

The Critical Roles of Health Professionals in Climate Change Prevention and Preparedness

Climate change is a burgeoning public health concern, with implications for chronic health conditions; nutrition and food security; food-, water-, and vector-borne diseases; and social disruption, injuries, displacement, and death associated with extreme weather.¹ Climate change is contributing to health disparities in the United States by having a disproportionate impact on low-income individuals, some communities of color, and those with higher vulnerability to chronic health conditions.¹ Moreover, these vulnerabilities can co-occur.

A central principle of public health is to provide individuals with sufficient knowledge to take action to prevent disease and promote health. In a 2014 national survey, we found that Americans have little ability to identify specific health problems that are caused or affected by climate change, or who is most at risk, despite expressing a general opinion that health can be harmed by climate change.² A survey of Maryland residents found that geographic vulnerability, race/ethnicity, having a chronic medical condition, and being low-income are associated with perceiving greater health risk from climate change.³ These studies provide evidence that members of the public, particularly those groups most

vulnerable to the impacts of climate change, express apprehension about climate change, but are lacking information about how it affects their health, safety, and well-being, and therefore are limited in their ability to take action to protect themselves, their families, and their communities.

Public communication campaigns can—and should—be mounted to inform the public and policymakers about the serious health harms of climate change and the important health benefits of climate solutions. Patient education efforts should also be retooled to reflect the changing baselines of climatic (e.g., extreme heat events) and related environmental conditions (e.g., longer and worse pollen seasons) that exacerbate medical conditions. There are clear roles for health professionals as both content experts and trusted messengers. Physicians and nurses are among the most trusted sources of information regarding the health consequences of climate change.² Large numbers of physicians already believe that they and their professional associations must get involved in public and patient education because they understand that climate change is relevant to direct patient care, and they report already seeing harmful impacts on patient health outcomes

within their own practice.⁴ Local, state, and federal public health agencies must also be directly involved in preparedness and prevention of injury and disease resulting from extreme weather, flooding, and vector-borne illness exacerbated by climate change. Indeed, the majority of health department directors report that they are seeing health impacts from climate change among their constituents.⁵

Expanding public health and medical education to address climate change is critical, as is improving infrastructure to meet anticipated needs. Public health practice would benefit from regional surveillance studies and analysis of the increases in disease burden, injury, and associated health care costs of climate change, particularly among those most vulnerable to its impacts.

As frontline witnesses to the human toll of climate change, health professionals are ideal

advocates for collective action toward adaptation and mitigation policies. Describing the health aspects of climate change—its health harms and the important health benefits of clean energy and other solutions—is well received by the public across the political spectrum and elicits emotional responses that are consistent with enhancing support for policies and structural approaches to addressing climate change.⁶ Highlighting individual stories of those already being affected may be an effective messaging approach. Identifying especially vulnerable groups is a necessity, but it is equally important to emphasize that the health of any and all people can be harmed by climate change, and that the health of all people will benefit from climate solutions.

Lastly, offering people clear guidance on individual and societal options for preventing climate change and for minimizing its health risks may be the most important role that health professionals can play. Vulnerable individuals require advice on immediate-term health management and protective behaviors to assuage the impacts of climate change on their health

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and safety, and there is preliminary evidence that targeted messaging related to these health impacts can increase knowledge, strength of certainty that climate change is happening, and intentions to practice recommended adaptation and mitigation-related behaviors.⁷ More research is still needed to develop and test health and climate change messages for both general and vulnerable populations and to evaluate their effectiveness in real-world settings.

Illuminating the direct relevance of climate change to human health and well-being appears to be one of society's best options for enhancing public and policymaker engagement in climate change adaptation and mitigation. Given the urgency of developing and deploying climate change preventive and protective measures worldwide, now is the time for health professionals—in America and around the world—to develop and rapidly scale up our efforts to protect the public's health. **AJPH**

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