



Adaptation to Climate Change for Health and Social Care organisations

“Co-ordinated, Resilient, Prepared”

With support from:

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Executive Summary

Climate Change is recognised as the biggest public health threat this century¹. Health and social care organisations are at the forefront of action to address the health impacts of climate change and need to adapt to, and prepare for, these circumstances. Adverse weather events and climate change are affecting people and services now and this is predicted to increase in the future.

Climate change could have significant implications for the health and wellbeing of the UK population. There are implications for public health, the continuity of health and social care services both within the NHS and beyond, the resilience of local emergency services and the impacts on the most socially vulnerable.

The development of the UK's first National Adaptation Programme² – a requirement of the Climate Change Act 2008 - provides a framework for action. Addressing the health impacts of climate change will be one of its main themes.

Building preparedness and resilience now to the predicted health impacts of climate change will save costs in the short and long term, protect lives and deliver health outcomes.

Adaptation planning is an opportunity to ensure a cohesive approach to current and future planning. The process of developing these plans should integrate with the development and refinement of emergency preparedness and business continuity plans.

Adaptation should be an integral component of Sustainable Development Management Plans (SDMPs) and this Adaptation Guidance supplements the SDMP Guidance³.

Introduction

Many of the impacts of climate change, including those for health, will be felt locally, with effects differing from place to place even though impacts such as heat waves will have relevance across the country. Organisations will need to develop responses which encompass national guidance and yet are specific to their local circumstances. The local health and social care system is therefore likely to play a crucial role.

This guidance looks specifically at climate change adaptation and asks what is it, why is it important for NHS and health and social care organisations, and what action can they take.

¹ Costello A, Abbas M, Allen A, Ball S, Bell S, Bellamy R et al., 2009. Managing the health effects of climate change. London: *The Lancet*, Vol 373, no. 9676, pp.1693–733

² Department of Environment, Food, and Rural Affairs, 2012. National Adaptation programme [Online] Available at www.defra.gov.uk/environment/climate/government/nap/ [Accessed 24 July 2012]

³ NHS Sustainable Development Unit, 2011. Sustainable Development Management Plan Guidance [Online] Available at: www.sdu.nhs.uk/documents/SDMP/SDMP_Guidance_April_2012.pdf [Accessed 24 July 2012]

What is adaptation?

Adaptation means responding to both the projected and current impacts of climate change.

Adaptation for the health system is two-fold:

1. Climate change could negatively impact the health and wellbeing of the UK population. The health system needs to be prepared for different volumes and patterns of demand.
2. Climate change could impact the operational delivery of the NHS. The health system infrastructure (buildings, emergency services vehicles, models of care) and supply chain (e.g. fuel, food) need to be prepared for, and be resilient to, adverse weather events.

Examples of adaptation measures include:

- Creating plans that reduce impact on and ensure continuation of care for the most vulnerable groups in society (such as frail older people) during heat waves, floods and other extreme weather events
- Ensuring that buildings and locations:
 - Can cope with rising temperatures and floods and minimise the risk to individuals (both patients and staff)
 - Are built with sustainability in mind; BREEAM for Healthcare Excellent Standard
- Enhancing green space and infrastructure in the design of health and social care facilities, towns and cities to help manage surface water drainage and cope with rising temperatures and heat waves
- Using water more efficiently in order to reduce vulnerability to droughts.
- Changing behaviours in relation to working patterns and locations, codes of practice and service delivery systems such as telephone follow ups instead of appointments where feasible.

What will we have to adapt to?

