

## COMMENTARY

## When Climate Change Shows Up in the Exam Room

Joanna G. Katzman, MD, MSPH, Stefan Wheat, MD, and Ann S. Christiano, MPAP

Climate change is considered one of the greatest threats to humanity and the most significant global public health emergency of our lifetime. Millions of people from throughout the globe suffer and die each year from degraded air quality, extreme heat, water and vector-borne diseases as well as the mental health effects of climate change. Because clinicians are considered one of the most trusted sources of climate information, they have a unique opportunity to communicate the many health-related effects of climate change to their patients. It is important for clinicians to understand the most beneficial techniques to use when communicating with patients who may need more information regarding climate change and extreme weather events. These include 1) meeting patients where they are, 2) providing patient education, and 3) telling authentic stories. Developing and delivering effective communication strategies to our patients to prevent and prepare for climate-related health issues are paramount- if we are to make meaningful progress. (J Am Board Fam Med 2024;37:15–18.)

**Keywords:** Climate Change, Community Medicine, Environmental Medicine, Health Behavior, Health Communication, Health Education, Organizational Innovation, Public Health

## Introduction

As temperatures and sea levels rise, air quality worsens, and weather events become more extreme, climate change is showing up in the examination room. Doctors and other health professionals are recognizing that more and more of their patients' symptoms may be a direct result of climate change. These include heat-related cardiovascular events, water and vector-borne diseases, asthma triggered by red tide blooms or repeated wildfire exposures, and mental health effects in young adults. Preventing health-related effects of climate change and preparing for increasing weather-related emergencies requires education and planning. Fortunately, health professionals

are considered one of the most trusted sources of climate information.<sup>1</sup>

The topic of climate communication is not new. Between 2015 to 2022, the planet has experienced the 8 hottest years on record and the mean global temperature has increased by more than 1 degree C since the preindustrial era.<sup>2</sup> It is time for clinicians to speak to their patients about the health-related effects of climate change.

Climate change is one of the many emotionally-laden topics not easy for clinicians to discuss with their patients—especially when they are just learning about the topic themselves.<sup>3</sup> There is significant misinformation and disinformation about climate change, and many patients may not fully understand the relevance to their own health.<sup>4</sup> The effects of climate change do not discriminate between people who believe in it and those who do not. Thus, when a clinician talks to a patient about how climate change may be affecting their health, he/she may be in for a challenging conversation.

Doctors and other health professionals who want to help their patients prepare and plan for the increasingly perceptible effects of the environment also need tangible communication skills. In a recent global survey taken by 4654 health professionals, 69% of those surveyed said they needed more training in climate communication.<sup>5</sup>

This article was externally peer reviewed.

Submitted 24 May 2023; revised 20 July 2023; accepted 11 September 2023.

From the Director, Public Health Initiatives, Project ECHO, University of New Mexico Health Sciences Center, Professor, Department of Neurosurgery, University of New Mexico School of Medicine, (JGK), Assistant Professor, Department of Emergency Medicine, University of Washington, Seattle, WA (SW), Department of Public Relations, College of Journalism and Communications, University of Florida, Gainesville, FL (ASC).

Funding: None.

Conflict of interest: None.

Corresponding author: Joanna G. Katzman, MD, MSPH, 1 University of New Mexico, MSC 07-4245, Albuquerque, NM 87131 (E-mail: jkatzman@salud.unm.edu).

Just as they do in other areas of their practice, health professionals can counter misinformation and distrust with science. Using skills and tools rooted in the science of what makes people listen, recall and act, clinicians can ensure that even patients who may not believe in climate change can still plan for and mitigate its effects on their health.<sup>6</sup> Many patients do not recognize the relationship between their climate-related health symptoms and the environment.<sup>7</sup> Even when they become aware, their perception of risk is not as alarming to them as one would expect.<sup>8</sup>

This requires meeting patients where they are. People seek affirmation, not information. Their beliefs are shaped by their worldviews, moral values, and identities—none of which humans interrogate or change.<sup>9</sup> That means that doctors and other health professionals have to explain climate change in ways that are genuine, meaningful, and useful to their patients, without trying to get them to change how they see the world—but they have a head start.<sup>10,11</sup> Every person comes into the examination room with a different lived experience. Understanding the subjective experience of the patient means treating them with a wide-open health equity and environmental justice lens. Their lived experience may include current and/or historic (in)equities in health care and social, and moral determinants of health, where poverty, environmental exposures and health-related risks are very high.<sup>12</sup> In fact, studies show that vulnerable populations already recognize their climate risk to be higher than other populations.<sup>13</sup>

However, it is not enough to simply be a trusted messenger. To build on that strength, clinicians need to use proven strategies regarding climate communication that can move people to understanding and action.<sup>11,14</sup>

