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CORRESPONDENCE

Climate change and health—Stopping the merchants of doubt

The history of the tobacco industry's deliberate campaign to cloud public perception on the health risks of smoking has been carefully documented.[1-3] Their campaign was lent a veneer of scientific legitimacy through the recruitment of a small cadre of scientists paid to argue that cigarette smoke might not be deleterious to health. The impact of these so-called "Merchants of Doubt," to borrow the memorable phrase from one seminal study,[4] was immense. A small number of scientists and think tanks leveraged their credibility to suggest there was no consensus in the scientific community on issues like the health risks of smoking and the existence of anthropogenic climate change. The medical community should now understand that a few individuals bent on intentional obfuscation can succeed in muddying public perception only when a majority maintains a concomitant silence.

In my time as a medical student and volunteering in hospitals, however, I have made a frustrating discovery—physicians rarely talk about the health impacts of climate change. The silence is real, and it is pervasive.

There are clear, obvious exceptions: articles in major journals have been published discussing topics like "The Imperative for Climate Action to Protect Health" and "The Climate Crisis and Clinical Practice" with increasing frequency.[5-7] Some medical schools are working to add climate change to their curricula, a lacuna highlighted by current students and recent graduates.[8,9] Some groups are organizing research and supporting advocacy efforts, and calling attention to the regional health impacts of climate change.[10]

The majority of physicians, however, do not speak publicly about climate change and health. In their absence, public and legislative discourses have been informed by a small group of medical doctors and scientists who entirely reject the scientific consensus on detrimental health impacts attributable to anthropogenic climate change. The CO2 Coalition, the successor to the George C. Marshall Institute noted to have cast doubt on the existence of climate change,[4] cosigned a public thank you note to the President of the United States for withdrawing the country from the Paris Climate Agreement. The CO2 Coalition's research has now been repeatedly referenced by the US Environmental Protection Agency to deregulate methane emissions, refute the existence of anthropogenic climate change, and end the labeling of biogenic carbon dioxide as a pollutant.[11-13] The medical doctors on CO2 Coalition's board of directors have, thus, been more impactful than the 500 000 physicians represented by the Medical Society on Climate and Health in shaping environmental health policies.

We cannot demur on climate change, lest we forget the role that physicians and scientists played as merchants of doubt in previous public health crises. How many millions of premature deaths, cancer diagnoses, and years of suffering resulted from the medical establishment's slowness to comment on the health risks of cigarette smoking? How many must suffer or die before more physicians speak out about the detriments to health caused by climate change?

To those who feel uncomfortable talking about climate change for fear of either bringing politics into work or potentially alienating patients, it is worth remembering that this is not a political conversation but a scientific one.[14] We have an affirmative obligation to communicate scientific findings to the public. To not discuss a major source of health risks is a dereliction of the best known of medicine's first principles, *primum non nocere*. And, as history has repeatedly taught us, our silence is hardly an apolitical act.

There are simple actions that individual physicians could take. First, as has been noted by others, we should communicate with our patients about climate change and its impacts on health.[15] In addition, proper documentation of mortality and morbidity that could be attributable to climate change is essential. For instance, if a patient presents with an infectious disease from a vector outside its historical habitat, this complaint could be accompanied by a note stating that this could be secondary to climate change. The burden of disease for global air pollution is approximately 7 million premature deaths[16]; it would follow that several million health records should reflect this upstream cause of disease. By accurately documenting morbidity and mortality potentially attributable to anthropogenic climate change, we can spur more discussion with patients and perhaps highlight the severity of the issue.

Ultimately, systems-level solutions are needed. The US healthcare system emits 10% of the carbon dioxide produced in the United States.[17] No amount of documentation or conversation will change that, and every hospital system and practice should be taking material steps to minimize landfill waste, decrease energy usage, and increase sustainability. Practice-specific work is needed. For instance, every anesthesia trainee should at least be aware of the relative greenhouse emissions of inhaled anesthetics, given how significant their greenhouse gas footprint is.[18] Health policy changes are also required. Notwithstanding these needs, however, I believe each physician has an individual imperative to talk about climate change and health to combat climate change denialism and misinformation.

I am not a climate change epidemiologist or infectious disease expert, but a medical student; some may argue that I should only be focusing on my bedside manner, building clinical knowledge, and learning procedural skills. But the overwhelming silence on the part of healthcare professionals, especially physicians, compels me to write. Historians of science have long discussed how we might defeat the merchants of doubt, but thus far, medicine has not succeeded.[19] Climate change is the greatest public health crisis of my generation, and I believe my chosen profession of medicine has much to contribute to its remediation. We cannot let the merchants continue to traffic their dangerous—and sometimes fatal—brand of doubt.

AUTHOR CONTRIBUTIONS

Writing – original draft: Peter Kentros.
Writing – review and editing: Peter Kentros.

Peter A. Kentros

Vagelos College of Physicians and Surgeons, Columbia University, New York, New York, USA

Correspondence
Peter A. Kentros, Vagelos College of Physicians and Surgeons, Columbia University, New York, NY.
Email: pak2137@cumc.columbia.edu

ORCID

Peter A. Kentros https://orcid.org/0000-0002-6014-1134

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