Climate change, energy demand and health: Protecting vulnerable populations

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Jo-Ting Huang-Lachmann, Junior Research Group Lead at the Climate Service Center Germany, discusses climate change, energy demand, and health to safeguard vulnerable populations

Climate change presents multiple challenges that significantly affect the health and well-being of the most vulnerable populations, including older adults. At the intersection of climate change, energy insecurity, and an ageing population lies a complex web of risks that requires urgent attention.

However, this scenario also presents opportunities to promote resilience and social equity. In this context, climate services play a crucial role by providing information and tools that enable communities to better adapt to changing climatic conditions, thereby minimising the negative impacts on the health of older adults.

Impacts of climate change on health and long-term care

With a projected increase in the number of people aged 65 and older worldwide, from approximately 807 million in 2023 to 1.6 billion by 2050, healthcare systems face unprecedented pressure (WHO, 2024). This demographic growth not only implies an increase in the demand for health services and long-term care but also exposes this vulnerable population to systemic risks.

Extreme temperatures are linked to higher rates of heat-related morbidity and mortality, exacerbating chronic health conditions such as respiratory and cardiovascular diseases. For instance, research conducted by McKenna et al. (2023) highlights that older adults are particularly vulnerable to heat stress due to age-related declines in their ability to dissipate heat. From a systemic risk perspective, these impacts not only directly affect individuals but also generate cascading effects on healthcare systems, including:

1. Overburdened healthcare infrastructure.
2. Critical energy dependency.
3. Impact on social equity.

Addressing this challenge requires a comprehensive approach considering the interconnections between health systems, energy, and climate change. Developing policies that enhance resilience to extreme temperatures, adapt care systems, and promote equity is important for mitigating the impacts of this systemic risk on a rapidly ageing population.

Key finding: The article “Exploring interconnections: A comprehensive multi-country analysis of climate change, energy demand, long-term care, and health of older adults,” published as part of the CoCareSociety project, highlights that older adults in Global South regions face particularly severe risks. This vulnerability is largely due to a lack of essential adaptive resources, such as access to air conditioning or infrastructure designed to withstand extreme weather events.

Energy transition and its role in health

The increased energy demand resulting from extreme events, such as more frequent heatwaves, exacerbates disparities in access to safe and clean energy sources. Dependence on fossil fuels not only aggravates climate change but also contributes to air pollution, severely affecting respiratory health.

Emerging solutions: Promoting the use of renewable energy sources and adapting policies to improve access to energy-efficient technologies can alleviate the burden on the most vulnerable households. For example, community solar projects can provide low-income families with affordable electricity options while reducing reliance on fossil fuels. However, their implementation timeline necessitates complementing these solutions with immediate strategies that allow the most affected populations to face current challenges while progressing toward a more sustainable and equitable energy system.

Strengthening resilience in care systems

The CoCareSociety project emphasises how collaboration between Global North and South regions can generate significant insights for addressing systemic risks. For instance, workshops conducted in Germany and Japan as part of this project allowed experts from diverse backgrounds to identify critical areas for action, such as modernising long-term care infrastructures with energy-efficient materials that can withstand climate extremes.

Towards a comprehensive approach

Interdisciplinary work shows that addressing climate risks to health requires a holistic approach that prioritises social justice, technological innovation, and inclusive policies. As challenges continue to intensify, interventions must consider local communities’ cultural and economic realities. Policymakers must engage with these communities to design effective strategies that reflect their unique needs and circumstances.

The interconnected challenges posed by climate change demand immediate attention from policymakers and stakeholders alike. By recognising the specific vulnerabilities older adults face and implementing targeted interventions – such as enhancing access to renewable energy and improving healthcare infrastructure – we can mitigate the adverse effects of climate change on this population.

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About CoCareSociety

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