

Systematic Lack of Educational Preparation in Addressing Climate Change as a Major Public Health Challenge

Climate change is widely recognized by public health leaders as a tremendous threat to human health and well-being. As succinctly stated in 2015 by the prestigious Lancet Commission on Health and Climate Change, “tackling climate change could be the greatest global health opportunity of the 21st century.”¹ The American Public Health Association displayed leadership in addressing this challenge through its declaration of 2017 as the “Year of Climate Change and Health.”² At the 2017 annual conference, Executive Director Georges Benjamin announced that “climate change is public health’s greatest challenge.”² Leading public health researchers share this concern, as evidenced by a literature search (June 2018) using the Clarivate Analytics Web of Science search engine³ through the University of North Carolina at Charlotte library for the term *climate change* in the American Public Health Association’s flagship journal, *AJPH*, resulting in 528 entries. Just this April 2018, *AJPH* published a special supplement on climate change and environmental justice, which included six articles focusing on technical, political, and economic linkages between climate change and public health.⁴ Clearly, there is

great unanimity among prominent researchers that the public health community plays an essential role in response to the changing global climate.

Yet left unclear is the response of front-line public health organizations, agencies, and practitioners to climate change. Although climate change has substantial effect on traditional public health areas (e.g., nutrition, sanitation, vectors, communicable diseases, natural disasters), little tradition exists within public health programs to lead community adaption to changing climatic conditions or to work toward mitigations that reduce the release of climate-changing gases. Based on an examination of curricula offered in public health programs, I posit that a major barrier to optimizing the public health community response to climate change is a lack of educational preparation.

I explored whether climate was incorporated into public health curricula by searching the educational requirements specified in material published online for all 102 member programs of the Association of Schools and Programs of Public Health within the United States. These programs included all schools of public health accredited by the Council on Education for Public Health.

Only 3 of those 102 programs required a specific course focused on climate change. One MPH program required a course in climate change and environmental policy, and a PhD program with a concentration in environmental health required a course in human health and global environmental change. One certificate program available to MPH students required a course in public health impacts of climate change, a course in atmospheric and climate science, and two noncredit climate change-related seminars.

Clearly, focused study on climate change is not required as a regular feature of public health education. Considering only MPH degrees, arguably the most important route to enter the public health profession, only one institution required a course with obvious focus on climate change.

Council on Education for Public Health accreditation appears to be neither a barrier nor an

encouragement to including climate change as a curricular requirement. The Council on Education for Public Health’s accreditation criteria follow a competency-based approach “informed by the traditional public health core knowledge areas (biostatistics, epidemiology, social and behavioral sciences, health administration, and environmental health sciences), as well as cross-cutting and emerging public health areas.”⁵ Competencies in these areas may help provide tools from which to address climate change (e.g., understanding of advocacy techniques could be directed toward climate change policy development), although applying these tools without grounding in foundational content material is problematic. Accredited programs could include climate change as a “cross-cutting and emerging public health area” but generally have chosen not to do so. Perhaps contributing to this practice is the lack of mention of “climate change” or synonymous terms in accreditation criteria.

Without direction from the accrediting organization, programs still could include coursework because of its importance to the public health educational experience. If viewed as of lesser importance than other public

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health areas, elective courses could provide opportunity for selected students. Again, curricula should indicate the relative importance of providing this opportunity. Of the 102 examined programs, 24 did have at least one elective course focused on some element of climate change. A less positive perspective is that fewer than 25% of public health programs offered an opportunity for their students to learn about climate change.

Pushback to the above postulate surely will include that curricular content and student preparation cannot be measured simply by looking at course descriptions. My own anecdotal experience, speaking with colleagues at my university and at professional conferences, is that many instructors include some mention of climate change in their coursework. Climate change affects so many traditional public health issues that it can be easily included in a course curriculum through examples and case studies. However, atheoretical inclusion may not provide sufficient educational background to translate meaningfully into professional practice. It also may be problematic if such inclusion focuses on current popular understandings rather than underlying concepts. Even among my students who most strongly advocated for the need to make immediate responses to climate change, seldom did they have more than a cursory understanding of its importance. Although my personal experiences may be atypical, they do align with the national-level omission of systematically addressing climate change within public health curricula.

Professional degrees signify attainment of knowledge that enables practitioners to practice successfully. For example, few

public health professionals would argue that preparation must include a foundation that ensures understanding of epidemiology or how to successfully promote adoption of healthy behaviors. If the importance of understanding climate change were also unambiguous, then its prominence in public health education would be expected. Its omission may send an important signal that climate change is not an issue critical to professional public health practice.

The public health educational community has a history of responding to critical population health problems. Recent public health initiatives, perhaps most notably the Planetary Health Education Program of the Planetary Health Alliance,⁶ include international-level involvement among academic programs in providing climate change educational opportunities. Yet such involvement cannot be seen as driving climate change education in the public health classroom. Perhaps a good comparison is with HIV/AIDS—could any public health student complete a curriculum without obtaining at least a cursory understanding? Certainly, the political nature of climate change discussions would challenge inclusion, but those types of challenges existed when the HIV/AIDS pandemic erupted. Why would the public health community not embrace this new challenge with the same intensity?

That answer is complex, and hypothesizing reasons is beyond the scope (and word limit!) of this editorial. Instead, perhaps this editorial will influence educators into rethinking how their curricula should prepare the next generation of public health practitioners and leaders. The importance of timeliness in responding to climate change

does not allow for slowly evolving curricula. Without rapid mitigation, climate changes will be irrevocable. Public health leadership recognizes the significance of climatic change, but the educational community appears more interested than actively involved. Importantly, this lack of educational focus may discourage prospective students interested in public health and in climate change. Lacking coursework, and missing those most interested students, it is difficult to foresee the public health community fully meeting the public health challenge of “the greatest global health opportunity of the 21st century.” Clearly, that needs to change. *AJPH*

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CONFLICTS OF INTEREST

The author has no conflicts of interest associated with this editorial.

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