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Should Health Professionals Speak Up to Reduce the Health Risks of Climate Change?

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Abstract

Should physicians take action in the political realm to address climate change? There are many historical examples of physician advocacy in the political sphere, both individually and as a collective, and many have argued that it is important for health professionals to advocate on a variety of issues. But which criteria should be used to determine when and how health professionals should take on particular advocacy issues, and is climate change an appropriate—or even obligatory—arena for physician advocacy? We propose a seven-part deliberative framework for making this determination.

Introduction

It's not controversial to claim that all physicians should dedicate themselves to certain core values and behaviors, including providing effective care for patients, promoting health within communities, and upholding professional integrity. It's also not particularly controversial to note that many environmental factors, including the effects of climate change, affect both individual and population health outcomes [1, 2]. And there is no doubt that environmental factors often pose risks to health and well-being over which individual patients have little or no control. Taken together, these facts strongly suggest that effective approaches to mitigating environmental health risks would require policy-level interventions and also that physician participation in such policymaking—as advisors to policymakers or in other capacities—could be useful in bringing attention to short- and long-term health consequences that might otherwise be overlooked. Indeed, many physicians have chosen to learn about and work to change environmental conditions that can undermine health—from the dangers of lead-based paint to the global health impacts of climate change—and to speak out about these issues in public.

But does the fact that physicians can be effective advocates on environmental issues mean that advocacy to address climate change is an *ethical obligation* for physicians or other health professionals? Recently, a number of medical schools have added the teaching of advocacy skills to their core curriculum [3], implicitly answering one aspect of this question in the affirmative: advocacy *per se* is increasingly recognized as a professional responsibility. But how is advocacy defined, why should it be taught, and

how might a general responsibility to advocate for health apply to climate change mitigation or any other health concern?

Physicians and Professional Advocacy

To advocate, from the Latin *vocare* (to call), has been defined as "to speak in favor of; recommend publicly" [4]. Many different personal, professional, or other factors might influence whether, when, and how a physician chooses to speak up publicly. We focus here on advocacy about health-related issues, which can be considered *professional* advocacy and distinct from advocacy pursued out of personal interests unrelated to one's profession. In addition, we focus here on advocacy related to populations, rather than advocacy in service of a specific individual patient (which is clearly an important, but less controversial, responsibility of health professionals). For our purposes, therefore, we define a health professional advocate, following Earnest and Wong [5], as one who promotes "those social, economic, educational, and political changes that ameliorate the suffering and threats to human health and well-being that he or she identifies through his or her professional work and expertise" [6].

There is a long history of physician advocacy addressing population health risk factors. The British physician, John Snow, famously advocated in 1854 to disable a water pump that he correctly suspected was the source of a cholera outbreak in London [7]. More recently, pediatrician Richard Pan, a state senator in California, successfully advocated strengthening vaccination mandates for school children [8], and physician leaders in the American Medical Association (AMA) have publicly urged policymakers to implement taxes on sugar-sweetened beverages to address obesity [9]. In fact, there are many examples of physicians, both individually and in groups, taking public stands to promote the health of populations. In one survey of 1,662 US physicians, more than 90 percent of respondents said they believe that community participation, political involvement, and collective advocacy are "important" activities for physicians; and two-thirds of responding physicians reported taking part in one or more of these activities in the last three years [10].

Advocacy Skills Education

In recent years, North American medical curricula have been introducing students to social determinants of health, often emphasizing the harms, inequities, and social justice issues that arise from unequal exposure to a variety of social risk factors [11]. In this light, accrediting bodies have encouraged medical schools to teach advocacy skills, because "teaching the social determinants of health is incomplete without the provision of tools for students to address those determinants" [12]. Some skills proposed for effective advocacy include "identifying a problem amenable to advocacy, defining the problem and its scope, identifying and engaging strategic partners, developing a strategic action plan, [and] communicating an effective message" [13].

