.1.1 Explanation

Long-term strategic planning activities include year-round joint working in a multi-agency context to reduce the impact of climate change and ensure maximum adaptation to reduce harm from periods of severe heat, to improve resilience to very hot weather.

5.1.2 Agencies involved

Local preparations at this level include NHS Trusts; Local Health Resilience Partnerships; social services; public health and local authorities, care, residential, nursing homes and the health and wellbeing boards

5.1.3 Long-term planning

This involves influencing community planning to enhance the natural environment and to keep housing, workplaces, transport systems and the built environment cool and energy efficient. For more detailed information please see the PHE Heatwave Plan for England (2013).

5.1.4 Role of CWP

CWP and local health and social care partners will support inpatient and community staff in:

- Developing systems to identify and improve resilience of high-risk individuals
- Requesting a Housing Health and Safety Rating System assessment (HHSRS) assessment from Environmental Health for clients at particular risk (please follow the link for more information <https://www.gov.uk/government/organisations/department-for-communities-and-local-government/series/housing-health-and-safety-rating-system-hhsrs-guidance>)
- Encouraging cycling/walking to work where possible to reduce heat levels and poor air quality in urban areas
- Supporting staff to remain fit and well during spells of hot weather
- Work with commissioners to develop longer term plans to prepare for heatwaves

5.1.5 Role of hospitals

- Make environmental improvements to provide a safe environment for clients in the event of a heatwave – e.g. provide cool rooms
- Prepare business continuity plans to cover the event of a heatwave e.g. storage of medicines, computer resilience etc.
- Work with partners and staff to raise awareness of the impacts of severe heat and on risk reduction awareness

5.1.6 Role of community

- Request an HHSRS assessment from Environmental Health for clients at particular risk
- Prepare business continuity plans to cover the event of a heatwave e.g. storage of medicines, computer resilience etc.
- Work with partners and staff to raise awareness of the impacts of severe heat and on risk reduction awareness.

5.2 Level 1: Heatwave and summer preparedness

5.2.1 Explanation

During the summer months, health and social care services need to ensure that awareness and background preparedness are maintained by the measures set out in the CWP Heatwave Plan.

5.2.2 Role of CWP

CWP and local health and social care partners will support inpatient and community staff in:

- Working with partner agencies to set up systems which will allow them to identify those most at risk from excessive heat and to improve their resilience to very hot weather; (see section 6 on high-risk factors).
- Raising awareness of heat illnesses and their prevention (particularly for caregivers of the old and infirm and parents of infants). Many at-risk individuals are likely to be already receiving care (see key public health messages section 8);
- Where individual households are identified as being at particular risk from hot weather, making a request to Environmental Health to do an assessment using the Housing Health and Safety Rating System (HHSRS), (please follow the link for more information <https://www.gov.uk/government/organisations/department-for-communities-and-local-government/series/housing-health-and-safety-rating-system-hhsrs-guidance>)
- Working actively with the local authority lead on the HHSRS to identify and assess those considered most vulnerable during heatwaves;
- In summer months especially, cycling and walking should be encouraged as a means of transport as this will help to reduce overall heat levels and poor air quality in urban areas due to car use;
- If travelling is necessary, encourage travel in the cooler hours and travel with supplies of water / liquids.

5.2.3 Role of hospitals and other in-patient units

NHS Trusts will raise awareness among staff about the very significant heat-related health risks. Additionally the following preparations should be made:

- **Indoor thermometers** should be installed in each room that vulnerable individuals spend substantial time in (bedrooms, living areas and eating areas) and during a heatwave, indoor temperatures should be monitored at least four times a day;
- **Cool rooms or cool areas should be created.** High-risk groups who are vulnerable to the effects of heat are physiologically unable to cool themselves efficiently once temperatures rise above 26°C. Hospitals should aim to ensure that cool areas are created that do not exceed 26°C, especially in areas with high-risk patients;
- If temperatures exceed 26°C, high-risk individuals should be moved to a cool area that is 26°C or below. For patients who cannot be moved, or for whom a move might be too disorienting, take actions to cool them down (e.g. liquids; use of cool wipes/cool flannel) and enhance surveillance;
- Cool areas can be developed with appropriate indoor and outdoor shading, passive cooling, ventilation, the use of indoor and outdoor plants and if necessary air-conditioning;
- During the summer months, sufficient staff must be available so that appropriate action can be taken in the event of a heatwave;
- Due to the additional risk of psychiatric medications affecting thermoregulation and sweating, mental health trusts and teams need to ensure that hospital environments have a cool room (26°C or below) and that heatwave considerations are included within an individual's Care Programme Approach (CPA);
- Ensure that patients are encouraged to wear light, loose-fitting cotton clothes;
- Include risk in care records and consider whether changes might be necessary to care plans in the event of a heatwave;
- Ensure Business Continuity Plans are in place and implemented as necessary.

5.2.4 Role of community

- Identify any changes to individual care plans for those in high risk groups, including those with chronic illness or severe mental illness, which might be necessary in the event of a heatwave, including initiating daily visits by formal or informal carers to check on people living on their own;
- Working with the families and informal carers of at-risk individuals to ensure **awareness** of the dangers of heat and how to keep cool and to put simple protective measures in place, such as installing proper ventilation and ensuring that fans and fridges are available and in working order;
- Health visitors and school nurses to provide advice to parents and childcare providers and schools and young people respectively regarding behaviours to protect health during hot weather (e.g. fluid intake, reducing excessive sun exposure, avoiding diving into cold water).
- Reviewing surge capacity and the need for and availability of staff in the event of a heatwave, especially if it lasts for more than a few days;
- Ensure Business Continuity Plans are in place and implemented as necessary.

5.3 Level 2: Alert and readiness

5.3.1 Explanation

This is triggered as soon as the Met Office forecasts that there is a 60% chance of temperatures being high enough on at least two consecutive days to have significant effects on health. This will normally occur 2–3 days before the event is expected. As death rates rise soon after temperature increases, with many deaths occurring in the first two days, this is an important stage to ensure readiness and swift action to reduce harm from a potential heatwave.

5.3.2 Role of CWP

CWP and local health and social care partners will support inpatient and community staff in:

- Communicating Level 2 alerts to BCP Leads and make sure that they are aware of the CWP heatwave plan and action cards;
- Implement business continuity as required;
- Identifying any staff falling into the vulnerable category;
- Distributing PHE advice to community health and social care workers who are in contact with all those defined as at-risk living at home;
- Identify provision of cool drinks for staff during the normal working day.

5.3.3 Role of hospitals and other in-patient units:

- Ensure that cool rooms are ready and consistently at 26°C or below;
- Check that indoor thermometers are in place and recording sheets printed to measure room temperature regularly during the hottest parts of the day in all areas where patients reside;
- Review and prioritise high-risk people;
- Identify naturally cooler rooms that vulnerable patients can be moved to if necessary;
- Identify particularly vulnerable individuals (those with chronic / severe illness, on multiple medications, or who are bed bound) who may be prioritised for time in a cool room;
- Obtain supplies of ice / cool water and provision of cool drinks for in-patients and staff during the normal working day;
- Provide water-rich foods such as fruits, yoghurt and salads;
- Consider more frequent change of bed linen and storage. Plastic continence pants/pads should be avoided;
- Provide regular wet towels/wipes for head and neck only, foot baths;
- Weigh regularly – weight loss as a measure of dehydration;
- Adjust physiotherapy schedules to occur outside 1100 – 1600 if possible;
- Discuss possible adjustments of medications with GP / Consultants before heatwave;
- Ensure that staffing levels will be sufficient to cover the anticipated heatwave period;

- Repeat messages on risk and protective measures to staff;
- Ensure that visits or phone calls are made to advise high-risk individuals (those with severe mental illness, living on their own, or without regular contact with a carer);
- Provide cool drinks for in-patients and staff during the normal working day;
- Ensure that patients are encouraged to wear light, loose-fitting cotton clothes.

