COMMENTARY

# Climate Change and Policy Reforms: A View from the Primary Care Clinic

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The medical community has been calling the public's attention to the health harms of climate change for decades.[1] Commonly cited impacts include catastrophic weather, wildfires, excessive heat, migration of disease vectors, community dislocation, flooding, sea level rise, and the disruption of human services and food and water supplies. Family physicians are uniquely situated to provide guidance to both patients and policymakers on best steps to mitigate these impacts as well as the more immediate health impacts of fossil fuel pollution.

Over the past 2 decades humanity has suffered devastating effects of climate change: In a recent survey[2] of 23,507 adults in 34 countries by Ipsos for the World Economic Forum, 54% of respondents reported that climate change had already had severe effects where they live. A recent joint statement[3] by the editors of the world's 200 top medical journals concluded, "The greatest threat to global public health is the continued failure of world leaders to keep the global temperature rise below 1.5°C and to restore nature."

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As our patients experience increasing effects of climate change, they turn to health care professionals as trusted sources of information, while policymakers consult us regarding the population health aspects of excessive heat, flooding, and other local and regional impacts of global overheating. We believe that the primary care provider can play a vital role to effect meaningful measures to reduce pollution and address the climate crisis because of our close relationship with our patients and our ability to recognize emerging health trends in a community.

According to UN Climate Action, fossil fuel pollution accounts for over 75% of global greenhouse gas emissions and nearly 90% of all carbon dioxide emissions.[4] While fossil fuels have made possible much of what we presently enjoy in industrialized societies, the accompanying pollution is having epic effects on our planet's homeostasis. It is affecting health on all levels, from low birth weight to dementia. The burden of disease and death is increasing in severity because of these environmental changes. Furthermore, this burden falls disproportionately on people of color, people of lower socioeconomic status, and on developing countries.[5] Meanwhile, renewable energy is not widely available at the necessary scale.

Physicians are trained to and routinely use population-level science to better the health of individual patients in every aspect of medicine, from preventive health guidelines to asthma management. Over 5 decades of research provides us with a wealth of information on how air pollution affects people's health, with an abundance of studies demonstrating the benefits of cleaner air. These, in turn, provide compelling evidence to motivate policymakers to develop the requisite public policies.

Our standard practice is to reduce household air pollution to improve patients' respiratory health. For example, we may advise reducing and ventilating cooking on a gas stove, replacing a gasoline-powered car with electric, replacing an aging gas furnace with a heat pump, and using active transport and mass transit instead of an automobile. All these measures reduce greenhouse gas pollution, a connection illustrated by these examples:

Nationwide, thanks to increasingly stringent motor vehicle emissions rules and gas mileage standards, vehicle-related PM2.5-attributable deaths decreased from 27,700 in 2008 to 19,800 in 2017.[6]

1. A 2023 California study[7] comparing rates of Zero-Emission Vehicle (ZEV) ownership with average annual N2O levels and annual rates of ER visits for asthma exacerbation, by zip code, found that "A within-zip code increase of 20 ZEVs per 1000 population was associated with a 3.2% decrease in annual age-adjusted rate of asthma-related ED visits."
2. A 2022 study[8] of the risk of childhood asthma attributable to gas stove use found that 12.7% (95% CI = 6.3–19.3%) of current childhood asthma in the US is attributable to gas stove use.

As we family physicians are the most frequent first contact for patients seeking care, we have a unique perspective on the communities we serve, seeing the initial presentation of a patient's illness, and its connections to social determinants of health. This helps us discern overall community health trends, including the impacts of climate change and pollution on physical and mental health, from asthma exacerbations to interpersonal violence[9]. Furthermore, with the continuity and often long service that comes with primary care, we are granted a high level of trust and respect by the communities we serve. This positions us clinicians to have a powerful voice in the halls of federal, state, and local governments to stem the climate crisis. Our experience is crucial in providing evidence that can influence policymaking. Through our patients' stories, we can bring these vital issues to life for legislators, as we have done successfully with issues ranging from individual and passive tobacco smoking to nuclear disarmament.

As we learn more about the connections between air pollution, climate change, and patients' health, we can add environmental health to our holistic approach to medicine. We have seen through experiences, data, and scientific studies that the environment is a crucial component of health; and how cutting pollution, particularly air pollution, has prompt and significant benefits to our patients. Armed with these results, we can become better advocates for local, state and federal policies which will lead us to a world in which present and future generations can thrive.

*To see this article online, please go to: http://jabfm.org/content/37/1/19.full.*

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