

Heatwaves hit hard, but prescribing 'cool' isn't enough

Written by The Life Science Feed Editorial Team · Published 20 July 2026 · Edited by Mara Voss

The UK faces a growing public health challenge as heatwaves intensify and become more frequent, straining healthcare systems and disproportionately affecting vulnerable populations. While the immediate clinical presentation of heat-related illness is well-understood, the systemic inequities in exposure and resilience demand a more integrated and proactive response from primary care and public health. This is not merely an environmental issue; it is a direct determinant of health outcomes, particularly for those already navigating chronic conditions or socioeconomic disadvantage.

KEY TAKEAWAYS

- **The Pivot:** The UK's current infrastructure and social support systems are inadequate to protect all citizens from escalating heatwave risks.
- **The Data:** Excess mortality during heatwaves can increase by over 50% in the most deprived areas compared to the least deprived, highlighting a stark cooling divide.
- **The Action:** Clinicians should proactively identify and counsel high-risk patients on heat mitigation strategies, advocate for community-level cooling interventions, and integrate heat risk into chronic disease management plans.

The escalating frequency and intensity of heatwaves across the UK present a clear and present danger to public health, moving beyond an occasional summer nuisance to a predictable, seasonal threat. Clinicians in general practice increasingly encounter patients presenting with heat-related illnesses, from heat exhaustion to heatstroke, but the underlying mechanisms of vulnerability extend far beyond individual physiological responses. The problem is systemic, rooted in housing quality, urban planning, access to green spaces, and the socioeconomic determinants of health that dictate who can afford to adapt and who cannot. This creates a pronounced 'cooling divide,' where the most vulnerable populations bear the brunt of heatwave morbidity and mortality, often silently and without adequate intervention. Understanding the pathophysiology of heat-related illness is fundamental for effective clinical management. Sustained exposure to high ambient temperatures overwhelms the body's thermoregulatory mechanisms, primarily sweating and vasodilation. When core body temperature rises above 37°C, compensatory mechanisms activate. As temperatures climb further, particularly above 40°C, cellular damage begins, leading to multi-organ dysfunction. Dehydration, electrolyte imbalances, and direct thermal injury to cells contribute to a cascade of effects impacting the cardiovascular, renal, and central nervous systems. Older adults, infants, and individuals with pre-existing conditions like cardiovascular disease, diabetes, and chronic kidney disease are particularly susceptible due to impaired thermoregulation, reduced physiological reserves, or medications that interfere with heat dissipation, such as diuretics or anticholinergics. Mental

health conditions also elevate risk, as certain psychotropic medications can impair sweating or alter perception of thirst, while social isolation limits access to support.¹

Addressing the Structural Determinants of Heat Vulnerability

The clinical presentation of heat illness is only one facet of the problem; the structural inequities that amplify risk demand equal attention. Housing quality, for instance, plays a critical role. Many homes in the UK, particularly older social housing or privately rented properties, are designed to retain heat, a benefit in winter but a severe liability during summer heatwaves. Poor insulation, lack of external shading, and inadequate ventilation transform these dwellings into heat traps. Residents in such homes often lack access to air conditioning, either due to cost or structural limitations, forcing them to endure dangerously high indoor temperatures for prolonged periods. This is particularly acute in urban areas, where the 'urban heat island' effect exacerbates ambient temperatures, making cities several degrees warmer than surrounding rural areas. Concrete and asphalt absorb and re-emit solar radiation, while a lack of green spaces prevents natural cooling through evapotranspiration.²

Socioeconomic status directly correlates with heat vulnerability. Individuals in lower-income brackets are more likely to live in poorly insulated housing, work in outdoor or physically demanding jobs with limited access to cooling, and have less disposable income to run fans or air conditioning. They may also have limited access to transport to reach public cooling centres, if such facilities are even available in their communities. This creates a vicious cycle: those already facing health disparities due to poverty or chronic illness are precisely the ones most exposed to heat risk and least equipped to mitigate it. Public health data consistently show that excess mortality during heatwaves is significantly higher in the most deprived areas. For example, some analyses indicate that excess mortality can increase by over 50% in the most deprived deciles compared to the least deprived during severe heat events, underscoring the profound impact of this cooling divide.³

The current public health response, while improving, often relies on reactive measures like heat health alerts and general advice. While important, these broad communications frequently fail to reach the most vulnerable or translate into actionable changes. Many at-risk individuals may not perceive their own risk, or they may lack the resources to implement recommended strategies, such as staying hydrated or seeking cooler environments. This highlights a critical gap between public health messaging and individual capacity for adaptation. A more proactive, targeted approach is necessary, integrating heat risk assessment into routine clinical practice and community health initiatives.

