An Education Imperative: Integrating Climate Change Into the Emergency Medicine Curriculum

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There was one glaring omission in the eighth review of *The Model of the Clinical Practice of Emergency Medicine* through the American Board of Emergency Medicine.¹ Important topics, such as transgender care, social determinants of health, and firearm injury were added. However, the health effects of climate change was absent.

There is no denying that climate change is in our lane. Climate change is as much about human health as it is about the environment. Time and again, we have seen the *current* detrimental health outcomes because of climate change, including poor birth outcomes,² cardiac disease,^{3,4} pulmonary disease,^{5,6} and renal disease.^{7,8} We see air pollution linked to COVID-19 mortality⁹ and see that the populations most greatly affected by climate change are the BIPOC communities currently fighting for safety.^{10–12} We see our patients displaced from wildfires and inundated from hurricanes.

How can we respond to climate change as frontline providers, as health experts within our communities, if we are never trained in the topic? When COVID-19 reared its head, we educated ourselves. We read the literature and listened to podcasts. Then, we used the evidence to advocate for evidence-based practices, PPE, and community masking for public safety. Our voices carried weight given our training. As the Black Lives

Matter movement (finally) gained the national spotlight, we instituted trainings in our faculty groups, discussed diversity in our residency and medical school classes, and wore our white coats to protests. Yet, our response to the climate change crisis has been largely silent save a few voices.

Understanding how climate change, heat, and air pollution affect us allows us to identify root causes of pathologies and at-risk populations and provide appropriate counseling. During increasingly frequent heat waves, I now screen patients to see if they have air conditioning or access to a cooling center. While I used to routinely counsel patients with chronic conditions or mental illness to incorporate walking outside, I now inquire as to what that environment looks like. Do they live next to a highway? Within an urban heat island?

One clear way to address this gap is to train our residents on the current and projected health effects of climate change. I do not mean a one-off, 1-hour lecture on CO₂ admission and the greenhouse gas effect. I am referring to an integrated systemic change in curriculum. Why, despite being known as a risk factor, is air particulate level not discussed as a risk factor for cardiovascular disease? And why is the risk of heat not discussed in lectures on spontaneous abortion? In the infectious disease lectures, why are we not systematically teaching about

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migrating vectors in the changing climate and the extended time window for transmission of vector-borne illnesses in the face of mild winters and prolonged summers? To be sure, resident education time is precious and the competition for attention is fierce. However, by not adding a completely new chapter and integrating the consequences of climate change into the already existing framework would allow for a clear picture of our changing climate's effects across physiologic systems. We would not argue that teaching new knowledge and changing disease epidemiology is not possible secondary to time for other causes. We would educate ourselves and update our lectures.

Climate change is about human health, but it lurks in the background, the preceding hypertension to our global STEMI. We will never understand its changing effects and future risks if we do not discuss its known, current impacts on health in training. Its effects on human health is expected to exponentially grow. There is no cath lab to reverse this STEMI. We need to educate ourselves and, most importantly, our trainees now.

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