

Natural and unnatural synergies: climate change policy and health equity

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Introduction

Climate change and health inequities represent two of the greatest challenges to human development in the 21st century. As the Copenhagen summit on climate change planned for December 2009 approaches, there are opportunities to use the political momentum of climate change to promote health equity. The broad-ranging policies required to address climate change have both positive and negative implications for health and health equity.^{1,2} Similarly, interventions to reduce health gaps will not necessarily help stabilize the climate. Poorly designed policies could easily undermine both climate and health equity goals, and reduce public support for their implementation. This paper reviews the potential tensions between climate stabilization and improving health equity and discusses how these might be resolved.

The impact of climate change on health equity

Climate change has major repercussions for the social determinants of health – people's daily living conditions and their access to money, power and resources are strongly influenced by political, economic, environmental, cultural and social factors.² Inequalities in these determinants are the major cause of health inequities.

By acting on these social determinants, climate change could greatly exacerbate health inequities, also highlighting an often neglected aspect of health equity – intergenerational inequity. In 2000, an estimated 150 000 deaths were attributable to climate change and this is likely to increase with plausible temperature rises.³ The current illness burden overwhelmingly falls on those who have contributed least to

the problem, with the poorest one billion people in the world accounting for only 3% of global carbon emissions.⁴ Disadvantaged communities have the most vulnerability and least resources to respond to climate change health threats such as increased natural disasters, food and water insecurity and changing disease distribution. For example, the risk of being affected by weather-related natural disasters is almost 80 times higher in developing countries than in developed countries.⁵

Addressing climate change can worsen health equity

While climate change represents a health burden imposed principally by the rich on the poor, addressing climate change will not necessarily improve health equity. Many promising policies aimed at mitigating climate change by reducing carbon emissions, such as price mechanisms, could easily increase income inequality and worsen health inequities.

For example, the use of a carbon tax in Denmark has been shown to be regressive in terms of income inequality.⁶ Carbon taxation schemes discourage carbon emissions by making them more expensive. As a result, raised production costs increase the price of essential items. Despite high-income groups using more carbon and often paying more tax, the proportional financial burden is greater for low-income groups. Decreased spending by low-income groups on essential commodities such as adequate food, heating and health care can lead to negative impacts on health and health equity.

There are similar concerns with carbon trading schemes. Most schemes currently mooted operate at the level of industry and are likely to have inequitable effects on income as producers

pass on the costs to consumers. Personal trading schemes, while difficult to implement, could provide revenue for poorer people through the sale of excess carbon allowances to higher emitters. However, poorer people, particularly in high-income countries, are not always the lowest emitters.

Other policy decisions aimed at reducing carbon emissions can also bring unexpected hazards for health equity. For example, the marked recent instability in the cost of basic foods was due to a complex range of factors, but a significant contributor was the shift from food to biofuel production, particularly in subsidized markets. More locally, in Delhi, changing the fuel source of buses from diesel to liquefied petroleum gas aimed to achieve local and global environmental objectives. However, higher prices pushed poorer passengers to more polluting and dangerous transport, and hampered access to health and other essential services.

Measures to adapt to climate change also pose particular challenges for health equity. Given the high costs of infrastructure and other adaptation measures, poor countries and communities are likely to be the least able to implement protective measures. This poses similar risks for adaptation as those that exist with some health promotion strategies. Rich communities are likely to be able to implement adaptation measures before poorer communities and this will increase health gaps.

Improving health equity can worsen climate change

Equally, policy that aims to improve health inequity can easily worsen climate change. It is undeniable that, for many countries with very poor health status, economic development

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is a necessity to reduce inequities. The improvements in health status seen in many east Asian countries over the past 40 years have been accompanied by economic development and increased carbon emissions. If other countries follow this path, even using the best available technology, construction of basic infrastructure in housing, sanitation, roads and communications will require significant carbon emissions.

To stay within ecological limits and prevent serious destabilization due to climate change, on average no more than two tonnes of carbon dioxide per person must be generated per year.⁷ Yet the average American emits 20 tonnes and the average Chinese nearly four tonnes. To deny poorer countries economic development using carbon-based fuel gives rise to charges of hypocrisy on the part of developed countries. Many developing countries resist committing to emissions reductions which seem incompatible with the improvements in living conditions essential to improving health equity.

“Co-benefits” are achievable

Despite these tensions, there are potential synergies between improving health equity and addressing climate change. Health equity gains from economic development in poorer countries will be unsustainable without climate stabilization. Mitigation of climate change, without undermining poverty alleviation, is therefore a pre-condition for health equity in coming decades.

Clear mutual “wins” can already be identified. Policies that promote safe, affordable and accessible use of active transport – public transport, cycling and walking – over the use of private motorized transport have health equity gains as well as value in climate change mitigation. Such policies can reduce the health burden from air pollution and motor vehicle injury and, by increasing physical activity, reduce cardiovascular disease, cancer and mental illness, all of which are health threats that show large disparities between different groups.

Improved housing also provides great potential for health equity and climate change co-benefits. Incomplete household combustion of coal and biomass in low-income countries causes 2.7% of the global disease burden, mainly from respiratory disease.⁸ Shifting to cleaner energy sources is expected to both reduce emissions of black carbon, a potent greenhouse gas, and save large numbers of lives among the poorest. In both high- and low-income countries, energy inefficient housing causes considerable health effects due to cold and dampness. Improving insulation has been a focus of policy to address climate change in many countries. In New Zealand, Kyoto Protocol requirements and research showing the health benefits of insulation together resulted in a commitment for insulation to be installed in all social housing – a clear example of a “win-win” for health equity and climate stabilization.

Ensuring synergies

The Commission on Social Determinants of Health’s call “to bring the two agendas of health equity and climate change together”² requires specific attention. The potential tensions between reducing emissions and creating equitable policies require strategies that keep both goals at the forefront to identify and exploit synergies and co-benefits.

Essential conditions for achieving health equity and climate goals can be identified. First, strategies must adhere to key principles, including the fair sharing of burdens embodied in the United Nations Framework Convention on Climate Change’s language of “common but differentiated responsibilities” and the World Health Organization constitution’s declaration that all people have a right to “the highest attainable standard of health”. Principles must also include a commitment to intersectoral action to achieve “health equity and climate change in all policies”. This provides a further driver

for the differential approach to mitigation whereby developed countries contract their emissions while developing countries converge theirs to allow the development that is fundamental for health equity.

Second, specific policies need to be carefully designed and assessed. Integrated assessment methods that consider the range of effects on health and health equity can maximize synergies and optimize trade-offs between competing priorities. At the design stage, implementing safeguards and flanking measures, such as recycling revenue from carbon pricing measures, towards health outcomes for disadvantaged groups can help avoid or reduce inequitable effects.

Third, further research and continued monitoring and evaluation of policies are required. Interactions between climate policy and health equity are particularly complex and uncertain. Improving health equity is identified as a broad goal of the currently proposed climate change research agenda.⁹ However, few relevant or specific studies exist. As with all policy, implementation will be necessary without full knowledge of effects and unintended consequences. Success stories and chastening experiences must be shared rapidly and widely to help decision-makers move towards socially beneficial policies.

The simultaneous pursuit of climate stabilization and health equity is a political as well as a technical challenge, questioning current economic models in terms of the allocation of resources in society and calling for careful policy design to achieve fairer outcomes. Anyone attempting to improve health equity alongside addressing climate change will need to be as smart as they are well-intentioned. ■

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