CLARITY DIGEST

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Unequal Burdens: Climate Change and Health Inequalities in the UK

Introduction

Climate change is no longer a distant environmental concern - it is a **pressing public health emergency**. The World Health Organization has identified the "escalating threat to health posed by climate change" as one of its six strategic priorities for 2025–2028 (UK Health Alliance on Climate Change, n.d.), underscoring the urgent need to address its wide-ranging impacts on human health.

In the UK, climate change is already influencing the **social and environmental determinants of health**. From more frequent and intense heatwaves to increased flooding and deteriorating air quality, the effects are being felt across the country. These changes not only strain the NHS and public infrastructure but also contribute to excess deaths and rising healthcare costs - estimated at **£6.8 billion annually** in the 2020s, potentially doubling by the 2050s (UKHSA, 2023).

However, the burden of these impacts is not shared equally. Climate change **exacerbates existing health inequalities**, disproportionately affecting disadvantaged and marginalised communities. Vulnerable populations - such as the elderly, low-income households, and those with pre-existing health conditions - are more likely to suffer from the direct and indirect consequences of climate-related events. Moreover, global climate disruptions can ripple into the UK through food supply instability, migration, and geopolitical tensions, further complicating the health landscape.

As we confront the realities of a warming world, it is essential to recognise that climate action is not only about protecting the planet - it is about protecting people, and ensuring that **no one is left behind**.

The Effects of Climate Change on Health Inequalities

Climate change is a health multiplier - it not only introduces new risks but also deepens existing health inequalities. While everyone is affected by a changing climate, the **degree of exposure, vulnerability, and capacity to adapt varies significantly** across population groups. These differences are shaped by factors such as income, ethnicity, age, geography, and housing conditions, meaning that **the most disadvantaged often bear the heaviest burden**.

For a detailed overview of health inequalities in the UK, see our previous Clarity Digest issue on "Health Inequalities in England: Current Status, Causes, and Recommendations for Action."

⚠️ Extreme Temperatures

The UK is experiencing warmer, wetter winters and hotter, drier summers, with sea levels continuing to rise (UKHSA, 2023). **Extreme temperatures are already contributing to increased mortality**: in 2023, there were approximately 2,300 heat-related deaths and 5,500 cold-related deaths. These impacts are not evenly distributed. For example, a 1°C rise above 16°C leads to a 1.02% increase in hospital visits among the most deprived (UKHSA, 2025).

Vulnerable groups - such as older adults, children, and people with chronic illnesses - are at greater risk. **Children**, in particular, are **more susceptible to heat-related illnesses** like dehydration, especially if they are already disadvantaged by homelessness, poor nutrition, or lack of access to clean water (RCPCH, 2023). Ethnic minority groups, who are more likely to live in urban areas and overcrowded housing, face increased exposure to the **urban heat island effect and fluvial flooding** (UKHSA, 2025).

Without adaptation, up to 10,000 heat-related deaths per year are projected by the 2050s under a high-warming scenario. Cold-related deaths are also expected to rise, driven by fuel poverty, poor housing, and an ageing population (UKHSA, 2023).

🌊 Flooding

Flooding is another climate hazard with unequal impacts. Deprived communities often live in high-risk areas with **lower insurance coverage**, making recovery more difficult (UKHSA, 2025). Flooding can lead to **waterborne diseases, food insecurity, and mental health issues** such as depression and eco-distress (RCPCH, 2023; UKHSA, 2023).

By 2050, the number of people at risk of flooding in the UK is projected to **increase by 61%** under a +2°C scenario and 118% under a +4°C scenario (UKHSA, 2023), with the most severe impacts falling on those least able to prepare or recover.

Air Pollution and Chemical Exposure

Air pollution is a major health threat, linked to **29,000–43,000 deaths annually** in the UK (UKHSA, 2025). It disproportionately affects **deprived and ethnically diverse communities**, who are more likely to live near busy roads or industrial areas and in overcrowded, multigenerational households. These conditions increase vulnerability to heat stress, poor indoor air quality, and infectious disease spread.

Children are especially vulnerable. They breathe faster, their organs are still developing, and they are more exposed to pollutants like PM2.5, PM10, and NO_2, which are linked to poor lung function, low birth weight, and intrauterine growth restriction (RCPCH, 2023).

Food Security

Climate change threatens food security through both direct and indirect pathways. The UK relies heavily on food imports from climate-vulnerable countries, making it **susceptible to price volatility and supply disruptions** (UKHSA, 2023). Low-income households are hit hardest by food price inflation, especially for fresh produce.

Children are particularly affected by malnutrition, which can have lifelong consequences. **Undernutrition** increases the risk of infections, while **overnutrition** (often linked to poor-quality diets) raises the risk of diabetes, cardiovascular disease, and cancer (RCPCH, 2023).

Mental Health

The mental health impacts of climate change are profound and growing. Flooding, heatwaves, and food insecurity can all trigger stress, anxiety, and depression, especially in communities already facing limited access to mental health services. Children and young people are particularly vulnerable to **eco-distress** - a sense of fear and helplessness about the future. In fact, 73% of 16–24-year-olds in the UK report that climate change negatively affects their mental health (RCPCH, 2023).

What is being done - and what needs to be done

Addressing the health impacts of climate change, particularly their unequal distribution, requires urgent, coordinated, and equity-focused action. While progress is being made, significant gaps remain in both research and policy.

