

Climate crisis and child health inequity

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To cite: Gauffin K, Spencer N. Climate crisis and child health inequity. *BMJ Paediatrics Open* 2022;**6**:e001357. doi:10.1136/bmjpo-2021-001357

Received 18 February 2022
Accepted 27 March 2022

The climate crisis, that is, global heating and its multiple consequences, is one of the greatest threats to the future of the world's children.¹ At the same time, the causal chains that connect climate change and children's health are long and complex. Some threats can be directly attributed to climate change (eg, extreme weather events), some are mediated through changes in ecological systems (eg, distribution and burden of vector-borne diseases) and others are channelled through factors related to resource distribution, social organisation and institutional arrangements (eg, food insecurity and forced migration).^{2,3} Climate change could be described as a 'creeping crisis' as it evolves over time, reveals itself in different ways and resists adequate responses.⁴ As such, the adverse impact on child health through mediated factors can be challenging to pinpoint, although the occurrence of 'climate shocks' and its direct effects are making these causal chains less uncertain.

Children are particularly vulnerable to climate change for various reasons. Due to their incomplete physiological and cognitive development they have higher exposure to air, food and water per unit body weight, putting them at higher risk of climate-related health burdens than adults.⁵ This biological vulnerability is aggravated by interaction with social vulnerability. Hazardous environmental and social conditions for poor and marginalised children in majority world countries, including lacking access to essential determinants of health such as clean water and adequate nutrition, are particularly severe for developing bodies and minds. The social vulnerability of children is further exacerbated by their dependence on parents and/or caregivers. Finally, there is an emerging recognition that climate change is a greater threat to children not simply due to their physiological and developmental vulnerability, but because their health across their whole life course will be adversely affected by increasing temperatures. This intergenerational inequity has contributed to the global

movement for climate change action among children and young people that has forced the climate crisis up the international policy agenda, epitomised by the Fridays for Future movement and other political initiatives.

The climate crisis is unjust, with countries contributing least suffering the most.⁶ This *between-country inequity* is driven by an interaction of geography, resources and political power. Existing inequities in child health comparing the majority world countries and rich nations are exacerbated by climate change.⁷ This global injustice ensures that children in majority world countries are not only more exposed to the direct effects of climate change on their health but are unable to benefit from the advances in living conditions afforded by the availability over decades of abundant energy resources. The *within-country inequity* caused by climate change is evident in all countries of the world. As populations in rich nations are increasingly exposed to the effects of climate change as shown by recent wildfires in Australia and California and extreme heat along the west coast of North America, the disadvantaged and indigenous communities suffer the most. Poor housing conditions, degraded environments and climate-driven crop failures increasing food prices hit the poorest population groups hardest.

The fact that the climate crisis is a human-made emergency reminds us that the way forward will be determined by human action or inaction. As a public health crisis, climate change has a strong inherent potential to exacerbate existing health inequity with severe consequences for today's children and future generations. Health inequity is often framed within theories on 'social determinants of health', which point to the contribution of socioeconomic conditions to existing differences in health. However, similar to many other public health issues, the relationship between the climate crisis and child health inequity could be more appropriately understood as a result of 'political determinants of health'.⁸ Overlapping with the concept of 'the causes of the causes', a theoretical framework considering the political determinants of health



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acknowledges the fact that political decisions form a basis for both health inequities and the social inequalities driving them.⁹ It also integrates responsibility and accountability into the equation, highlighting that health equity does not appear out of thin air or as an effect of bad luck or poor individual choices, but is a result of a rigged system that needs to be fixed. This being said, the magnitude of the climate crisis calls for interventions that go far beyond what we usually mean when suggesting policy implications of public health research. There will be no silver bullet intervention that will 'solve' climate change, but there are radical measures that, if taken in a coordinated and decisive response, have the potential to change the direction and let us stay within the 1.5°C-target set by the Paris Agreement.⁸

The number of climate-related political determinants of health are numerous, yet dependency on fossil fuels is undoubtedly principal among these. Further mining of coal and drilling for oil undermines any chance of realising the Paris Agreement target. Huge vested financial interests are under threat and they have shifted from denial to climate action delay and 'greenwashing' to defend their interests. The features of a 'creeping crisis' imply a significant challenge to decisive counteraction. With complex casual pathways and a gradual accustoming to the unsustainable status quo, business will continue as usual as long as it is not held accountable. Here, professional alliances can be formed to challenge the hazardous practices of today. Health professionals, and paediatricians in particular, have the chance to contribute to policies robust enough to ensure climate change action is not derailed in the interest of profit. This implies a major active role for paediatricians as the health professionals directly concerned with the health of child populations, both in the role as clinical practitioners contributing to a mitigation of the adverse effects of climate change, but also as public health educators and advocates. Paediatricians will bear witness to one of the most appalling consequences of the climate crisis—increased suffering and deaths of children born into a heating world—and to speak openly and clearly about this will be a significant contribution and call for action.

At the international and national levels, the responsibility will fall on paediatric societies and leading national paediatricians. They have a major role as advocates for urgent policy change to protect children and their health as well as educators of their members and others. International and national societies have published declarations and position statements recommending policy measures to target climate change and protect child populations from its effect. For example, the International Society for Social Pediatrics and Child Health's Declaration (<https://www.issop.org/2021/03/28/issop-declaration-on-climate-change/>) has been adopted by the International Pediatric Association and disseminated widely. Other initiatives such as webinar series (<https://www.youtube.com/channel/UCIkPU1qjQsn7Zjj3dkgioTQ>) and meetings with policy makers have been undertaken. To protect the health of child populations

much more will be needed in the coming years. Children and young people have become leaders in the climate change movement. Paediatric organisations and individual paediatricians should actively support national and local groups, work closely with them in hospitals and clinics and in local communities and ensure their voices and views are incorporated in decision-making processes, for example, in the design of climate friendly policies in clinics and hospitals. Consultations with children and their families can be opportunities to discuss issues such as air pollution, heat exposure and climate anxiety.

In conclusion, the climate crisis is an existential threat to child health in general and to children with little resources in particular. Paediatricians and their organisations can contribute to confronting vested interests and promoting policies to limit carbon emissions.

Contributors Commissioned editorial written jointly by KG and NS.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Commissioned; externally peer reviewed.

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