5.3.4 Role of community

- Have identified those in their community who are at particularly high-risk from a heatwave;
- Check high-risk people have daily visit / phone call arrangements in place by a formal or informal carer (family, neighbour, friend, voluntary and community sector workers) during the heatwave period (see section 6 on high-risk factors).
- Have considered visits especially for those living on their own and without the contact of a daily carer;
- Have checked the client's room temperature if visiting;
- Have distributed PHE advice/key public health messages to all those defined as at-risk living at home.

5.4 Level 3: Heatwave action

5.4.1 Explanation

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.

5.4.2 Role of CWP

CWP and local health and social care partners will support inpatient and community staff in:

- Communicate Level 3 alerts to all staff
- Continue to distribute advice/key public health messages to people at risk;
- Ensure that health and social care staff are aware of risk and protective factors and consider, where appropriate, daily visits/phone calls for high-risk individuals living on their own who have no regular daily contacts;
- Consider the welfare of staff working during the hottest part of the day;
- Implement BCPs as necessary.

5.4.3 Role of hospitals and other in-patient units:

- Implement appropriate protective factors, including regular supplies and assistance with cold drinks;
- Ensure that cool rooms are consistently below 26°C as this is the temperature threshold at which many vulnerable patients find it difficult to cool themselves naturally if sweating is impaired due to old age, sickness or medication;
- Check that indoor temperatures are recorded during the hottest period for all areas where patients reside;
- Identify and monitor closely particularly vulnerable individuals (those with chronic/severe illness, on multiple medications, or who are bed-bound) for prioritisation in cool rooms;
- Monitor and minimise temperatures in all patient areas and take action if the temperature is a significant risk to patient safety, as high risk patients may suffer undue health effects including worsening cardiovascular or respiratory symptoms at temperatures exceeding 26°C;
- Reduce internal temperature by turning off unnecessary lights and electrical equipment;
- Consider moving visiting hours to mornings and evenings to reduce afternoon heat from increased numbers of people;
- Make the most of cooling the building at night with cross ventilation. Additionally, high night-time temperatures in particular have been found to be associated with higher mortality rates. Due to the potential increased risk of cross infection that may be induced by cross ventilation, they should ensure increased vigilance of other routine infection control measures;

- Seek early medical help if an individual starts to become unwell;
- Ensure that discharge planning takes into account the temperature of accommodation and level of daily care during the heatwave period;
- NHS England Area Teams, Clinical Commissioning Groups, local authorities, and the Care Quality Commission have a potential role in monitoring whether the above measures are implemented.

5.4.4 Role of community

- Continue to distribute advice/key public health messages to people at risk;
- Be aware of risk and protective factors;
- Consider, where appropriate, daily visits/phone calls for high-risk individuals living on their own who have no regular daily contacts;
- Advise social care or informal carers to contact the GP if there are concerns about an individual's health;
- Ensure that visits or phone calls are made to check on high-risk individuals (those with severe mental illness, living on their own, or without regular contact with a carer).

5.5 Level 4: Emergency

5.5.1 Explanation

Declaring a Level 4 Alert indicates a major incident. The Government will decide whether to go to Level 4 when there is a very severe heatwave which will last for a considerable period of time and will also affect transport, food and water, energy supplies and businesses as well as health and social care services. At this level, illness and death may occur among the fit and healthy and not just in high-risk groups and will require a multi-sector response at national and regional levels.

The decision to issue a Level 4 Alert is made at national level and is not triggered automatically by a greater than 4 day period of severe hot weather.

5.5.2 Role of CWP

CWP and local health and social care partners will support inpatient and community staff in:

- In the event of a major incident being declared, all existing emergency policies and procedures will apply;
- All level 3 responsibilities will also continue unless advised to the contrary.

5.5.3 Declaration of a National Level 4 Emergency – local health and social care economy actions

- All Level 3 actions continue during the emergency period.
- NHS England Area Teams should identify local healthcare providers most vulnerable to heatwaves and ensure that safety measures are taken, for example, the closure of wards that are too hot for vulnerable patients with transfer to safer locations enabling the provider to continue to operate safely;
- During extreme conditions, it is not only non-high-risk groups that may be at risk. Therefore, further risk appraisals should be made as to how the wider population is likely to be affected.
- Risk appraisals should be made regarding continuation of public or sporting events, the potential closure of nurseries, schools, provision of local cool centres, reducing urban heat and deteriorating air quality by minimising unnecessary transport and energy use.

5.5.4 Declaration of a National Level 4 Emergency – national actions

- The decision to issue a level 4 Alert is made at national level will be taken in light of a cross-government assessment of the weather conditions, coordinated by the Civil Contingencies Secretariat (Cabinet Office);
- Consultation will take place with a range of interested departments / agencies including the DH emergency planning functions, the Met Office, Department for Transport, DCLG, and others as required;

- PHE will continue to monitor syndromic and mortality surveillance and produce a weekly report for inclusion within a daily PHE heatwave output.

5.6 Communicating alerts

During normal office hours these alerts will be sent to the emergency planning team who will then forward level 2 and above to BCP Leads and to Communications Team for alerting staff around the organisation.

6. High-risk factors and vulnerable groups of people

Certain factors may contribute to a person being more vulnerable to the effects of heat, these include:

6.1 Older age

Especially women over 75 years old, or those living on their own who are socially isolated or in a care home. Older women appear to be more vulnerable to the effects of heat than older men, possible due to having fewer sweat glands and being more likely to live on their own.

6.2 Chronic and severe illness

Including heart conditions, cerebrovascular disease, peripheral vascular disease, diabetes and obesity, respiratory disease, renal insufficiency, Parkinson's disease and difficulties with mobility, learning disability or severe mental illness, Alzheimer's and related diseases. Medications that potentially affect renal function, the body's ability to sweat, thermoregulation or electrolyte balance can make this group more vulnerable to the effects of heat.

6.3 Inability to adapt behaviour to keep cool

Having Alzheimer's, a disability, a learning disability, being bed bound, drug and alcohol dependencies, babies and the very young.

6.4 Environmental factors and overexposure

Living in urban areas and south facing top floor flats, being homeless, activities or jobs that are in hot places or outdoors and include high levels of physical exertion.

6.5 Infants

Infants are vulnerable to heat due to immature thermoregulation, smaller body mass and blood volume, high dependency level, dehydration risk in case of diarrhoea.

6.6 Homeless people

Those who sleep in shelters as well as outdoors, may be at increased risk from heatwaves. Higher rates of chronic disease (often poorly-controlled), smoking, respiratory conditions, substance dependencies and mental illness are more frequent in homeless populations than in the general population. These risk factors increase the risks of heat-related morbidity and mortality, on top of social isolation, lack of air conditioning, cognitive impairment, living alone and being exposed to urban heat islands.

6.7 People with alcohol dependence and drug dependence

Often have poorer overall health and increased social isolation which can increase their risk of heat stress.

6.8 Other

In a moderate heatwave, it is mainly the high-risk groups mentioned above who are affected. However, during an extreme heatwave such as the one affecting France in 2003, normally fit and healthy people can also be affected.

A peak in homicide and suicide rates during previous heatwaves in the UK has been observed. With local Social Services, CWP has a role in identifying those people locally who are most at risk.

