COMMENTARY

How Physicians Should Respond to Climate Change

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Urgent warnings about the existential threat of climate change are coming from leaders in nearly every sector of society, including virtually all climate scientists, notable heads of civil governments around the globe, the world's top religious leaders, prestigious medical journals, as well as principals of the largest financial firms. Surveys show that the majority of U.S. physicians in several specialties are caring for patients who are experiencing direct health harms due to climate change. In public platforms, physicians are expressing their awareness that this public health crisis places everyone at risk, but many people are at greater risk, including children, pregnant women, people with chronic health conditions, elders, and those who experience environmental injustice or live in harm's way. Physicians should respond to this crisis with meaningful activities performed within the context of their current roles. The role of medical care provider is the best known role. But, throughout their careers, physicians have ongoing responsibilities as educators of colleagues, trainees, and patients. They are influential employees of medical institutions, trusted experts who exercise civic responsibility, and sources of guidance for public policymakers. Physicians and other health professionals, individually and through their organizations, also work to influence our societal response to the challenge of climate change. The first annual Lancet Journal Countdown Report in 2016 tracking health indicators of climate change stated that climate change had the potential to wipe out all public health gains of the last half century, but it also presents a tremendous opportunity to save lives and improve health. All physicians should work toward the latter outcome. (J Am Board Fam Med 2024;37:7–10.)

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As the existential health threat of climate change faces US residents and people everywhere, urgent warnings are coming from climate scientists, presidents and prime ministers, the Secretary-General of the United Nations, religious leaders including the Pope, venerable institutions like the National Academy of Medicine, and 48 US medical societies.[1–5] Surveys of major medical societies conducted nearly a decade ago demonstrated that the majority of responding physicians considered it their responsibility to inform their patients and the public about the looming health threats of climate change.[6–8] At the time, responders were already seeing health impacts in their own practices manifesting as heat illness, worsening cardiopulmonary symptoms related to air pollution, longer more severe allergy seasons, increasing numbers of tick and mosquito borne infections, and rising mental stress from storm displacement.

Beyond the basic role of providing medical care, physicians can respond to the public health crises of climate change in several ways. Because public trust is high and doctors are familiar with the role of explaining science to the public, the education role is an obvious opportunity. Other opportunities flow from the fact that doctors are respected community leaders and serve as responsible health professionals within the health system. Physicians are advocates as well, speaking individually and through their societies for meaningful solutions based on consensus values. The response to the threat of climate change should be through any or all these roles.

The Physician as Care Giver

The role that is the easiest to access but may cause the most consternation for practicing clinicians is patient education during a medical visit. Time

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pressures produce reluctance to broach topics that are viewed as marginal or controversial. In reality, such topics may be essential for delivering quality care. Parents of young patients should hear that children run a greater risk of heat illness than before global warming was a factor, and they need to know how to protect their children. Pregnant women should know that increased exposure to heat or air pollution predisposes them to premature delivery. Patients with compromised kidney, cardiac, or respiratory function should know that heat can compromise their condition. Cardiorespiratory patients should know how to access and use the Air Quality index.

In most medical practices, advice can be offered verbally or on written instruction sheets. Some practices post such materials online. Sources of these resources are often available through medical societies and their journals, or health department web sites. Federal agencies like the Centers for Disease Control and Prevention and the Environmental Protection Agency also offer health information and tips. Disease focused organizations like the Lyme Disease Association, the Asthma or COPD Foundations, and the American Lung Association are also sources. Research on the effectiveness and timing of such methods are some of the many topics ripe for health services research.

Doctors as Professional Employees of the Health System

Medical Education

If medical education is going to keep pace with the times, the focus on climate threats to body systems and pathophysiology must expand without delay. Clinical training must prepare doctors to educate patients about health threats and offer remedies.[9,10] Understanding the impact of extreme heat, drought, extreme fires, excessive rain with flooding, and the spread of new pathogens and vectors is needed. So is the fact that although all people are at risk, some are at greater risk, including children, pregnant women, people with chronic health conditions, elders, and those who have experienced environmental injustice in the past. Medical student organizations such as the Medical Students for a Sustainable Future have been pushing for several years for including this content and a focus on reducing the carbon footprint of the health system as part of medical education.[11,12] The International Federation of Medical Student's Associations has been rating schools based on this criteria.[13] The Global Consortium on Climate Change Education at Columbia University brings together educational institutions of medicine, nursing, and public health and has been publishing online resources to support this effort.[14] One medical specialty, Pediatrics, now offers a maintenance of certification option on climate and health. Medical schools should waste no more time in ensuring that medical education is up to date about climate change.