### **Meet the Patient Where They Are While Providing Value**

While it's unrealistic to try to change someone's beliefs in a 15-minute visit, clinicians, especially those in primary care, can focus on how the tangible effects caused by climate change are affecting patients directly.<sup>15</sup> This means, working with patients to create a plan that will help them stay in control of their health. Unlike the COVID-19 pandemic, the climate crisis does not have vaccines to prevent this humanitarian emergency. One example is the growing number of days when the air quality in the US is harmful to one's health. Wildfire smoke caused by the countless fires in North America

due to extreme drought and heat can travel hundreds, even thousands of miles.<sup>16</sup> Although some face masks may protect one from the particulate matter so deleterious to pulmonary function, the countless other chronic effects of this slow-moving planetary crisis affecting our most vulnerable are less easy to mitigate. This includes people experiencing homelessness and subject to extreme heat, those without easy access to health care, and many other social and environmental determinants of health. Thus, when climate change shows up in the exam room, clinicians need communication skills they did not learn in medical school.

### **Provide Patient Education**

Clinicians may benefit from virtual learning communities, such as Project ECHO's Climate Change and Human Health (Climate ECHO) program, or the Medical Climate Change Consortium.<sup>17,18</sup> Communities of practice increase knowledge, confidence, and communication skills while boosting advocacy among like-minded colleagues.<sup>19</sup> And, not only do telementoring programs and virtual courses reduce the carbon footprint as compared with traveling to off-site regional and international conferences, but most offer continuing medical education credits as well.<sup>20</sup> Clinicians can learn in an interprofessional environment that is easily accessible to them, and then can readily transmit the information to their patients and community.

In addition, there are a wealth of climate-related education tools that patients can use on their computer and even on their smart phones. Clinicians now have the capability to educate patients on real-time heat, air quality and extreme weather events.<sup>21–23</sup> ClimateRx, a badge enabled campaign, is another patient education tool that addresses the primary barriers to clinical engagement on climate and health. ClimateRx badges, worn by clinicians and public health professionals, prompt patients to ask questions and make connections to already familiar problems, such as asthma and allergies, while simultaneously linking people to information on how they can act.<sup>24</sup> Peters et al, posits 11 evidence-based strategies for communicating health-related impacts of climate change on human health.<sup>14</sup> These not only include the recommendations above, but also emphasize the importance of “using emotions, visual images, and using subtle, but powerful language choices.”<sup>9</sup>

## Tell Stories

Well-told stories by doctors are associated with much credibility.<sup>25</sup> Perhaps this is a story of a colleague who almost suffered heat exhaustion because she did not have enough fluids with her during a long summer hike, or a tribal member who was grateful to have an evacuation kit ready when the Hermits Peak Fire in Northern New Mexico forced his Pueblo to evacuate last summer.<sup>9</sup> It is important to inspire hope and activation, rather than fear.<sup>26</sup> If so, clinician/patient conversations can be met with excitement and a call to action. The collective action of health professionals to move the narrative on climate change has the potential to catalyze the paradigm shift necessary to protect the health of people and communities.<sup>27</sup>

## Conclusion

Health care professionals are doing their best to keep up with the clinical and educational demands of building preprofessional and postlicensure education on climate and health, health care sustainability, disaster preparedness, environmental health, and health equity. Developing and delivering effective communication strategies for our patients is priceless if we are to make meaningful climate change progress.<sup>28</sup>

Most clinicians are not naturally gifted communicators. Few people are. Becoming skilled at this approach requires intention and practice. But just as dealing with the health consequences of climate change will require new behaviors of our patients, it also requires more of us. As clinicians, we too need to change our behavior and embrace the role we can take in preparing our fellow humans for one of the most profound crises the planet has faced. It is time that clinicians prioritize climate and health communication- so patients can better plan for extreme weather events and learn to identify and manage climate-related health symptoms and illnesses.

---

The authors would like to acknowledge Chamron Martin and Briana Kazhe-Dominguez for their support on this article preparation and the Climate Change and Human Health ECHO program.

To see this article online, please go to: <http://jabfm.org/content/37/1/15.full>.