Managers must consider that some of their staff may suffer from a chronic or severe illness and / or may work in a hot environment and should consider them to fall into the vulnerable category. They

may be more susceptible to illness during a heatwave. Further advice and support is available through accessing the Workforce Wellbeing Service.

7. Main 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 as a result of water or sodium depletion, with non-specific features of malaise, vomiting and circulatory collapse, and is present when the core 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 eight hours. It can result in cell death, organ failure, brain damage or death. Heatstroke can be either classical or exertional (e.g. in athletes).

Whatever the underlying cause of heat related symptoms, the treatment is always the same – move the person to somewhere cooler and cool them down.

8. Key public health messages

The key message for preventing heat-related illness and death is to keep cool! The best ways to do this include the following.

8.1 Stay out of the heat

- Keep out of the sun between 11.00am and 3.00pm;
- If you have to go out in the heat, walk in the shade, apply sunscreen and wear a hat and light scarf;
- Avoid extreme physical exertion;
- Wear light, loose-fitting cotton clothes.

8.2 Cool yourself down

- Have plenty of cold drinks and avoid excess alcohol, caffeine and hot drinks;
- Eat cold foods, particularly salads and fruit with a high water content;
- Take a cool shower, bath or body wash;
- Sprinkle water over the skin or clothing, or keep a damp cloth on the back of your neck
- Ensure you have regular breaks.

8.3 Keep your environment cool

- Keeping your living space cool is especially important for infants, the elderly or those with chronic health conditions or who cannot look after themselves;
- Place a thermometer in your main living room and bedroom to keep a check on the temperature;
- Keep windows that are exposed to the sun closed during the day and open windows at night when the temperature has dropped;
- Close curtains that receive morning or afternoon sun. However, care should be taken with metal blinds and dark curtains, as these can absorb heat – consider replacing or putting reflective material in-between them and the window space;
- Turn off non-essential lights and electrical equipment – they generate heat;
- Keep indoor plants and bowls of water in the house as evaporation helps cool the air;

- If possible, move into a cooler room, especially for sleeping;
- Electric fans may provide some relief, if temperatures are below 35°C¹
- Use air conditioning in vehicles
- Try and park in shaded areas

Longer term:

- Consider putting up external shading outside windows;
- Use pale, reflective external paints;
- Have your loft and cavity walls insulated – this keeps the heat in when it is cold and out when it is hot;
- Grow trees and leafy plants near windows to act as natural air-conditioners (see Making the Case document – see section 9).

8.4 Look out for others

- Keep an eye on isolated, elderly, ill or very young people and make sure they are able to keep cool;
- Ensure that babies, children or elderly people are not left alone in stationary cars;
- Check on elderly or sick neighbours, family or friends every day during a heatwave;
- Be alert and call a doctor or social services if someone is unwell or further help is needed.

8.5 If you have a health problem

- Keep medicines below 25°C or in the refrigerator (read the storage instructions on the packaging); see appendix 2
- Seek medical advice if you are suffering from a chronic medical condition or taking multiple medications.

8.6 If you or others feel unwell

- Try to get help if you feel dizzy, weak, anxious or have intense thirst and headache; move to a cool place as soon as possible and measure your body temperature;
- Drink some water or fruit juice to rehydrate;
- Rest immediately in a cool place if you have painful muscular spasms (particularly in the legs, arms or abdomen, in many cases after sustained exercise during very hot weather), drink oral rehydration solutions containing electrolytes;
- Medical attention is needed if heat cramps last more than one hour;
- Consult your doctor if you feel unusual symptoms or if symptoms persist.

9. Links to useful websites including to the National Heatwave Plan for England and associated guidance leaflets

[CWP Emergency Planning website](#)

The full heatwave plan and all the accompanying documents listed below outline the responsibilities of health and social care organisations at different stages during a heatwave and can be accessed on the [Department of Health website](#)

Heatwave Plan for England 2019 – Protecting health and reducing harm from severe heat and heatwaves

Heatwave Plan for England – Making the Case: the impact of heat on health – *now and in the future*

Heatwave Plan for England – Supporting vulnerable people before and during a heatwave – Advice for health and social care professionals

¹ Use of fans: at temperatures above 35°C fans may not prevent heat-related illness. Additionally, fans can cause excess dehydration. The advice is to place the fan at a certain distance from people, not aiming it directly on the body and to have regular drinks. This is especially important in the case of sick people confined to bed.

Heatwave Plan for England – Looking after Yourself and Others during hot weather – the latest advice

Copies of the public information leaflet and fact sheets for health and social care professionals and care, residential and nursing care home managers can be downloaded from the [Department of Health website](#)

NHS Choices advice on being prepared for a heatwave with advice on heatstroke and other heat-related conditions can be accessed [here](#) and [here](#).

MetOffice advice on sunburn can be accessed [here](#).

Information on alert levels can be found on the met office website at www.metoffice.gov.uk/weather/warnings-and-advice/seasonal-advice.

Information on air quality can be found at: <http://uk-air.defra.gov.uk/> or by calling the freephone Air Pollution Information Service on 0800 55 66 77 or on local news stations, or follow UK-AIR on Twitter: @DefraUKAIR

Advice on skin protection during hot weather can be found on the [Cancer Research UK SunSmart campaign website](#).

Appendix 1 - Heatwave guidance for staff

Supporting vulnerable people before and during a heatwave

This guidance is adapted from the Heatwave Guidance published by the Department of Health 2013.

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 heatwaves are likely to become more common in England. In one hot spell in London in August 2003, deaths among people aged over 75 rose by 60%.

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. Ideally these should be complete by the beginning of June.

1. Who is at risk?

There are certain factors that increase an individual's risk during a heatwave. Health and social care workers are in a good position to assess individual levels of risk.

These include:

- **Older age:** especially women over 75 and/or living on their own and who are socially isolated, or in a care home;
- **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 (see heat-related illnesses section 7);
- **Inability to adapt behaviour to keep cool:** having Alzheimer's, a disability, people who are bed-bound, people who take too much alcohol; babies and the very young;
- **People taking certain types of medication** (see Appendix 2);
- **Environmental factors and overexposure:** living in a top floor flat, being homeless.

2. What are the risks?

The main causes of illness and death during a heatwave are respiratory and cardiovascular diseases.

Sweating and dehydration affect electrolyte balance, for people on medications that control electrolyte balance or cardiac function; this can also be a risk. Psychoactive drugs (amongst others) may affect the ability to sweat and can make a person more vulnerable to the affects of heat.

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.

Heat exhaustion is usually one of the first signs that someone is at risk of developing heatstroke. Symptoms include headaches, dizziness, nausea and vomiting; muscle weakness or cramps, pale skin, weak pulse and high temperature.

Heatstroke can develop if the symptoms of heat exhaustion are left untreated. It can also occur suddenly and without warning. Symptoms include confusion and disorientation, convulsions, unconsciousness, racing, thumping pulse, flushed, hot and dry skin and very sudden rise in temperature. Heatstroke can result in organ failure, brain damage or death.

Whatever the underlying cause of heat-related symptoms, the treatment is to move the person somewhere cooler and cool them down.

3. 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 ahead 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, living alone is likely to need at least daily contact, whether by care workers, volunteers or informal carers. Older people, with chronic or serious illness, mobility or mental health problems, who are on certain medication, or living in accommodation that is hard to keep cool, will probably need extra care and support.