According to the UK Climate Change Risk Assessment ⁴ (UK CCRA 2012), the UK is projected to see an increase in the frequency and intensity of weather-related hazards including heat waves and floods. While winters are projected to become warmer and wetter, cold spells will still occur. The NHS, health and social care organisations must therefore adapt to a range of scenarios so they can be prepared for future climate change. The UK CCRA 2012 highlighted several key health risks from climate change including:

- Heat (increased summer temperatures and heat wave events)
- Cold (reduced deaths and illness but with continued risk from cold 'snaps')
- Ground level ozone
- Flooding and Storms (resilience and continuity of health and social care services, mental health impacts and injuries)
- Incidence and exposure to marine and freshwater pathogens
- Sunlight (UV risk)

⁴ Department of Environment, Food, and Rural Affairs, 2012. UK Climate Change Risk Assessment [Online] Available at www.defra.gov.uk/environment/climate/government/risk-assessment/ [Accessed on 24 July 2012]

These findings build on other evidence reports such as the DH Report on the Health Effects of Climate Change in the UK⁵.

The predicted impacts of climate change will be felt differently in particular locations⁶. For instance coastal areas may be subject to significant coastal erosion and cities may suffer more from the so called 'urban heat island effect' due to the concentration of buildings in one place.

These changes will have an impact on individuals, services and society as a whole. It is likely that the vulnerable groups will suffer most and that those that already experience health inequality will also experience more disturbances from environmental changes⁷. This is clearly of key concern to health and social care organisations who will need to consider how best to support vulnerable people in different scenarios and the models of care that will be best fit for purpose. Tools and information already exist to support the mapping of communities that might be considered vulnerable.

Why is it important?

Climate Change is the biggest public health threat this century. The NHS, health and social care organisations will need to consider how to respond and prepare for the changes ahead.

The [impacts of climate change](#) are already being felt in the UK and these impacts will increase in the future. Adaptation should therefore be addressed alongside mitigation in a [twin-track approach](#) to addressing climate change.

Adapting to climate change will reduce the costs and damages of a changing climate in the UK from extreme weather events including floods, droughts, and heat waves.

Effective adaptation encourages a better use of resources, can save costs and can deliver wider health benefits too. For instance developing green spaces and infrastructure to help prevent overheating while enabling a cooler environment can also help prevent flooding, save energy and promote biodiversity. It can also encourage people to go outdoors, be more active and promote mental well-being.

Decisions being made now with long-term consequences, such as the commissioning and design of assets and estates, will affect how resilient an organisation will be to the impacts of climate change.

For the health system adaptation is not just about procurement practices and energy supply, but about higher quality, and less wasteful service design. It aligns well with the integrated care agenda and the integrated planning and commissioning that Health & Well-Being Boards are charged with doing. Improved service design is about the right care, in the right place, at the right time and this is good for adaptation and resilience as well as carbon reduction.

⁵ Department of Health, 2008. Health Effects of Climate Change [Online] www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_080702 [Accessed on 24 July 2012]

⁶ Oven, K.J., Curtis, S.E., Reaney, S., Riva, M., Stewart, M.G., Ohlemuller, R., Dunn, C.E., Nodwell, S., Dominelli, L. and Holden, R. (2012) Climate change and health and social care: Defining future hazard, vulnerability and risk for infrastructure systems supporting older people's health care in England. *Applied Geography* 33: 16-24. *Summarised in:* BIOPICCC briefing report

⁷ Fair Society, Healthy Lives: Strategic Review of Health Inequalities in England post 2010, 2010. London: the Marmot Review

Taking Action

It is recommended that health & social care organisations and systems:

- Draw on existing risk assessments, adaptation tools such as the UKCP09 projections and other local information to assess the risks to the local system
- Ensure the risks are registered on organisational risk registers
- Promote dialogue for example through a workshop with relevant partners and stakeholders including sustainable development, emergency preparedness, business continuity, finance, estates and clinical leads across the health system and local authorities in order to:
 - help agree co-ordinated action
 - share important information about which climate impacts and parts of the system should be prioritised for adaptation
 - raise awareness across the health and social care sector
- Agree actions to take forward drawing on cost benefit analysis, across the system and within organisations
- In doing so assess predicted impacts on vulnerable people, services, models of care and local infrastructures
- Develop plans or actions that are embedded in the SDMP and link to wider Heat Wave, Cold Wave, flooding, emergency preparedness and business continuity plans and control measures
- Develop plans which encompass national guidance yet are specific to their local circumstances
- Review and monitor at least annually

Developing an Adaptation Plan

The local health and social care system is likely to play a crucial role and so the local NHS and its partners working through, for example, local Health and Wellbeing Boards and Clinical Commissioning Groups may wish to take the following step-wise⁸ approach in building climate resilience:

Step 1: Identify the key people to involve (Appendix 1)

Step 2: Identify the key information to help with climate adaptation and resilience planning (Appendix 2)

Step 3: Assess the most locally important climate impacts and parts of the system which will need to be adapted to be resilient to climate change (see section below on tools for adaptation planning).