## References

1. Maibach E, Frumkin H, Ahdoot S. Health professionals and the climate crisis: trusted voices, essential roles. *World Med & Health Policy* 2021;13:137–45.202.
2. World Meteorological Organization, WMO annual report highlights continuous advance of climate change. Published April 21, 2023. Available at: <https://public.wmo.int/en/media/press-release/wmo-annual-report-highlights-continuous-advance-of-climate-change>. Accessed May 21, 2023.
3. Katzman JG, Katzman JW. Primary care clinicians as COVID-19 vaccine ambassadors. *J Prim Care Community Health* 2021;12:21501327211007026.
4. Lewandowsky S. Climate change disinformation and how to combat it. *Annu Rev Public Health* 2021;42:1, 1–21. Accessed April 13, 2023.
5. Kotcher J, Maibach E, Miller J, et al. Views of health professionals on climate change and health: a multinational survey study. *Lancet Planet Health* 2021;5:e316–e323.
6. Van der Linden S, Leiserowitz A, Rosenthal S, Maibach E. Inoculating the public against misinformation about climate change. *Glob Chall* 2017;1: 1600008.
7. Kotcher J, Maibach E, Montoro M, Hassol SJ. How Americans respond to information about global warming's health impacts: evidence from a national survey experiment. *Geohealth* 2018;2:262–75.
8. Weber EU. Experience-based and description-based perceptions of long-term risk: why global warming does not scare us (yet). *Climatic Change* 2006;77:103–20.
9. Shome D, Marx SM. The psychology of climate change communication: a guide for scientists, journalists, educators, political aides, and the interested public. Columbia University Libraries, Academic Commons. June 1, 2021. Available at: <https://academiccommons.columbia.edu/doi/10.7916/d8-byzb-0s23>. Accessed July 11, 2023.
10. Fiske ST, Dupree C. Gaining trust as well as respect in communicating to motivated audiences about science topics. *Proc Natl Acad Sci USA* 2014;111 Suppl 4:13593–7.
11. Christiano A, Neimand A. The science of what makes people care. *Stanford Social Innovation Review* 2018;16:26–33.
12. Berwick DM. The moral determinants of health. *JAMA* 2020;324:225–6.
13. Akerlof KL, Delamater PL, Boules CR, Upperman CR, Mitchell CS. Vulnerable populations perceive their health as at risk from climate change. *Int J Environ Res Public Health* 2015;12:15419–33.
14. Peters E, Boyd P, Cameron LD, et al. Evidence-based recommendations for communicating the impacts of climate change on health. *Transl Behav Med* 2022;12:543–53. May 25.
15. Climate and Health Alliance. Real, urgent and now: communicating the health impacts of climate change. Available at: <https://d3n8a8pro7vhm.cloudfront.net/>

- caha/pages/1957/attachments/original/1620887738/caha-run-communication-guide-FA.pdf?1620887738. Accessed July 10, 2023.
16. Environmental Protection Agency. Wildfire smoke and your patients' health, challenges in predicting smoke concentrations. Available at: <https://www.epa.gov/wildfire-smoke-course/challenges-predicting-smoke-concentrations>. Accessed July 8, 2023.
17. Climate University of New Mexico Health Sciences Center, Project ECHO, Climate Change and Human Health Program. Available at: <https://hsc.unm.edu/echo/partner-portal/programs/global/climate-change/>. Accessed May 21, 2023.
18. The Medical Society Consortium on Climate & Health. Webinars for Health Professionals. Available at: <https://medsocietiesforclimatehealth.org/educate/healthprofessionals/>. Accessed May 21, 2023.
19. Katzman JG, Balbus J, Herring D, Bole A, Buttke D, Schramm P. Clinician education on climate change and health: virtual learning community models. *Lancet Planet Health* 2023;7:e444–e446.
20. Storz MA. Medical conferences and climate change mitigation: challenges, opportunities, and omissions. *J Occup Environ Med* 2019;61:e434–e437.
21. National Centers for Environmental Information. Climate monitoring. Available at: <https://www.ncei.noaa.gov/climate-monitoring/#temp>. Accessed May 21, 2023.
22. Centers for Disease Control and Prevention. Heat and health tracker. Available at: <https://ephtracking.cdc.gov/Applications/heatTracker/>. Accessed May 21, 2023.
23. Centers for Disease Control and Prevention. OSHA-NIOSH heat safety tool app. Available at: <https://www.cdc.gov/niosh/topics/heatstress/heatapp.html>. Accessed May 21, 2023.
24. Climate Rx. Join Climate Rx for Health Professionals. Available at: [https://www.climate\(rx\).org/for-health-professionals](https://www.climate(rx).org/for-health-professionals). Accessed May 21, 2023.
25. Cohen J, Atad E, Mevorach T. Does it matter who tells the story? An experimental test of the effects of narrative perspective on credibility, identification, and persuasion. *Communication Research Reports* 2023;40:101–10.
26. Frumkin H, Cook S, Dobson J, Abbasi K. Mobilising hope to overcome climate despair. *BMJ* 2022;379:o2411.
27. Howard C, MacNeill AJ, Hughes F, et al. Learning to treat the climate emergency together: social tipping interventions by the health community. *Lancet Planet Health* 2023;7:e251–e264. Mar. Erratum in: *Lancet Planet Health*. 2023 Apr;7(4):e270.
28. Quitmann C, Griesel S, Nayna Schwerdtle P, Danquah I, Herrmann A. Climate-sensitive health counselling: a scoping review and conceptual framework. *Lancet Planet Health* 2023;7:e600–e610.