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 the person's home or room can be properly ventilated, without causing any additional health risk, discomfort or security problems;
- Check any south-facing windows, which let in most sunlight, can be shaded, preferably with curtains with pale, reflective linings. Metal venetian blinds may make things worse;

Facilities

- Check fridges and freezers work properly;
- Check fans and air conditioning 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.

Organisation

- Check that extra care and support is available if needed;
- Check that the person can contact the primary care team if one of their informal carers is unavailable;
- Check that their care plan contains contact details for their GP, other care workers and informal carers;
- Check that there are adequate arrangements for food shopping.

4. If a heatwave is forecast for your region

- Make sure you have taken the steps outlined above;
- Monitor the current situation by checking the 'Heat-Health Watch' level on the internet (www.metoffice.gov.uk) or listening to local weather news;
- 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 PHE website;
- Suggest people at particular risk consult their GP about possible changes to their treatment and / or medication (see Appendix 2).

5. During a heatwave

How to keep out the heat

- Keep curtains at windows exposed to the sun closed while the temperature outside is higher than it is inside;
- 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;
- Water external and internal plants to help cool air;
- Advise the person to stay out of the sun, especially between the hours of 11.00am and 3.00pm;
- Advise buying a fan, particularly if their home is difficult to keep cool;

- Advise them to stay in the shade and wear a hat, sunscreen and light clothing if going outside.

Keep body temperatures down

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

Provide extra care

- Keep in regular contact throughout the heatwave, and try to visit at least once a day;
- Keep giving advice on what to do to help keep cool;
- Check that their care plan has full details of their informal carers and other support, in case extra help is needed.;
- Ensure that people over 65 are encouraged to increase their fluid intake.

Be alert

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

- Difficulties in sleeping, drowsiness, faintness and changes in behaviour;
- Increased body temperature;
- Difficulty breathing and increased heart rate;
- Dehydration, nausea or vomiting;
- Worsening health problems, especially heart or respiratory problems.

6. Emergency treatment

If you suspect someone has heatstroke, call 999. While waiting for the ambulance:

- Take the person's temperature;
- If possible, move them somewhere cooler;
- 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;
- Encourage them to drink fluids, if they are conscious;
- Do **not** give aspirin or paracetamol.

7. Additional notes

People with severe or chronic illness are likely to be at particular risk:

- Respiratory disease;
- Cardiovascular and cerebrovascular conditions;
- Diabetes and obesity;
- Severe mental illness;
- Parkinson's disease;
- Renal insufficiency;
- Peripheral vascular conditions;
- Alzheimer's or related diseases.

Appendix 2 - Medications, heatstroke and storing medications during a heatwave

Medications likely to provoke or increase the severity of heatstroke		
Those causing dehydration or electrolyte imbalance	Diuretics, especially loop diuretics Any drug which causes diarrhoea or vomiting (colchicine, antibiotics, codeine)	
Those likely to reduce renal function	NSAIDS, sulphonamides, indinavir, ciclosporin	
Those with levels affected by dehydration	Lithium, digoxin, antiepileptics, biguanides, statins	
Those that interfere with thermoregulation	By central action	Neuroleptics, serotonergic agonists
	By interfering with sweating	Anticholinergics: – Atropine, hyoscine – Tricyclics – H1 (first generation) antihistamines – Certain antiparkinsonian drugs – Certain antispasmodics – Neuroleptics – Disopyramide – Antimigraine agents
		Vasoconstrictors - Phenylephrine
		Those reducing cardiac output: - beta blockers - diuretics
	By modifying basal metabolic rate	Levothyroxine
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) - drugs used in sleep disorders)		

Storage of Medicines

Medicines that must be stored in a fridge may deteriorate in a heatwave if the fridge does not keep the medication cool enough. Most fridge-storage medicines need to be kept between 2 and 8 degrees Celsius, so the temperature control in a patient's fridge may need to be adjusted during a heatwave to meet this requirement. The "cold chain" requirements for medicines such as vaccines must be maintained at all times, but this is particularly important during a heatwave. It is very important that medicines are not frozen or stored in the freezer, because freezing can damage some medicines.

For medicines that are not normally stored in a fridge, manufacturers generally guarantee that they remain stable if stored below 25 degrees Celsius. In a heatwave, ambient temperatures may rise above this. To protect these medicines, encourage patients to store them somewhere cool out of direct sunlight. Avoid places that get very hot – such as in cars, or on sunny windowsills etc. Some medicines that are not normally stored in a fridge can be stored in the fridge during a heatwave; however others should not be refrigerated. The package leaflet should be checked and clarification sought from the manufacturer or a pharmacist if necessary. It is important to store medicines out of the sight and reach of children.

Hospital wards and any other institutions where medicines are stored should monitor room temperatures during a heatwave.

Some products are particularly prone to deteriorate in the heat, and these include creams and lotions, which may separate out, and some types of capsules which may melt or split.

It is not possible to give general advice on what will happen to a medicine if it is stored at the incorrect temperature and so a pharmacist should be consulted for guidance if necessary.

Side Effects of Medicines

There is very limited published information available on the adverse effects of drug treatment during excessive heat exposure. Also, it is sometimes not clear to what extent the increased risk is due to medication and not to the underlying disease being treated (1).

The elderly, young children, and people with heart or respiratory conditions are examples of individuals at greater risk of harm in hot environments, but some medicines also pose particular risks (2). For example, in one study, 59 out of 151 children (39.1%) taking topiramate experienced potentially serious symptoms related to hypohidrosis (reduced perspiration). The authors suggest that paediatric epileptic patients taking topiramate should avoid hot and humid environments (3). Certain medical conditions carry risks because affected patients may take a variety of medicines affecting heat tolerance (e.g. Parkinson's disease) (4). Some medicines potentially cause multiple side effects which affect the body's heat response e.g. neuroleptics can cause decreased sweating, raised body temperature, and hypotension; they may also adversely affect CNS thermoregulation.

Table 1 below suggests some side effects that could theoretically be a problem for patients in a heatwave, together with examples of oral medicines that can cause them. It is not a list based upon clinical research, but is mostly derived from three published lists which appear to be opinion-based (1,2,5) the current and original authors' opinions, and a fourth publication which cites some published evidence to support its conclusions (4). Table 1 omits injections only given in hospital, and gives no indication of the likelihood of the reactions described or the severity of impact.

The effects of some drugs are not clear. For example, thyroxine increases heat production via metabolism, but the effects of regularly monitored, chronic substitution therapy with levothyroxine during a heatwave have not been described.

Patients already suffering from hyperthermia could find some of their symptoms exacerbated by certain medicines depending upon the severity of their condition. So, drugs that cause renal impairment might hasten the deterioration of kidney function, for example, and sedating medicines might worsen drowsiness or make sufferers appear confused. Medicines that can cause electrolyte imbalance may also be a concern in some hyperthermia sufferers (many antidepressants can cause hyponatraemia, for example).

Practical advice for the appropriate action or adjustment of drug treatment in a heatwave situation is limited (1). However, it is suggested that patients' medication should be reviewed and the risks and benefits of any changes evaluated (2). Patients at risk should be closely monitored (4).

Table 1: Patient reactions to medicines that could pose problems in a heatwave

Reaction	Example Medicines
Elevated body temperature as part of a group of side effects or 'syndrome'	<ul style="list-style-type: none"> • e.g. medicines causing neuroleptic malignant syndrome (e.g. neuroleptics), serotonin syndrome, anticholinergic drug excess. • Pyrexia can be a feature of systemic hypersensitivity to many drugs.
"Hot flushes", fever-like side effects, or feeling hot	<ul style="list-style-type: none"> • Gonadorelin analogues (e.g. goserelin); bicalutamide and cyproterone in men; anastrozole, tamoxifen and related drugs in women. • Many others including: atomoxetine, dipyridamole, duloxetine, methadone (chronic maintenance therapy), PEGinterferon, sertraline, topiramate, triptans, venlafaxine.