Primary care clinicians are uniquely positioned to identify patients at high risk. During routine consultations, particularly for older adults or those with chronic conditions, a brief assessment of living conditions, access to cooling, and social support networks can flag potential vulnerabilities. This involves asking specific questions: 'Does your home stay cool during hot weather?', 'Do you have access to a fan or air conditioning?', 'Do you have family or friends who check on you during heatwaves?' Simple interventions, such as advising patients on medication adjustments during hot weather (e.g., timing of diuretics), emphasising hydration, and providing information on local cooling centres, can make a tangible difference. But this requires a shift in clinical mindset, integrating heat risk as a routine consideration in patient management, much like fall risk or medication adherence.⁴

Beyond individual patient counselling, broader community-level interventions are essential. This includes advocating for improved housing standards, particularly in social housing, to incorporate better insulation, reflective roofing, and external shading. Urban planning must prioritise increasing green infrastructure, such as parks and tree-lined streets,

which provide natural cooling and reduce the urban heat island effect. Local authorities also have a role in establishing and promoting accessible cooling centres during heatwaves, ensuring they are well-advertised and easy to reach for all residents, especially those without private transport. These centres should offer more than just cool air; they should provide a safe, welcoming environment with access to water and potentially health checks.⁵

The challenge extends to occupational health. Workers in outdoor professions, such as construction, agriculture, and delivery services, face direct and prolonged heat exposure. Employers have a responsibility to implement heat safety protocols, including providing shaded rest areas, ensuring access to hydration, and scheduling work to avoid peak heat hours. Clinicians should be aware of these occupational risks and counsel patients accordingly, advising on appropriate work practices and monitoring for symptoms of heat stress. The economic implications of heatwaves, including reduced productivity and increased healthcare costs, underscore the need for these preventative measures.⁶

Still, implementing these changes faces significant hurdles. Retrofitting existing housing stock is expensive and complex, requiring substantial government investment and coordinated efforts across multiple sectors. Urban greening projects often compete with other development priorities and can take years to mature. Public awareness campaigns need to be sustained and culturally sensitive, reaching diverse communities effectively. The open-label nature of many public health interventions means that quantifying their precise impact can be challenging, but the clinical imperative remains clear. The trial of inaction is already running, and the results are consistently poor for the most vulnerable.⁷

The long-term implications of a warming climate mean that heatwaves will not abate; they will only intensify. This necessitates a fundamental re-evaluation of how the UK designs its built environment, delivers public health services, and supports its most vulnerable citizens. The cooling divide is not merely a discomfort; it is a health equity crisis that demands immediate and sustained attention from clinicians, policymakers, and communities alike. Ignoring it will only lead to greater morbidity, mortality, and an ever-widening gap in health outcomes. The next trial must focus on robust, scalable interventions that address these systemic failures, rather than simply reacting to individual crises.⁸

CLINICAL IMPLICATIONS

The escalating frequency of heatwaves demands that clinicians integrate heat risk assessment into routine patient care, particularly for those with chronic conditions or socioeconomic vulnerabilities. It is no longer sufficient to merely treat heat-related illness; we must proactively identify and mitigate risk factors before patients present in crisis. This means asking about housing conditions, access to cooling, and social support during routine consultations.

The cooling divide is a stark reality, with excess mortality during heatwaves disproportionately affecting deprived communities. This is not a failure of individual resilience but a systemic failure of infrastructure and public health planning. Clinicians have a role in advocating for community-level interventions, such as improved housing standards and accessible cooling centres, which directly impact patient outcomes.

Pharmaceutical companies and guideline bodies must also consider the impact of heat on medication efficacy and safety. Prescribing information should offer clearer guidance on dose adjustments or monitoring for drugs that impair thermoregulation or are affected by dehydration. This is a critical gap in current clinical practice that needs urgent attention as climate patterns shift.

Ultimately, addressing the UK's cooling divide requires a multi-sectoral approach, but primary care remains

at the frontline. We cannot wait for perfect data; the clinical imperative to protect our most vulnerable patients from preventable heat-related harm is immediate and undeniable.

EDITORIAL & AI STANDARDS

AI tools are used solely to structure and summarise evidence from peer-reviewed primary sources. No AI-generated conclusions appear in The Life Science Feed without editor verification against the primary source.

LICENCE & RIGHTS

© 2026 The Life Science Feed. All rights reserved. This content is produced for medical education purposes. It may not be reproduced, distributed, or transmitted without prior written permission from The Life Science Feed.

MEDICAL DISCLAIMER

This content is intended for healthcare professionals only and does not constitute medical advice. Clinical decisions must be made by qualified practitioners based on individual patient circumstances.

FOLLOW THE LIFE SCIENCE FEED

[Instagram](#) @lifesciencefeed [LinkedIn](#) linkedin.com/company/thelifesciencefeed

thelifesciencefeed.com