CLIMATE CHANGE: WHAT CAN DOCTORS DO?

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ABSTRACT

Global warming remains one of the largest global threats to our health. The size of the challenge is immense but political interventions have so far failed to create the drastic changes that are needed to avert this crisis. Concerned by the health risks of climate change, new health groups are emerging to champion this cause, raising awareness, accumulating research data, and influencing public policy. However, there has been less discussion about the role of individual clinicians, particularly family doctors, in addressing this challenge. This article proposes six simple steps that doctors can take to help influence the 'green' behaviour of patients, colleagues, and health systems.

Keywords: Global warming, climate change, general practice, family medicine.

INTRODUCTION

I often wonder if in 20 years' time, we will be telling our children with shame and disbelief of how the world sat back and did nothing about climate change. Despite the Ebola crisis, the obesity epidemic, and nuclear weaponry, global warming could represent the biggest impending threat to public health across the globe.[1] At the end of 2015, the United Nations (UN) met in Paris once again, to reach an agreement on tackling climate change. Described by the French Foreign Minister Laurent Fabius as a 'historic turning point',[2] the agreement that came out of this meeting laid out plans to recreate a space race-like fever in emissions cutting, encouraging countries to make 'green choices' as a matter of national pride. Yet, the agreement is largely non-binding and flexible, relying on countries to determine their own contributions to carbon-cutting and to act solely out of goodwill.[3] If politicians continue to delay action, it may be that individual lifestyle change and grassroots campaigning become our best strategies and doctors are well placed to champion this cause.

HEALTH IMPACTS

Extreme heatwaves will cause increasing deaths from cardiovascular and respiratory disease,[4] especially in the elderly. In Europe, 70,000 deaths were attributed to the heatwave of 2003 alone.[5] Furthermore, an increase in air temperature would increase the mobility of pollen and other aeroallergens, and increase the spread of pollutants through the air.[4] Evidence is accumulating that clearly demonstrates the effect of air pollutants on respiratory and cardiovascular mortality;[4] as temperatures rise and the burning of fossil fuels continues, mortality will only increase.

Variable rainfall patterns are expected to increase both the frequency and intensity of flooding, which as seen during the winter of 2015 across the UK, can be devastating. As well as destroying property and infrastructure and posing a direct threat to life, flooding also can contaminate freshwater and increases the spread of water-borne disease and the breeding of disease-carrying insects such as mosquitoes.[4] In other areas of the world the opposite effect will be seen, with drought and famine threatening human life.

As global air temperatures change, it is expected that patterns of infection will be altered, with some tropical diseases becoming more widespread.[4] The transient changes in temperature from the 1997–1998 El Niño affected the spread of *Plasmodium falciparum* in eastern Africa,[6] schistosomiasis across China,[7] and tick-borne encephalitis in northern Europe,[8] suggesting that infectious disease is already responding to climate change.

Additionally, a secondary effect of climate change is the impact that all of the above will have on global migration and conflict. Flooding, drought, famine, and collapse of infrastructure will all contribute to mass migrations, which risk greater spread of infection and overwhelming the health systems of the receiving countries. What is more, as boundaries are crossed and communities become increasingly protective of their resources, border disputes could occur.

Finally, it is worth noting that although 50% of all emissions are caused by the richest 10% of people,[9] it is those living in developing areas with a weak health infrastructure, limited access to clean water and food, and those living in small island states, that will be most severely affected by the aforementioned changes.[4]

WHAT IS ALREADY BEING DONE

The International Physicians for the Prevention of Nuclear War (IPPNW) was founded during the Cold War and won the Nobel Peace Prize for helping to change public opinion and public policy across the world. They did this by translating scientific jargon into the concrete, personal terms of human health.[10] Joules of force became skull fractures, degrees centigrade became third degree burns. Unable to view nuclear war as an abstract entity anymore, public opinion changed. This same approach is needed now to communicate the harsh realities of climate change but thankfully, health organisations are already taking a stand.

In the UK, the Climate and Health Council was established in 2007 to campaign internationally on the health dangers of climate change and to unite and empower health professionals in this cause.[11] The commissions published in 2009 and 2015[1] marked an international academic collaboration, which mapped out clearly the health impact of climate change and the policy changes needed to protect health worldwide. More recently, the Global Climate and Health Alliance[12] was also founded to raise awareness of the health implications of climate change and to apply political pressure, supported with research, to UN climate negotiations.

Finally, steps have also been taken to reduce the environmental impact of healthcare itself. In 2008, the UK's National Health Service (NHS) Sustainable Development Unit (SDU) was created to help reduce the carbon footprint of health and social care in England, which in 2015, was reported to be 26.6 million tonnes of carbon dioxide equivalent.[13] They have identified carbon 'hot spots' across the NHS,[14] including in pharmaceuticals and medical devices, which commissioners can use to help reach the SDU's 5-year goal of reducing the NHS's carbon footprint by 34%.[15]

WHAT CAN YOU DO?

Below are six steps we each can take as doctors in our daily practice to help in our fight against climate change, adapted from recommendations from The Climate and Health Council in the UK:[16]

1. Encourage patients to walk and cycle whenever possible to benefit both their cardiovascular health and the quality of the air they breathe
2. When offering dietary advice, strongly encourage reduced meat consumption. Farming and meat production is one of the biggest and most overlooked contributors to global warming. If everyone in the UK had one meat-free day per week, this would reduce the same amount of CO_2 emissions as taking 5 million cars off the road,[17] whilst benefiting the cardiovascular health of our patients
3. Community awareness: become aware of local 'green' grants and schemes you can signpost patients towards, especially those who are struggling financially. For instance, look for grants for home insulation or bus passes in your area
4. Social prescribing: volunteering can benefit patients who are socially isolated or struggling with their mental health or self-esteem. Directing these patients to 'green' charities and local environmental projects can give a sense of purpose and social support to these patients whilst also protecting the environment
5. Climate change champion: advocate for climate change to have a place on the agenda of all committees and meetings you attend to help reduce the environmental footprint of healthcare. Argue for the environmental impact of healthcare to become a regular agenda item on all meetings you attend. Recognise your power to influence policy change at a wider level and to leverage the health voice. Consider becoming politically active or joining one of the above national or global campaigns
6. Set an example: try to reduce the energy bill for your own practice, advocate for local and less processed food, drink tap water, and cycle or catch the bus to work

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