Inhibition of CNS thermoregulation	<ul style="list-style-type: none"> e.g. neuroleptics and SSRIs.
Reduced thirst	<ul style="list-style-type: none"> e.g. ACE inhibitors, angiotensin-II receptor antagonists ('sartans'), neuroleptics, carbamazepine, anti-Parkinson drugs.
Impaired sweating (leading to raised body temperature)	<ul style="list-style-type: none"> Medicines with antimuscarinic actions (e.g. alimemazine, chlorpromazine, amitriptyline, hyoscine, oxybutynin, procyclidine). Topiramate.
Sedation	<ul style="list-style-type: none"> Medicines explicitly prescribed for their sedating effect (e.g. benzodiazepines and 'Z-drugs') or medicines that commonly cause drowsiness (e.g. sedating antihistamines, antimuscarinics, antidepressants, antiepileptics, dopaminergic drugs used to treat Parkinson's disease), may affect judgement and reduce perception of overheating.
Dehydration or electrolyte imbalance	<ul style="list-style-type: none"> Diuretics and ACE inhibitors/ angiotensin-II receptor antagonists. Hyponatraemia caused by diuretics can be worsened by excess fluid intake. Drugs that cause vomiting or diarrhoea.
Reduced cardiac output	<ul style="list-style-type: none"> Could affect body's ability to dissipate heat e.g. beta-blockers.
Increased drug toxicity	<ul style="list-style-type: none"> Dehydration might theoretically concentrate some drugs in the body and cause symptoms of toxicity. Lithium is an important example that is sometimes seen in practice. Direct exposure to heat may increase the release of medicines from some transdermal formulations, potentially causing toxicity e.g. fentanyl patches (6)
Hypotension	<ul style="list-style-type: none"> May increase risk of fainting and/or flushing e.g. alcohol, antihypertensives and vasodilators (e.g. nitrates, calcium channel blockers), some tricyclic antidepressants.

Summary

- Factors to consider during a heatwave in relation to the use of medicines include:
 - Appropriate storage of medicines, as some medicines could deteriorate in the hot conditions.
 - Side effects of some medicines which may affect a person's response to heat and increase the risk of heat exhaustion or heatstroke.
- There is very limited published information available on the adverse effects of drug treatment during excessive heat exposure.
- Practical advice for the appropriate action or adjustment of drug treatment in a heatwave situation is limited. However, it is suggested that patients' medication should be reviewed and the risks and benefits of any changes evaluated. Patients at risk should be closely monitored.

Appendix 3 - Dehydration: preventing side-effects of medications if you are dehydrated

In a heatwave we are at risk of becoming **dehydrated**, which can affect how medication is handled within the body leading to higher drug levels (and potential toxicity) and the potential for damage to the kidneys.

Dehydration means that your body does not have as much water and fluids as it should. Being dehydrated may harm your kidneys. The damage may be made worse by certain medications you may be taking and might lead to you being admitted to hospital.

The symptoms of dehydration include:

- A dry mouth;
- Weakness;
- Your urine may be dark and there may only be a small amount;
- When you pinch your skin it may not spring back to normal as quickly as usual.

If you develop sickness and / or diarrhoea you are at risk of dehydration.

Excessive heat from the sun can also cause dehydration. You should be aware of this during hot summers and foreign holidays to hot climates.

Please follow these steps to help avoid problems when you become dehydrated.

- 1) Keep drinking water to re-hydrate, aim to drink at least 6-8 cups a day (one cup = 200ml).
- 2) If you have not passed urine for more than six to eight hours then speak to your doctor, they may need to check your kidney function.
- 3) Check with your doctor or pharmacist which medications you should stop taking when you are dehydrated.

This is especially important if you are taking any of the following because they may affect how well your kidneys are working:

Blood pressure and heart tablets:

Ramipril, Lisinopril, Enalapril – there are others – they all end with the letters “.....pril”
Losartan, Candesartan, Irbesartan – there are others - they all end with the letters “....sartan”

Water tablets (diuretics):

Furosemide, Bumetanide, Metolozone, Bendroflumethiazide (this drug is also used to reduce high blood pressure)

Diabetic tablets:

Metformin

Anti-inflammatory painkillers:

Ibuprofen, Diclofenac, Naproxen, Indometacin, Piroxicam, Ketoprofen, Mefenamic acid, Etoricoxib and Meloxicam

Lithium:

If you are taking Lithium and become dehydrated you must contact your GP within 24 hours for advice.

If your symptoms continue for more than 48 hours and you have missed doses of the above medications, please consult your doctor.

NB: Information courtesy of Pharmacy Department. Glan Clwyd Hospital, Betsi Cadwaladr University Health Board

Storing medicines during a heat wave (Adapted from UKMI Which medicines could cause problems for patients during a heatwave? Aug 2012)

Medicines that must be stored in a fridge may deteriorate in a heatwave if the fridge does not keep the medication cool enough. Most fridge-storage medicines need to be kept between 2 and 8 degrees Celsius, so the temperature control may need to be turned down during a heat wave. It is very important that medicines are not frozen or stored in the freezer, because freezing can damage some medicines.

Every effort should be made to ensure that the temperature in clinic rooms stays below 25C including the use of air conditioning unit if available, opening windows to create air flow and closing blinds to shield from the sun.

For medicines that are not normally stored in a fridge manufacturers generally guarantee that they remain stable if stored at room temperature ie below 25 degrees Celsius. In a heat wave, temperatures may rise above this. To protect these medicines during a heat wave, they should be stored somewhere cool out of direct sunlight (but not in the fridge). Avoid places that get very hot – such as in cars, or on sunny windowsills etc. It is important to store them out of the sight and reach of children.

Some products are particularly prone to deteriorate in the heat, and these include creams and lotions, which may separate out, and some types of capsules which may melt or split. Contact the pharmacy team for advice if medicines have been stored above 25C for more than 4 days or if any change in the appearance of the medicine is noted.

Appendix 4 - Guidance for those looking after schoolchildren and those in early years settings during heatwaves

Outdoors

- On very hot days (i.e. where temperatures are in excess of 30°C) children should not take part in vigorous physical activity.
- Children playing outdoors should be encouraged to stay in the shade as much as possible.
- Loose, light-coloured clothing should be worn to help children keep cool and hats of a closed construction with wide brims should be worn to avoid sunburn.
- Thin clothing or sun cream should be used to protect skin if children are playing or taking lessons outdoors for more than 20 minutes.
- Children must be provided with plenty of cool water *and encouraged to drink more than usual when conditions are hot. *The temperature of water supplied from the cold tap is adequate for this purpose.

Indoors

- Windows and other ventilation openings should be opened during the cool of early morning or preferably overnight to allow stored heat to escape from the building. It is important to check insurance conditions and the need for security if windows are to be left open overnight.
- Windows and other ventilation openings should not be closed, but their openings reduced when the outdoor air becomes warmer than the air indoors. This should help keep rooms cool whilst allowing adequate ventilation.
- Use outdoor sun awnings if available, or indoor blinds, but do not let solar shading devices block ventilation openings or windows.
- Keep the use of electric lighting to a minimum during heatwaves.
- All electrical equipment, including computers, monitors and printers should be switched off when not in use and should not be left in 'standby mode'. Electrical equipment, when left on, or in 'standby' mode generates heat.

Which children are likely to be most affected by high temperatures?