Step 4: Decide the focus of work and the priorities for your area

Step 5: Develop plans, review and monitor on yearly basis

Checklist of a good adaptation plan

- Embedded in Board approved SDMP
- Links to and cross refers to Emergency Preparedness Plans, Business Continuity Plans and vice versa
- Developed in partnership with Local Authority and other stakeholders, for example members of the Health and Wellbeing Boards
- Mechanism for review and updating
- Consider the following aspects as a minimum:
 - infrastructure including buildings, travel, supplies and supply chains,
 - resource use, scarcity and continuity including energy, food and water

⁸ BLOPICCC Research Team (2011) *Research Briefing 1: Mapping future risks of extreme weather and growth in older populations in England*. Durham University, UK

- workforce and service delivery including training requirements, changes to disease patterns, changes to the health needs of population
- social and community impacts including vulnerable communities, migration and mental health
- QIPP initiatives
- Vision for Adult Social Care
- Procurement practices include evidence of climate change adaptation planning to support business continuity and resilience

Risks & Responses

Health and Social Care organisations will wish to consider the following checklist in developing their adaptation response:

| Categories | Risk to | Examples of Adaptive response |
|---|---|---|
| Infrastructure: | <ul style="list-style-type: none"> ➤ Estate/building stock and other supporting infrastructure e.g. roads, utilities and telecommunications | <ul style="list-style-type: none"> ➤ By providing more natural ventilation instead of air conditioning as heat wave temperatures become more frequent ➤ Cool spots within buildings identified for patients and staff ➤ Use of trees, shade and other green infrastructure to provide cooling ➤ Sustainable drainage systems to help reduce risk of localised flooding |
| Resource use, scarcity and continuity: | <ul style="list-style-type: none"> ➤ Increase in fuel, energy, water and food costs ➤ Supply of drinking water ➤ Supply chain and transport network | <ul style="list-style-type: none"> ➤ Resilience of fuel and water supply (and sewerage), power and other key resources |
| Workforce and service delivery: | <ul style="list-style-type: none"> ➤ Work of staff in the NHS and other care agencies ➤ Changes in vector disease migration ➤ Clinical issues which may require changes to structure or service models e.g. increase in respiratory conditions and potential need to provide medical gases to all bed spaces or increase in care related to mental health and wellbeing. | <ul style="list-style-type: none"> ➤ Access considerations for staff to work, for patients to services and for providers to communities ➤ Training requirements and potential guidance on how to respond to extreme weather events including emerging ones such as heat waves, drought and wildfires ➤ Planning of transport requirements for future models of care ➤ Inclusion in current emergency preparedness plans and business continuity ➤ Impact on public health and commissioning requirements |
| Social and community impacts: | <ul style="list-style-type: none"> ➤ Social impacts of climate change – and impacts on vulnerable communities e.g. migration, transient populations or community resilience ➤ Need for enhanced preparedness, resilience and recovery to extreme weather events e.g. heat wave, air pollution event | <ul style="list-style-type: none"> ➤ Information, targeted warning systems, and support to individuals who may be most at risk, to help them take basic action to adapt and be more resilient to climate change ➤ Influencing fundamental changes in behaviours |

Adaptation in the NHS and Health & Social Care organisations

Adaptation needs to be considered as part of a 'whole systems approach' to Sustainable Development. Clearly adaptation plans need to support the delivery of existing and future health and well-being outcomes as well as local economic and environmental benefits such as those identified in local Joint Strategic Needs Assessments (JSNAs) and other local plans and strategies.