Remarkably, scholars in medical education have almost unanimously supported the addition of advocacy skills to an already-packed curriculum [3, 6, 14-17]. Reasons given include that developing advocacy skills is a means of exercising critical thinking and communication skills—recognized as core competencies for physicians that are necessary for history taking, handovers, and informed consent conversations [18]—and that giving clinicians advocacy skills might empower them in other realms and reduce burnout in the face of multiple systemic problems in health care [6, 12, 19]. In addition, advocacy training would support efforts to motivate civic learning and democratic deliberation, as called for by Solomon and Jennings [20]. The decline of productive civic engagement threatens not only health care but also democratic freedoms [20, 21]. In particular, health-related advocacy that is grounded in objectively obtained, analyzed, and reported evidence—and that prioritizes public and patient interests over personal or ideological interests—is a potential means of counterbalancing politicization, including partisan affiliations and biases that can challenge objectivity, undermine public trust, and threaten health.

The limited opposition to integrating advocacy into medical curricula has centered on the claim that physicians should not be expected to hold or act on political positions and that there are other, nonpublic means of fulfilling civic responsibilities in medicine [22]. It is true that health advocacy can become politicized—in a particularly extreme example, Dr. Pan was personally threatened following his sponsorship of a bill to mandate childhood vaccination [23]. It's also the case that physicians have nonpublic opportunities to fulfill their civic responsibilities. But neither of these claims is an effective argument against including advocacy skills in medical curricula. First, advocacy skills can be taught and pursued without alignment to any political or ideological position (except, perhaps, a commitment to improving human health through evidence-based and contextually responsive policy); and second, abdicating any role in public discussion is contrary to the very notion of a profession. After all, the word *profession*, like advocacy, is built on a Latin root (profess) that means "to declare aloud or publicly" [24].

Responsibility to Advocate

If advocacy skills are worth teaching and using, a logical next question is, When does it become more-or-less *obligatory* for physicians to use these skills? After all, there are an extremely large number of issues in which any given physician, or physicians as a group, might invest. Yet a limitless responsibility for advocacy would clearly be untenable. How should physicians determine whether a specific issue merits professional advocacy?

We propose that a professional responsibility to advocate is rarely dichotomous (entirely present or totally absent) but is acquired as certain criteria are met; and when more of these criteria are met, the duty to act becomes increasingly strong [25]. An example from outside of medicine can help to describe these criteria. Consider the case of a lifeguard, who has a clear responsibility to act to save a drowning swimmer when she is

on duty. This clear obligation is called a "role responsibility" [26, 27], and it's derived from an explicit relationship that very often includes a written or implied legal contract. But what if the lifeguard is not on duty but simply walking along the beach and spots a swimmer in distress? Or what if, when off duty, she notes a riptide that poses a risk to swimmers? Does she still have a special duty to act, above and beyond the responsibility any of us might have to help someone in trouble? There are several reasons why the answer might be yes.

Even when the lifeguard is not obliged to act by an explicit work contract, we suggest that when seven criteria are met, she would still have some responsibility to do so. These proposed criteria are not weighted, and they might not be exhaustive, but as more of them are met, her special role-related responsibility to act can become very strong, perhaps even becoming an obligation. These seven criteria are:

1. *Expertise*. Her particular expertise makes her actions more likely to be beneficial than if others were to try to act.
2. *Proximity*. She is close to the event; her obligation would be altered if she were a mile away, watching from her deck through a telescope.
3. *Effectiveness*. Her obligation to act is greater if there is a greater likelihood her actions will make a difference.
4. *Low risk or cost*. Her obligation to act is greater if acting does not jeopardize her safety or pose an unsupportable cost to her. Note that her training and expertise might make the actions she undertakes less dangerous or costly than if they were undertaken by someone without training.
5. *Unique*. If she is the only available rescuer, her duty is greater than if others are available to act.
6. *Severity*. How severe will be the outcome if she fails to act? Her duty to act is greater when failing to do so might cause a much worse outcome.
7. *Public trust*. As someone who has public trust (lifeguards are certified), she has a greater responsibility to act when failure to do so might harm that trust.