A recent conference, Climate Change and Health 2023, planned by editors of the Journal of Climate Change and Health featured teams from diverse medical specialties (including primary care) presenting scoping reviews of published research on climate impacts on their respective specialties. The reviews made clear that the scope of the impact is notable in many specialties, including nephrology, respiratory medicine, cardiology, infectious diseases, ophthalmology, allergy and immunology, obstetrics and gynecology, neurology, and psychiatry. Some of the articles will be published in the Journal of Climate Change and Health.[15]

The revelations from those specialties raise an interesting question. Given the myriad impacts, could climate change as a principal influence on health be a new paradigm percolating just below the surface of our shared outlook? It took hundreds of years before the germ theory of disease was fully accepted. Before the germ theory, people believed in "miasmas" as the cause of disease.[16] Temperature, humidity, air or water quality, and other changes in the biosphere supporting human life are factors we have for too long taken for granted because of their relative stability. Regrettably, we are losing this stability and will be increasingly subject to instability. A new paradigm could give environmental factors their proper due.

Doctors as Professional Employees of the Health System

The health system itself has a significant carbon footprint that contributes to climate change. Physicians are well positioned to point this out and encourage a proper response. The nonprofit group Health Care Without Harm has been working on this issue for many years; thousands of hospitals in the US and around the world are making progress on decarbonization.[17] Its partner in this endeavor, Practice Green Health, offers

support and resources of a technical nature to support work to make hospitals more efficient, sustainable, and resilient.[18] My Green Doctor is a similar resource for outpatient practice.[19] The new Office of Climate Change and Health Equity (within the HHS Office of the Assistant Secretary for Health) is also working to advance this agenda.[20] Any physician can access the resources these groups provide.

Two years ago, the National Academy of Medicine (NAM) announced the formation of an Action Collaborative on Decarbonization of the Health System.[21] Starting in 2024, NAM is transitioning its focus and will seek to launch a movement in the health delivery sector to address the problem. The sway doctors have in their places of employment means they are positioned to initiate, support and accelerate this work along with allies like green teams and hospital sustainability professionals.

Doctors as Trusted Citizens and Civic Leaders

Multiple polls over many years show that doctors, nurses, and pharmacists are the most trusted professionals.[22] Their individual relationships with nearly all people provide unparalleled access with the potential to inform and persuade. A movement of doctors and nurses focused on climate and health is gaining strength and momentum. The Medical Society Consortium on Climate and Health (Consortium), based at George Mason University within the Center for Climate Change Communication, boasts 48 national societies representing more than 70% of all US doctors and includes a network of 24 state affiliates.[23,24] The Consortium engages its members and affiliates in policy advocacy for equitable climate solutions at national and state levels.[25] They also educate the public in community forums of all types. An organization of nurses with a similar focus is the Alliance of Nurses for Healthy Environments.[26]

These groups are currently engaged in raising awareness of the opportunity made available by the Inflation Reduction Act, which offers tax incentives and rebates to help power cars, homes, buildings, and household appliances more efficiently or with electricity produced by clean energy (wind and solar or battery storage) rather than fossil fuels. This will produce better air quality and help the country move toward a clean energy economy.[27] All physicians can themselves implement clean energy solutions in their homes and businesses and/or join efforts to raise awareness of opportunities to advance a clean energy economy and protect those at greatest risk. Physicians can also advocate for policies that mitigate emissions of greenhouse gases, protect people from climate health impacts, and focus attention on those people and communities at greatest risk.

Conclusion

Doctors must step up to confront the grand challenge of climate change.

Doing so is entirely consistent with the mission of medicine and the roles filled by physicians in society. There are many options. In 2016, in the first of the annual Lancet Journal Countdown reports on climate change, the editors stated that climate change has the potential to wipe out all worldwide health gains of the past 50 years, but addressing climate change presents just as great an opportunity to save lives and improve health.[28] We must make the best choice.

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