

ADAPTATION TO CLIMATE CHANGE

Increasing resilience against the changing climate

Changes to the global climate are already happening and the best efforts to reduce greenhouse gas emissions will still result in further warming. Adaptation actions are therefore needed alongside mitigation activities to reduce the potential adverse impacts of climate change.

Policy framework

The Paris Agreement on Climate Change included a global goal on adaptation, focussing on 'enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change'.¹

The Climate Change Act 2008 introduced a legal requirement for the UK Government to undertake an assessment of climate change related risks every five years and to develop a National Adaptation Programme (NAP) as a practical response to those risks. The most recent risk assessment was published in 2017.² The NAP was published in 2018.³

All NHS providers are required to have a Sustainable Development Management Plan, which should include measures to ensure services are fit for purpose in the context of a changing climate.⁴

Public health practice

Public health practitioners should work in partnership with colleagues from environment, planning, business development, health and emergency planning sectors to:

- advocate for adaptation action;
- champion and support risk assessment and monitoring of climate-related risks;
- support health & social care providers to provide resilient services.

Adaptation for health

Climate change will have impacts in many aspects of our lives and will affect the provision of infrastructure and services across many sectors. Actions aimed at improving resilience in terms of buildings, transport and flood defences will all have knock on effects on health. The responsibility for addressing the impacts of climate change should be collaborative and led at both a regional and organisational level.

Strategic Planning

The health sector has set itself two objectives that will help ensure the health system is resilient and adapted to climate change: to reduce mortality and morbidity associated with severe weather events and climate change and to promote resilience and service continuity to ensure sound service delivery.

Adaptation planning is an opportunity to ensure a cohesive approach to current and future planning. The Sustainable Development Unit has produced guidance for health and social care organisations on developing an adaptation plan.⁵

Some of the ways that Public Health professionals can contribute to improving resilience to climate change are described over the page. Table 1 provides further examples of adaptation actions for different health-related impacts. This is not an exhaustive list. Understanding of vulnerable populations, locations and services through risk assessment and local intelligence is needed to tailor local actions.

Table 1: Health impacts & adaptation examples⁹

Health impact	Adaptation example
Flood-related illness & displacement	<ul style="list-style-type: none"> • Flood response & recovery plans including mental health considerations • Flood defences, building controls
Heat-related illness	<ul style="list-style-type: none"> • Implement Heatwave Plan for England • Built environment (e.g. shade, drinking water) • Heat monitoring in health & social care facilities • Building controls
Air pollution & aeroallergens	<ul style="list-style-type: none"> • Monitoring & alerting • Clean air zones, encouraging active travel
Skin cancer & sunburn	<ul style="list-style-type: none"> • Provide shade
Infectious diseases	<ul style="list-style-type: none"> • Outbreak control
Disruption to food production & supply	<ul style="list-style-type: none"> • Develop resilient supply chains • Encourage use of locally-produced food.
Disruption to health & social care services	<ul style="list-style-type: none"> • Building and infrastructure design • Business continuity & emergency planning

Resources

Health Effects of Climate Change in the UK⁶. A review of scientific evidence on change and health impacts in the UK.

Climate change impacts report card: Health⁷. Provides a summary of key findings from a series of technical papers on health and climate change. An accompanying report card on infrastructure is available.

UK Climate Change Risk Assessment Evidence Report⁸
Chapter 5 on people and the built environment presents a detailed summary of risks and evidence which informed the National Climate Change Risk Assessment.

Planning Guidance for Health and Social Care organisations⁵
Guidance to support health and social care organisations in developing adaptation plans.

Under the weather – adapting to a changing climate⁹ A toolkit to support Health and Wellbeing boards to build adaptation actions into local needs assessments.

Adaptation actions in cities: what works?¹⁰ A review of adaptation in UK cities, including case studies and analysis of factors for success.

Health Building Note 00-77: Planning for a resilience healthcare estate¹¹ Provides guidance to help NHS-funded providers to determine appropriate levels of resilience for sites, buildings and installations against a wide range of emergencies, hazards and threats and including resilience to the impacts of climate change.

Climate Just (www.climatejust.org.uk) is a free webtool designed to: identify who is vulnerable to climate change and fuel poverty and why; highlight neighbourhoods where climate disadvantage is highest; explain the factors involved and help you decide what actions to take.

Implementation of adverse weather plans

The Heatwave Plan for England^[12] & Cold Weather Plan for England¹³ are multisector plans that aim to prepare for, alert people to, and prevent, the major avoidable effects on health during periods of severe heat or cold in England. A single adverse weather and health plan will be developed in the next 3 years.

The National Flood Emergency Framework for England¹⁴ also includes a section on flooding & health. Building mental health considerations into flood response and recovery plans is important given the known impacts of flooding on mental health.⁶

Building climate-resilient health and social care infrastructure

Health & social care facilities need to be robust to both high and low temperatures. This includes hospitals but also related infrastructure such as Residential Care Homes and Nursing Homes. Temperature monitoring in health and social care facilities can help to identify areas of concern. Cool spots can be identified within buildings for patients and staff.

Resilience of water, waste and transport infrastructure to the changing climate and adverse weather events should also be considered. This may require working with suppliers to get assurance that climate change risks are accounted and planned for.

Similar actions could be taken with schools and other facilities used by other vulnerable populations to improve resilience to climate-related impacts.

Climate resilience and the built environment

Incorporating considerations of the health impacts of climate change into local planning guidance and decision-making can help to improve resilience of the built environment in the longer term, for example to flooding and overheating. Public Health professionals can contribute to this agenda by working closely with those responsible for planning and ensuring climate-related health impacts are considered as part of environmental and/or health impact assessments, especially for larger developments.

Guidance on best practice for climate-resilient buildings is available¹⁵ Some specific design options include⁵:

- Provision of more natural ventilation instead of air conditioning as heat wave temperatures become more frequent.
- Use of trees, shade and other green infrastructure to provide cooling, consideration of placing of street furniture to allow best use of shade.
- Provision of drinking water in the urban environment.
- Use of sustainable drainage systems to help reduce risk of localised flooding.
- Maximising opportunities for active travel and increased physical exercise

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Professional Development Questions

1. **Which of these should be considered when addressing the resilience of health and social care facilities to a changing climate?**
 - A. Energy providers' plans for resilience in adverse weather conditions
 - B. Thermal monitoring in hospitals.
 - C. Surveillance systems for vector-borne diseases.
 - D. Vulnerabilities of the populations using the facilities to high temperatures
 - E. Availability of shade around the hospital grounds.
 - F. All of the above

2. **Which of these adaptation actions are likely to have a positive impact on population health?**
 - A. Building requirements for heat-resistant buildings into local planning guidance.
 - B. Sourcing a greater proportion of energy from photovoltaic panels.
 - C. Supporting local businesses to procure locally-produced food.
 - D. Introducing temperature monitoring into hospitals and other health and social care facilities.
 - E. All of the above.

FPH General CPD Questions

1. What did I learn from this activity or event?
2. How am I going to apply this learning in my work?
3. What am I going to do in future to further develop this learning and/or meet any gaps in my knowledge, skills or understanding?