Early consideration of adaptation options is essential in identifying the most cost-effective and innovative solutions, allowing organisations the flexibility to act rather than being forced to act urgently and reactively. Early action will avoid being locked-in to long-lived assets such as buildings and infrastructure which are not resilient to the changing climate. This will save costs.

It is important to recognise that adaptation is not a "one-off" event. The way in which organisations adapt will need to be a continual dynamic approach, rather than a single action designed to "solve" a single problem. Several case studies, tools and approaches are also available on the Environment Agency Climate Ready website: <http://www.environment-agency.gov.uk/research/137557.aspx>

The [impacts of climate change](#) are already being felt in the UK and these impacts will increase in the future. A twin track approach to climate change is encouraged. We need to prevent climate change as much as possible – so to mitigate against it; and we also need to prepare for the substantial changes to our climate that are already unavoidable – so to adapt to current and future changes. Further information on mitigation can be found at www.sdu.nhs.uk/publications-resources/3/NHS-Carbon-Reduction-Strategy/.

How do adaptation, extreme events, resilience, emergency preparedness, business continuity fit together?

NHS organisations already work closely with the wider health and social care system and beyond involving a wide range of partners including local authorities, voluntary sector, communities and other health and social care providers. The recent health reforms reinforce this partnership working at the local level. A cross-sector approach is essential for the development and delivery of effective adaptation and resilience strategies across the health and social care system. Action to build climate resilience can readily be embedded within established networks and fora such as Health and Wellbeing Boards and existing organisational risk management and business continuity functions.

Strong links exist with the work of emergency planners and links with bodies such as the Local Resilience Fora. Existing cross sector planning agencies can provide the organisational framework for whole system planning and can provide a good forum for this activity. Indeed Health and Wellbeing Boards and emergency planning fora could integrate this agenda into their core plans.

Aligning current and future policy and practice

The development of the UK's first National Adaptation Programme (NAP) – a requirement of the Climate Change Act - provides a framework for action. The NAP will address the key risks and opportunities identified in the UK's first Climate Change Risk Assessment (UKCCRA 2012). Addressing the health impacts of climate change will be one of the priority themes of the NAP.

The Department for Environment, Food and Rural Affairs (Defra) leads on climate adaptation within UK Government and has established a cross-Government Climate Ready Programme. For further background see this link www.defra.gov.uk/environment/climate/.

The Environment Agency has taken on the role of the Government's Climate Ready Support Service to help organisations adapt to climate change within England. This role builds on the work to date of the UK Climate Impacts Programme (UKCIP), based at Oxford University. The Environment Agency will provide advice and support to key sectors to help them build resilience to climate change. Visit the [Environment Agency's web pages](#) for the current information sources and tools which are available to help you now.

Local authorities, through the duties placed on Directors of Public Health, play a lead role in commissioning and delivering of local public health and social care services to their local communities. The Local Government Association has launched a 'Climate Local' initiative which seeks to support and showcase local climate change action. A health and communities section of the Climate Local website⁹ provides links to sources of information, tools, advice and case studies.

The nine Climate Change Partnerships¹⁰ across England are another valuable source of climate change advice

Many NHS, health and social care organisations are already addressing these issues through the following:

1. The **Civil Contingencies Act 2004**¹¹ requires all NHS organisations to prepare for adverse events/ incidents.
2. **HBN 00-07 Resilience planning for the healthcare estate**¹²
3. **HTM 00 Best practice guidance for healthcare engineering**¹³
4. **HTM 07-07 Sustainable health and social care buildings**¹⁴; design, construction and refurbishment sets – links into BREEAM healthcare score rating.
5. **HBN 11-01 Facilities for primary and community care services**¹⁵.
6. **HTM 07-02 Encode, making energy work in healthcare**¹⁶

⁹ Local Government Association 2012. Climate local [Online] Available at www.local.gov.uk/web/guest/your-council-and-climate-change/-/journal_content/56/10171/3567667/ARTICLE-TEMPLATE [Accessed on 24 July 2012]