Children's susceptibility to high temperatures varies; those who are overweight or who are taking medication may be at increased risk of adverse effects. Children under four years of age are also at increased risk.

Some children with disabilities or complex health needs may be more susceptible to temperature extremes. The school nurse, community health practitioner, family health visitor or the child's specialist health professional may be able to advise on the particular needs of the individual child. Schools need to provide for children's individual needs. Support staff should be made aware of the risks and how to manage them.

Further information is available from the Health Protection Agency website, pending migration to the PHE site: [Looking after schoolchildren and those in early years settings during heatwaves: Guidance for teachers and other professionals](#)

Appendix 5 - Action Cards

ACTION CARD - Community Team Managers	
Role:	To manage community teams, (including District Nurses, Community Matrons and Health Visitors) & Community Psychiatric Nurses (CPNs) supporting staff and clients
Reports to:	Clinical Service Manager

National Heatwave Plan - Level 0 long-term planning

Long-term planning to protect vulnerable people during heatwaves

1. Put in place systems to identify high-risk individuals
2. Raise awareness among staff of the Housing Health and Safety Rating System assessment accessed via Environmental Health
3. Prepare business continuity plans to cover the event of a heatwave
4. Raise awareness among staff of the impacts of severe heat and risk reduction awareness

National Heatwave Plan - Level 1 heatwave and summer preparedness programme

Readiness for the heatwave season (1 June -15 September)

1. Brief staff on the principles and core elements of the national Heatwave Plan and CWP Heatwave Plan 2013 and action cards.
2. Identify a list of clients at risk during a heatwave and include details in CPA.
3. Raise awareness of key public health messages among staff for dissemination to clients and carers.
4. Ensure BCPs are in place.

National Heatwave Plan - Level 2 alert and readiness

National alert that there is a 60% chance of a heatwave in one English region – this normally occurs three days before the event.

If notified by emergency planning / BCP leads that level 2 conditions exist continue all level 1 actions and:

1. Contact staff and instruct them to prioritise their current list of clients at risk; check high-risk people have visitor/phone call arrangements in place
2. Reconfirm key public health messages
3. Identify what non-essential activities could cease.
4. Make provision for surge capacity.
5. Be prepared to attend a meeting of the Emergency Planning Sub-Committee (Heatwave).
6. Implement BCPs as required.

National Heatwave Plan - Level 3 heatwave action

Heatwave conditions in one region or more, a heatwave has been declared as the “qualifying” temperatures are exceeded.

If notified by emergency planning / BCP leads that a heatwave has been triggered continue level 2 actions and:

1. Use all available resources to maximise frontline staff capacity. If this is not sufficient, notify emergency planning / BCP leads.
2. Require staff to make daily contact with clients at risk (visits/phone calls) and make a daily situation report.
3. Reconfirm key public health messages.
4. Advise carers to contact GP if concerns re health.
5. Collate situation reports and forward summary to emergency planning / BCP leads.

National Heatwave Plan - Level 4 national heatwave emergency

Central Government will declare a Level 4 Alert in the event of severe or prolonged heatwave affecting sectors other than health and if requiring coordinated multi-agency response.

Continue all level 3 actions and:

1. Continue to do your best for your service users and staff.
2. Provide situation reports as required (they might be requested more frequently than once a day by emergency planning team, who will be reporting to major incident partners).
3. Ensure staff have adequate breaks.

ACTION CARD - Community Staff including district nurses, community matrons and health visitors and community psychiatric nurses

Role: To provide support to clients based in the community

Reports to: Community Team Manager

National Heatwave Plan - Level 0 long-term planning

Long-term planning to protect vulnerable people during heatwaves

1. Familiarise yourself with the Housing Health and Safety Rating System assessment accessed via Environmental Health
2. Familiarise yourself with the impacts of severe heat and risk reduction awareness.

National Heatwave Plan - Level 1 heatwave and summer preparedness programme

Readiness for the heatwave season (1 June-15 September)

1. Familiarise yourself with the principles and core elements of the heatwave plan for England and CWP Heatwave Plan 2018 and action cards.
2. Familiarise yourself with the client heatwave advice leaflet and give copies to your clients as appropriate.
3. Familiarise yourself with the key public health messages.
4. Identify high-risk individuals on your caseload and raise awareness among clients and carers of heat illnesses and their prevention.
5. Include risk in care records and consider whether changes might be necessary to care plans in the event of a heatwave.
6. As clients come onto your caseload and are assessed, consider their vulnerability to adverse weather conditions, add them to your at-risk list and consider referring them to the local authority environmental health practitioner for an assessment on their health and housing (HHSRS).

National Heatwave Plan - Level 2 alert and readiness

National alert that there is a 60% chance of a heatwave in one English region – this normally occurs three days before the event.

If notified by your team manager that level 2 conditions exist continue all level 1 actions and:

1. Construct a prioritised list from your caseload of those who will require daily contact in the event of a heatwave. Some clients, especially the elderly, may be visited by more than one agency. During emergencies, when staff are stretched, agree where possible to avoid duplicate contact / visits.
2. Reconfirm key public health messages.
3. Check client's room temperature if visiting
4. Determine what non-essential activities could cease.

National Heatwave Plan - Level 3 heatwave action

Heatwave conditions in one region or more. A heatwave has been declared as the "qualifying" temperatures are exceeded.

If notified by your team manager that a heatwave has been declared continue all level 2 actions and:

1. Stop non-essential activities.
2. Commence daily contact with clients at risk.
3. Reconfirm key public health messages.
4. Advise carers to contact GP if concerns re health
5. Make daily situation reports to your team manager

National Heatwave Plan - Level 4 national heatwave emergency

Central Government will declare a Level 4 Alert in the event of severe or prolonged heatwave affecting sectors other than health and if requiring coordinated multi-agency response.

Continue all level 3 actions and:

1. Continue to do your best for your caseload.
2. Provide situation reports upwards, as requested and raise any concerns you may have.

ACTION CARD - Ward Managers	
Role:	To manage activities, staff and patients in an in-patient setting
Reports to:	Clinical Service Manager/Modern Matron

National Heatwave Plan - Level 0 long-term planning

Long-term planning to protect vulnerable people during heatwaves

1. Put in place systems to identify high-risk individuals
2. Prepare business continuity plans to cover the event of a heatwave
3. Raise awareness among staff of the impacts of severe heat and risk reduction awareness
4. Create cool room/areas and maintain temperature below 26°C / 79°F.
5. Install indoor thermometers in each room where vulnerable patients spend a substantial amount of time.

National Heatwave Plan - Level 1 heatwave and summer preparedness programme

Readiness for the heatwave season (1 June-15 September)

1. Brief staff on the principles and core elements of the national heatwave plan and CWP Heatwave Plan 2018 and action cards
2. Identify a list of clients at risk during a heatwave and include details in CPA.
3. Monitor room temperature at least 4 times a day especially during the hottest part.
4. Raise awareness of key public health messages among staff for dissemination to clients and carers.
5. Identify cool room/area and install room thermometers
6. Ensure BCPs are in place

National Heatwave Plan - Level 2 alert and readiness

National alert that there is a 60% chance of a heatwave in one English region – this normally occurs three days before the event.