Building the Evidence Base

The UK Health Security Agency (UKHSA) is playing a central role in developing the evidence base for effective interventions. Through its **Health Effects of Climate Change report**, UKHSA is tracking how environmental hazards like heatwaves and flooding affect health and worsen inequalities. The agency is also producing **tailored guidance for vulnerable groups** and supporting community resilience efforts.

However, the **evidence base remains limited** - especially regarding ethnicity-specific risks and the intersection of climate and health. A 2024 bibliometric study found that while interest in this area is growing, the field suffers from a lack of dedicated experts, limited commissioning capacity, and political sensitivities (UK Health Alliance on Climate Change, 2023).

Embedding a Planetary Health Perspective

A study published in the BMJ (2025) calls for adopting a planetary health lens - an approach that integrates human health with the health of Earth's systems. This means:

- **Implementing climate mitigation and adaptation policies** that explicitly protect and improve health.
- **Updating public health guidance** to assess the co-benefits, trade-offs, and risks of climate-related interventions, especially for vulnerable populations.

For example, phasing out fossil fuels not only reduces greenhouse gas emissions but also improves air quality, delivering immediate health benefits.

Mainstreaming Equity in Climate-Health Policy

To effectively reduce health inequalities, climate-health research and policy must mainstream equity considerations. This includes:

- **Disaggregating data** by key social determinants (e.g. income, ethnicity, age, geography).
- Understanding who is most exposed, most vulnerable, and least able to adapt.
- **Prioritising groups** often overlooked in interventions, such as ethnic minorities, people with disabilities, those in institutional settings, and non-English speakers.

The CORE20PLUS framework, developed by UKHSA and NHS England, provides a valuable structure for identifying and supporting these priority populations.

What is being done - and what needs to be done

Unlocking Health Co-Benefits

There are also opportunities to improve health through climate action. For instance:

- **Decarbonising** transport and housing can reduce air pollution and fuel poverty.
- **Expanding green spaces** supports mental and physical health.
- **Improving food systems** can enhance nutrition and reduce emissions.

The UK's decarbonisation agenda presents a major opportunity to embed health goals and reduce inequalities - if health is made a central pillar of climate policy.

Acting Early and Locally

Many adverse health impacts of climate change are **avoidable with timely mitigation** and **preventable through effective adaptation**. The most effective strategies:

- Harness natural systems (e.g. green infrastructure).
- Target vulnerable populations.
- Promote adaptive behaviours and climate education.
- Enhance community resilience by addressing existing inequalities.

Recent publications

Recent publications covering key subjects in health and care. The resources listed are gathered from trustworthy sources to offer a variety of content and are categorised by theme. Click on the boxes below to access the publications.

Service resdesign & transformation

Mental health: delivering the three shifts NHS Providers (2025)	Bringing care closer to home: making the shift to community a reality NHS Providers (2025)	A new front door: reimagining primary care for the next decade NHS Confed (2025)

Digital & AI

Data linkage is key to the digital shift The Health Foundation (2025)	Artificial Intelligence use in NHS communications NHS Confed (2025)	Embrace AI to improve system-wide decision-making LGA, 2025

Population health & governance

Occupation therapy leadership in public health LGA (2025)	Restricting advertising of less healthy food or drink on TV and online DHSC (2025)	RSV immunisation for older adults and pregnant women UKHSA (2025)
Pride month: Raising the profile of Queer Menopause RCOG (2025)	Adult ADHD assessments and diagnosis: data and service provision King's Fund (2025)	Roadmap to the future: RCN career frameworks launched RCN (2025)

Sustainability

Health impacts of emissions from incinerators: UKHSA opinion of the evidence UKHSA (2025)	Environmental monitoring following the Grenfell Tower fire UKHSA (2025)

Recent Podcasts

Recent podcasts covering themes across the health and care sector. We are always looking for new podcasts - so please do get in touch with your recommendations.

Autism, Vaccines, and Measles

One Health Trust (2025)

The Invisible Second Threat to Cancer Patients – Drug-Resistant Infections
One Health Trust (2025)

The $5 Trillion Bubble, Trump, Drug Pricing and the Future of US Healthcare
The Healthcare Policy Podcast (2025)

Climate Justice, Legal Tools to Hold Financiers Accountable
The Healthcare Policy Podcast (2025)

Understanding your personal sleep needs
The Business of Healthcare Podcast (2025)

Challenges and opportunities in primary care
The Business of Healthcare Podcast (2025)

Data centres: the race to power AI
The McKinsey Podcast (2025)

Empowering NHS leaders through continuous learning
The National Health Executive Podcast (2025)

The making of the Health Bill

HSJ (2025)

How the government should deal with another doctors' strike
HSJ (2025)

Who's really in charge of neighbourhood health?

HSJ (2025)

NHS England's hard line on AI

HSJ (2025)

A profound disappointment

HSJ (2025)

📄 **Read our previous Clarity Digests**

Health Inequalities in England: Current Status, Causes, and Recommendations for Action

Older women face unique challenges around health, inequality, economic insecurity and care responsibilities - and they require urgent policy attention.

Read Full Post →

AI in Healthcare

The goal should not simply be to build public trust in AI, but to ensure AI systems are inherently trustworthy.

Place-based Partnerships

The King's Fund report highlights the promise and complexity of place-based partnerships within England's Integrated Care Systems (ICSs).

Read Full Post →

Building a Picture of Older Women's Lives in the UK

Older women face unique challenges around health, inequality, economic insecurity and care responsibilities - and they require urgent policy attention.

Read Full Post →

Contact us

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