¹⁰ Climate UK, 2012. Homepage [Online] Available at www.climateuk.net/ [Accessed on 24 July 2012]

¹¹ HM government uk, 2004. Civil contingencies Act [Online] Available at www.opsi.gov.uk/acts/acts2004/ukpga_20040036_en_1 [Accessed on 24 July 2012]

¹² <http://www.spaceforhealth.nhs.uk>

¹³ <http://www.spaceforhealth.nhs.uk>

¹⁴ <http://www.spaceforhealth.nhs.uk>

¹⁵ <http://www.spaceforhealth.nhs.uk>

7. Using your local Climate projections (UKCIP)¹⁷ to adapt future infrastructure developments or building renovation/retrofit to cope with projected changes. This could be anything from solar shading, passive cooling to flood defences or grey water storage. The climate change partnerships (CCPs) have regional and/or local information on the climate impacts in their scoping reports. In addition the CCPs produced regionalised summary reports (and adaptation case studies) of the CCRA to make the information more accessible and understandable at local level.
8. Local partnership work with other public sector organisations, for example JSNAs & Local Strategic Partnerships.
9. Links to best practice and case studies. See CCRA health sector reports and each 'Regional' headline risks including case studies produced for each English CCP.

In Summary

- Adaptation is key to ensuring that the health and social care system is resilient and prepared for the future. It has a key role to play in supporting vulnerable groups during adverse weather events and increasing climate change impacts.
- Adaptation plans should be incorporated into organisations' SDMPs.
- Much of what should be included under adaptation may already be in place in organisations, for example flooding preparedness. It is therefore vital that a dialogue is in place to check alignment with the whole organisation and to ensure longer term planning implications.
- There are a great number of resources and websites that are useful in scoping out what the adaptation part of the SDMP should include.
- The development of the UK's first National Adaptation Programme – a requirement of the Climate Change Act - provides a framework for action in which addressing the health impacts of climate change is one of the priority themes

¹⁶ Department of Health, 2006. HTM 07-02 [Online] Available at www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4127754 [Accessed on 24 July 2012]

¹⁷ Department of Environment, Food and Rural Affairs, 2009. Adapting to Climate Change [Online] Available at <http://www.defra.gov.uk/publications/files/pb13274-uk-climate-projections-090617.pdf> [Accessed on 24 July 2012]

Appendix 1¹⁸:

Identifying key stakeholders to involve in adaptation and resilience planning

| | |
|--|--|
| <p>Council</p> <ul style="list-style-type: none"> • Adult Social Care (leads in the following areas: social work, residential care, day care, domiciliary care, telecare, personalisation, learning and physical disabilities, mental health) • Emergency and resilience planning • Spatial planning/development control • Infrastructure planning • Climate change adaptation • Neighbourhood management • Community services (e.g. CVS liaison and leisure facilities) <p>Coordinating bodies</p> <ul style="list-style-type: none"> • Local Strategic Partnership • Local Resilience Forum • Health and Wellbeing Boards • Sustainability Forums | <p>CCG and HWBB</p> <ul style="list-style-type: none"> • Public Health Intelligence • Join Planning and Commissioning • Community care representative • GP representative <p>Acute Trust</p> <ul style="list-style-type: none"> • General Acute Inpatient Services • Geriatric Inpatient Care • Inpatient Dementia and Mental Health Care • Accident and Emergency • NHS Estates <p>Community Trust (where applicable)</p> <p>Mental Health Trust</p> |
| <p>Utilities</p> | <p>Emergency Services</p> |
| <ul style="list-style-type: none"> • Water company • Electricity company • Gas company • Telecommunications | <ul style="list-style-type: none"> • Fire and Rescue Service • Police Force • Ambulance Service |
| <p>Independent Sector</p> | <p>Other</p> |
| <p>Community and Voluntary Sector</p> <ul style="list-style-type: none"> • Age UK • WRVS • NCVS • Older People's Forum • Carers' advisory groups • Alzheimer's Society • 'Other' local user-led groups • Older people's charter groups • British Red Cross • National and local flood forums <p>Private Care Providers</p> <ul style="list-style-type: none"> • Private care companies • Care homes • Care in the community schemes <p>Social Housing Corporation/Major Housing Associations</p> | <p>Government Departments</p> <ul style="list-style-type: none"> • Department for Environment and Rural Affairs • Department of Health • Department of Communities and Local Government <p>Inspection and Regulation</p> <ul style="list-style-type: none"> • Environment Agency • Care Quality Commission <p>Transport</p> <ul style="list-style-type: none"> • Rail service providers • Network Rail • Local bus companies • Dial-a-ride schemes <p>Advocacy and Brokerage Groups</p> <ul style="list-style-type: none"> • Health-Watch • Climate Change Partnerships |