If notified by emergency planning / BCP leads that level 2 conditions exist continue level 1 actions and:

1. Instruct staff to prioritise patients at risk.
2. Check that indoor thermometers with recording sheets and cool rooms are in place.
3. Check indoor temperatures in preparation for a level 3 heatwave action.
4. Ensure cool rooms are below 26°C/79°F
5. Ensure adequate supplies of cold water/ice are available.
6. Consider weighing patients regularly to identify dehydration and rescheduling physio to cooler hours
7. Identify what non-essential activities could cease.
8. Ensure sufficient staff and make provision for surge capacity.
9. Reconfirm key public health messages
10. Be prepared to attend a meeting of the Emergency Planning Sub-Committee (EPSC) (Heatwave).
11. Implement BCPs as required.

National Heatwave Plan - Level 3 heatwave action

Heatwave conditions in one region or more. A heatwave has been declared as the “qualifying” temperatures are exceeded

If notified by emergency planning / BCP leads that a heatwave has been triggered continue level 2 actions and:

1. Check that indoor temperatures are recorded 4 times a day especially during the hottest part.
2. Check that cool rooms stay below 26°C/79°F.
3. Identify, monitor and move vulnerable patients to the cool room.

4. Ensure adequate supplies of ice, cool food and drink are available and vulnerable patients are assisted as required.
5. Seek medical help if individual becomes unwell.
6. Ensure discharge planning takes home temperature and support into account.
7. Collate situation reports and forward summary to emergency planning/BCP leads.
8. Implement BCPs as required.

National Heatwave Plan - Level 4 national heatwave emergency

Central Government will declare a Level 4 Alert in the event of severe or prolonged heatwave affecting sectors other than health and if requiring coordinated multi-agency response.

Continue all level 3 actions and:

1. Continue to do your best for your service users and staff
2. Situation reports might be requested more frequently than once a day by emergency planners, who will be reporting to major incident partners.
3. Ensure staff have adequate breaks.

ACTION CARD – Emergency Planning Team	
Role:	To facilitate the Trust to prepare, respond and recover from emergency caused by heatwave. To facilitate the Trust to manage business continuity.
Reports to:	Director of Operations

National Heatwave Plan - Level 0 long-term planning

Long-term planning to protect vulnerable people during heatwaves

1. Work with partner agencies to develop long-term plans to prepare for, adapt to and mitigate the impact of future heatwaves including:
 - a) How to identify and improve the resilience of those individuals and communities most at risk
 - b) Ensuring that a local, joined-up programme is in place covering issues such as:
 - Trust property (include loft and wall insulation and other plans to reduce internal energy use and heat production)
 - Environmental action on Trust sites: (e.g. increase trees and green spaces, external shading, reflective paint, water features)
 - Engaging the community to support the development of local community emergency plans

National Heatwave Plan - Level 1 heatwave and summer preparedness programme

Readiness for the heatwave season (1 June-15 September)

1. Work with partner agencies to coordinate heatwave plans
2. Work with partners and staff on risk-reduction awareness (e.g. storage of medications), information and education. Physical health training on heat-related illnesses, affect of heat on medications etc
3. Continue to engage the community sector to support communities to help those most at risk
4. Ensure community and in-patient staff are aware of heatwave information guidance and plans
5. Ensure that heatwave alerts are disseminated widely and appropriate responsive action can be taken

National Heatwave Plan - Level 2 alert and readiness

National alert that there is a 60% chance of a heatwave in one English region – this normally occurs three days before the event.

If in receipt of level 2 alert from the Met Office continue level 1 actions and:

1. Communicate alerts to staff and make sure that they are aware of heatwave plans, information and guidance
2. Ensure that staff communicate key public media messages – especially to “hard to reach” vulnerable groups on their caseloads
3. Ensure that BCP Leads/General Managers implement business continuity plans as required
4. Increase advice to health and social care workers and other community staff via website and communications department
5. Be prepared to hold a meeting of the Emergency Planning Sub-Committee (Heatwave)
6. Advise BCP Leads it will be necessary to gather situation reports should level 3 be reached

National Heatwave Plan - Level 3 heatwave action

Heatwave conditions in one region or more. A heatwave has been declared as the “qualifying” temperatures are exceeded

If in receipt of level 3 alert from the Met Office continue level 2 actions and:

1. Communicate alerts about keeping cool to all staff via emergency planning intranet page and communication department
2. Hold a meeting of the Emergency Planning Sub-Committee (Heatwave) as necessary (using video/tele-conferencing facilities to reduce unnecessary travel)
3. Suggest that staff reduce unnecessary travel/cancel meetings and training and any public event e.g. open day or garden party
4. Obtain and provide regular situation reports as required

National Heatwave Plan - Level 4 national heatwave emergency

Central Government will declare a Level 4 Alert in the event of severe or prolonged heatwave affecting sectors other than health and if requiring coordinated multi-agency response.

Continue all level 3 actions and:

1. Take part in a multi-agency group as necessary
2. Provide updates and report any concerns to local resilience team

Heatwave Action Card – Level 3 heatwave alert

ACTION CARD – Heatwave (all staff)	
Role:	To support the response and recovery to prolonged periods of heatwave
Reports to:	Line Managers

From 1st June – 15th September 2018 the Met Office will operate an alerting system to forecast the possibility and severity of heatwaves which comprises of 5 main levels (Levels 0-4) – each of which should trigger certain actions. This system will be based on Met Office forecasts according to the threshold temperatures set for each part of the country.

The table below is a summary of these levels and the actions required.

Level 0 Long-term planning <i>All year</i>
Level 1 Heatwave and summer preparedness programme <i>1 June – 15 September</i>
Level 2 Heatwave is forecast – Alert and readiness <i>60% risk of heatwave in the next 2-3 days</i>
Level 3 Heatwave action <i>Temperature reached in one or more Met Office National Severe Weather Warning Service regions</i>
Level 4 Major incident – Emergency response <i>Central Government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health</i>

At **level 3** and above, CWP will ensure cascade of warnings to all staff and the following actions are to be followed.

All staff

- Ensure that staff are aware of individual and team roles and responsibilities as per the CWP heatwave plan;
- Maintain an overview of the CWP summer and heatwave page on the Emergency Planning intranet page.
- Refer to Business Continuity Plans for implementation where appropriate to ensure services are maintained, considering the following;
 - As appropriate, clinical staff contact and prioritise those most at risk and implement care plans where required;
 - Implement local plans for contacting the most vulnerable clients.
- Maintain an overview of the Met Office and Environment Agency weather forecasts as circulated by CWP Communications Team; also being aware of local news and radio weather updates;
- Consider how forecast weather conditions may impact on your work and make appropriate arrangements;
- Reduce internal temperature by turning off unnecessary lights and electrical equipment where possible.

Role of hospitals and other in-patient units

- Implement appropriate protective factors, including regular supplies and assistance with cold drinks;
- Ensure that cool rooms are consistently below 26°C as this is the temperature threshold at which many vulnerable patients find it difficult to cool themselves naturally if sweating is impaired due to old age, sickness or medication;
- Check that indoor temperatures are recorded during the hottest period for all areas where patients reside;

- Identify and monitor closely particularly vulnerable individuals (those with chronic/severe illness, on multiple medications, or who are bed-bound) for prioritisation in cool rooms;
- Monitor and minimise temperatures in all patient areas and take action if the temperature is a significant risk to patient safety, as high risk patients may suffer undue health effects including worsening cardiovascular or respiratory symptoms at temperatures exceeding 26°C;
- Reduce internal temperature by turning off unnecessary lights and electrical equipment where possible;
- Consider moving visiting hours to mornings and evenings to reduce afternoon heat from increased numbers of people;
- Make the most of cooling the building at night with cross ventilation. Additionally, high night-time temperatures in particular have been found to be associated with higher mortality rates. Due to the potential increased risk of cross infection that may be induced by cross ventilation, they should ensure increased vigilance of other routine infection control measures;
- Seek early medical help if an individual starts to become unwell;
- Ensure that discharge planning takes into account the temperature of accommodation and level of daily care during the heatwave period.