¹⁸ Durham University, Built Infrastructure for Older People's Care in Conditions of Climate (BIOPICC), 2012 [Online] Available at BIOPICCC project source <http://www.dur.ac.uk/geography/research/researchprojects/biopicc/> [Accessed on 24 July 2012]

Appendix 2¹⁹:

Information sources to support adaptation and resilience planning:

| Information source | Application |
|---|--|
| Strategic Health Asset Planning and Evaluation Application (SHAPE) | <ul style="list-style-type: none"> - Locate health and social care facilities - Mapping clinical activity, public health and health inequalities, demographics. |
| Climate change, justice and vulnerability study, Joseph Rowntree Foundation | <ul style="list-style-type: none"> - Locate parts of the UK where the population is vulnerable to heat wave and flood hazards. |
| BIOPICCC Research Briefing 1: Mapping future risks of extreme weather and growth in older populations in England | <ul style="list-style-type: none"> - Locate areas in England projected to experience increases in flood and heat wave hazards along with increases in the older population (aged 65 years and over). |
| Demographic data including demographic projections, datasets on ethnicity and deprivation: (Office for National Statistics). | <ul style="list-style-type: none"> - Locate potentially vulnerable groups to climate change across the UK. |
| <p>Specific Local knowledge of a given area, not recorded in routine data sources including Local Climate Impacts Profiles (LCLIPs -a UKCIP tool): http://www.ukcip.org.uk/lclip/</p> <p>For local climate projections, which have recently been set out in UKCP09 (UK Climate Projections 2009) see http://www.defra.gov.uk/publications/files/pb13274-uk-climate-projections-090617.pdf</p> | <ul style="list-style-type: none"> - Identification of particular issues and priorities in a given area e.g. particular community groups and their needs/vulnerabilities; crucial parts of local infrastructure and their susceptibility to climate change effects - Many local authorities have completed a LCLIP and have information about weather/climate related events that have affected the locality in the recent past. |
| <p>UK Climate Impacts: http://www.ukcip.org.uk/uk-impacts/UKCIP Adaptation Wizard – UKCIP</p> | <ul style="list-style-type: none"> - UKCIP |
| www.environment-agency.gov.uk/climateready | Climate Ready is a support service run by the Environment Agency to help businesses, public sector and other organisations in adapting to a changing climate. Their website hosts a number of useful, easy to use tools to help you take action. |

¹⁹ Source: BIOPICCC Project – as for footnote 18

Appendix 3

Vignettes:

Sheffield Teaching Hospitals NHS Foundation Trust:

Extract from Sheffield SDMP:

“Considering our ability to adapt to future scenarios will be of importance. This includes how we design our buildings to cope with increasing summer temperatures, how we prepare for future healthcare needs in changing climates, how we ensure we will comply with future government regulations and how we will reduce financial risk from taxes and price increases, likely to develop as a result of global climate change. We will consider our adaptive capacity as part of emergency planning and business continuity. For us, adaptation is about increasing the Trust’s ability to adapt and change through forward planning, increasing resilience, managing risks, protecting itself, patients and the wider population and also, importantly, taking advantage of any potential benefits that arise from changes that can be made.”

Bristol City Council:

Bristol City Council provides a good example of an organisation that requires providers to adapt to adverse weather events for instance by putting winter plans in place. See Bristol case study report re commissioners influencing providers:

<http://www.scie.org.uk/adults/sustainablesocialcare/bristol.asp>

Appendix 4

Links and Further reading

The Department of Health Climate Change plan sets out how climate change will be dealt with. See the following link to the plan <http://www.defra.gov.uk/environment/climate> Search for documents and the Climate Change Plan; _Department of Health Adaptation plan can be found on p 83.

A report from the Department of Health and the Health Protection Agency gives more detail on the health impacts of climate change. See the following link.
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_080702

For government proposals on Adaption for UK organisations see
<http://archive.defra.gov.uk/environment/climate/documents/eac-response-100804.pdf>
<http://www.defra.gov.uk/publications/2012/01/26/pb13698-climatechange-riskassessment>

Defra Guidance on reporting adaptation. Annex B on page 30 at
<http://archive.defra.gov.uk/environment/climate/documents/interim2/report-guidance.pdf>

For local climate projections, which have recently been set out in UKCP09 (UK Climate Projections 2009) see <http://www.defra.gov.uk/environment/climate>. Go to Adaptation/ukcip

For general adaptation tools, advice and case studies see
www.ukcip.org.uk

For government proposals on Adaption for UK organisations see
<http://www.defra.gov.uk/environment/climate> Search for documents/eac-response- 100804

For links to publications and guidance on the impacts of climate change on delivery of health services see
<http://www.energysavingtrust.org.uk> and follow the links from England to Nottingham/ Nottingham-Declaratoin/localservices/Health/health-trusts

Stern Review – the economics of climate change
http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/sternreview_index.htm

The Department of Health Heat wave Plan:
[Heatwave Plan for England 2012 published | Department of Health](http://www.dh.gov.uk/en/heatwave-plan-for-england-2012)

The Environment Agency are supporting the National Adaptation Programme including the health sector priority actions: <http://www.environment-agency.gov.uk/research/policy/132337.aspx>

BIOPICCC research programme works with local authorities and their partners to develop tools and strategies for older people's care in the context of climate change. The 'BIOPICCC' prototype toolkit summary discusses methods trialled in BIOPICCC that are relevant to the steps outlined on page 4 of this guidance and the BIOPICCC online toolkit will provide other useful information and examples:
<http://www.dur.ac.uk/geography/research/researchprojects/biopiccc/>

Voluntary sector organisations are working with older people and disabled people, building on the success of the Big Response project. <http://www.ncvo-vol.org.uk/vulnerable-people-climate-change>

The Social Care sector has already made excellent progress on adaptation planning:
<http://www.scie.org.uk/adults/sustainable-social-care/index.asp>

Summaries of a range of research projects focussing on adaptation to climate change are available on the website for the Adaptation and Resilience in a Changing Climate, including the 'DeDeRHECC' project on adapting hospital buildings to be resilient to hotter temperatures: <http://www.arcc-cn.org.uk/>

Report for the London Climate Change Partnership analysing climate change impacts on public health and health and social care services in London and proposing some responses – London's Changing Climate – In Sickness and in Health (LCCP 2010)
<http://www.london.gov.uk/lccp/publications/londons-changing-climate-sickness-health.jsp>
and the associated research report

Health and Social Care Risk Assessment and Action Plan (Catherine Max Consulting 2010)
<http://www.catherinemax.co.uk/#/resources/4561682691>

See SCIE and SDU briefing for HWBs on sustainability.
<http://www.scie.org.uk/publications/reports/report59.asp>

Climate UK is a not-for-profit national network organisation which supports local action on climate change throughout the UK. Through its network of trusted and independent Climate Change Partnerships, it can uniquely offer both local and national coverage by bringing together local knowledge and technical expertise from a range of sectors. You can contact Climate UK at info@climatesoutheast.org.uk or get in touch with any of the Partnerships by visiting <http://www.climate.uk.net/>

The NHS Sustainable Development Unit develops organisations, people, tools, policy, and research to help the NHS in England fulfil its potential as a leading sustainable and low carbon organisation. For more information see www.sdu.nhs.uk