Role of community staff

- Continue to distribute advice/key public health messages to people at risk;
- Be aware of risk and protective factors;
- Consider, where appropriate, daily visits/phone calls for high-risk individuals living on their own who have no regular daily contacts;
- Advise social care or informal carers to contact the GP if there are concerns about an individual's health;
- Ensure that visits or phone calls are made to check on high-risk individuals (those with severe mental illness, living on their own, or without regular contact with a carer).

Further information is available on the CWP Emergency Planning summer and heatwave intranet page; CWP Intranet >Emergency Planning > Preparing for summer and heatwaves.

Appendix 6 - Core messages

These are the core messages to be broadcast as official PHE warnings alongside national and regional weather forecasts. They may be expanded or otherwise refined in discussion with broadcasters and weather presenters.

Level 1: Summer preparedness and long-term planning

No warning required unless there is a 60 per cent probability of the situation reaching Level 2 somewhere in the UK within the next three days, then something along the lines of:

“If this does turn out to be a heatwave, we’ll try and give you as much warning as possible. But in the meantime, if you are worried about what to do, either for yourself or somebody you know who you think might be at risk, for advice go to NHS Choices at www.nhs.uk/summerhealth. Alternatively ring NHS 111.”

Level 2: Alert and readiness

The Met Office, in conjunction with PHE, is issuing the following heatwave warning for [regions identified]

“Heatwaves can be dangerous, especially for the very young or very old or those with chronic disease. Advice on how to reduce the risk either for yourself or somebody you know can be obtained from NHS Choices at www.nhs.uk/summerhealth, NHS111 or from your local chemist. “

Level 3: Heatwave action and Level 4: Emergency

The Met Office, in conjunction with PHE, is issuing the following heatwave advice for [regions identified]:

“Stay out of the sun. Keep your home as cool as possible – shading windows and shutting them during the day may help. Open them when it is cooler at night. Keep drinking fluids. If there’s anybody you know, for example an older person living on their own, who might be at special risk, make sure they know what to do.”

Appendix 7 - Threshold temperatures

Threshold day and night temperatures defined by the Met Office by region are set out below.

Temperatures are in degrees centigrade

Region	Day	Night
London	32	18
South East	31	16
South West	30	15
Eastern	30	15
West Midlands	30	15
East Midlands	30	15
North West	30 (86 F)	15 (59F)
Yorkshire and Humber	29	15
North East	28	15

Appendix 8 - Process for monitoring temperatures including recording and subsequent actions

- Using room thermometer record room temperature in all rooms where patients spend a substantial amount of time e.g. bedrooms, lounges, dining rooms four times during the hottest part of the day.
- If the temperature reaches 26°C during the day move the most vulnerable in-patients out of the area and into the prepared cool room.
- If room temperatures reach 15°C during the night arrangements must be put in place to keep them below this temperature.

Template for recording room temperatures four times per day during the hottest part

Date	Temperature	Signature	Temperature	Signature	Temperature	Signature	Temperature	Signature	Any actions?

Appendix 9 – Portable fan guidance.

Background

Many healthcare buildings are quite old, and are poorly equipped to cope with rising temperatures. The heat wave experienced in Ireland and the EU during the summer of 2018 caused unacceptably high environmental temperatures in some healthcare settings, placing already vulnerable people under additional heat stresses. This has resulted in some facilities resorting to the use of portable fans. Extreme weather events such as this recent heat wave may become more common and this must be considered when refurbishing old hospitals and designing new facilities.

Where hospitals do not have air-conditioning, in conditions of extreme heat, fans may be useful to assist in patient/staff comfort and regulation of body temperature. They achieve this through circulating airflow to create a breeze. Although there is no published evidence that electric fans spread infection, they may pose a risk through dispersal of airborne microorganisms, debris and dust, or through disturbing the normal or expected airflow in a clinical setting.

It is the responsibility of hospital management to try to provide the best possible temperature controlled environment for patients and staff. If this cannot be achieved after all other measures have been investigated, the use of a portable electric fan may be considered. For each patient/scenario, the safety of implementing fan use should be decided upon by the medical/nursing team in conjunction with the infection control team. A common sense approach is required that balances the risk of infection with patient and staff comfort and safety. In cases where a fan is sanctioned for use by a healthcare facility, these guidelines aim to assist in the proper use of that fan.

Portable fans should NOT be used in the following situations:

- In high risk areas including operating rooms, critical care units, transplant units, dialysis units
- In areas where immunocompromised patients receive care e.g. oncology units
- In rooms where a patient is on airborne precautions
- In rooms where a patient is on droplet or contact precautions e.g. clostridiumdifficile, MRSA, norovirus
- In rooms with directed airflow e.g. positive or negative pressure rooms
- In areas where sterile supplies are stored or where medical device reprocessing occurs e.g. hospital sterile services department, endoscopy units

Prior to commencing use of a portable fan, confirm:

- The use of fans is not prohibited by the healthcare facility
- Alternative cooling methods have been attempted with no success
- The patient is in a non-restricted use location (see above)
- The use of a fan is determined to be of benefit to the patient's clinical condition or comfort
- A risk assessment has been performed

If a portable fan is sanctioned for use the following tips may be used:

Position

- Position the fan so air flow is directed at the patient
- Position fan on clean surface at patient's bed level or higher
- Ensure airflow is not directed towards the door of room or across environmental surfaces. The direction of flow should be upwards toward the ceiling, avoiding smoke detectors

- Ensure airflow is not blowing directly on burned skin, burn dressings, open wounds or directly into the patient's face
- In non-patient areas, such as healthcare staff stations, ensure airflow is directed within the area

Cleaning

- Determine who will be responsible for cleaning and disinfecting the fan
- Follow the manufacturer's instructions to clean, disinfect and maintain the fan on a scheduled basis and whenever it becomes visibly soiled
- Perform hand hygiene before handling fan

Turn fan off before the following:

Any sterile or aseptic procedure e.g. intravenous cannulation, catheterisation, dressing change

Any procedure that may result in sprays or splashes of body fluids e.g. lumbar puncture, chest drain.

Adapted from advice from HPSC

References:

Gupta S, Carmichael C, Simpson C, Clarke MJ, Allen C, Gao Y, et al. Electric fans for reducing adverse health impacts in heatwaves. The Cochrane database of systematic reviews. 2012;7:CD009888

World Health Organization. 2004. Practical Guidelines for Infection Control in Health Care Facilities. Accessed 25/07/18. Available at http://www.wpro.who.int/publications/docs/practical_guidelines_infection_control.pdf

Covenant Health. Infection Prevention and Control - The Use of Portable Oscillating Blade Fans for use in Healthcare Facilities. Accessed 25/07/18. Available at http://extcontent.covenanthealth.ca/InfectionPreventionControl/20160829_IPC_BPG_PortableOscillatingFans_31843.pdf

Winnipeg Regional Health Authority. Acute Care Infection Prevention and Control Manual – Portable Fans Cleaning and Use Restrictions. Accessed 25/07/18. Available at http://www.wrha.mb.ca/extranet/ipc/files/manuals/acutecare/Portable_Fans_Restrictions.pdf

Alberta Health Services. Infection Prevention and Control Guidance – Use of portable fans in healthcare. Accessed 25/07/18. Available at: <https://www.albertahealthservices.ca/assets/healthinfo/ipc/if-hp-ipc-info-sheet-portable-fans.pdf>