These seven criteria provide a useful framework for considering when any specially trained individual or group should, or even must, engage in advocacy. Using this framework suggests that many advocacy actions will not be required in an absolute sense (in philosophy talk, most advocacy will be "superogatory"—i.e., praiseworthy, but not mandatory) [28]) but that advocacy becomes closer to obligatory when more of these seven criteria are met. Furthermore, these criteria can be applied by physicians who might face analogous instances of deciding whether they have some responsibility to act to protect people who are not under their direct care—i.e., by serving as advocates for population health.

How might these criteria be applied by a physician? Imagine, for instance, a hypothetical health threat to a population that a physician has special training to detect and manage

and that directly affects many of the physician's patients, that addressing the threat poses no risk and no cost to the physician, that the physician's action has a strong likelihood of being effective, and that the outcome of failure to act will be severe suffering or death. Even if most of those suffering and dying were not the physician's patients, if that physician failed to act in such a circumstance, public trust in the profession would presumably be sharply eroded. In this (admittedly extreme) hypothetical case, this physician would have a very strong professional duty to act to address the threat.

What happens when we use this framework to help us determine whether acting to address climate change is a professional responsibility for physicians?

Physician Advocacy and Climate Change

Many have detailed the health threats posed by climate change. Decades of evidence from diverse disciplines confirms that atmospheric accumulation of greenhouse gases are the primary drivers and that climate change is already causing adverse health effects through its impacts on agricultural production and food and water scarcity: respiratory illnesses (e.g., asthma), mental illnesses (e.g., depression), and novel infectious and zoonotic diseases such as Chikungunya and Zika that emerge or re-emerge in new locations [1, 2].

Consider how our seven criteria might help to evaluate the extent to which a physician has a special obligation to advocate for actions that could reduce health threats related to climate change. Physicians often have (1) *expertise* in treating climate-related injuries, infections, and diseases that are increasingly prevalent and severe in diverse locations [29]. They are often first responders with (2) *proximity* to those who need related care. Physicians might be more likely than others to be (3) *effective* in related advocacy aimed at health officials, the news media, local school boards, or the public, especially when their advocacy is based in scientific evidence and expertise and if they have been trained in advocacy skills. Such advocacy seldom poses unreasonable (4) *cost or risk* to the physician, although advocates addressing politically charged issues often run the risk of being criticized for speaking up. Countering this risk, if physician advocacy helps reduce harmful impacts of climate change, then advocacy to address climate change might directly benefit physicians themselves as well as their families and communities.

While physicians are not the only professional group with a special role to play in addressing climate change, physicians are (5) *unique* among potential climate change advocates in having medical expertise and experience in treating the health effects of climate change and in their influence over the distribution of health care resources [30]. The (6) *severity* of the potential health consequences of climate change should concern all physicians, given realistic models suggesting more frequent extreme heat if current trends continue unabated [1, 2].

Finally, physicians' silent acceptance of ongoing rates of greenhouse gas emissions risks undermining their ability to uphold (7) *public trust*. In failing to speak out, physicians risk being seen as complicit or out of touch. This risk is perhaps especially great in countries like the United States where there is significant public concern about climate change and where a relatively large percentage of global emissions is produced. In this regard, US physicians could take a lesson from physicians in Britain who have long engaged with climate change; they have significantly reduced emissions from their health system and medical facilities by conserving energy in various ways and promoted patient education about healthy lifestyles that also conserve energy [31].

These seven criteria provide reasonable grounds for claiming that advocacy addressing climate change is professionally appropriate for all physicians. We believe it is obligatory for those with unique expertise (such as those specializing in pulmonary diseases, infectious diseases, and so on) practicing in affected regions (which, increasingly, are everywhere). In addition, climate change surely merits strong advocacy on the part of groups of physicians, such as professional societies, which might have a particularly effective voice in altering organizational practices to achieve reduced emissions, waste reduction, and energy conservation. Additional advocacy by individuals or groups could promote healthy, climate-friendly behaviors, such as walking or cycling rather than driving, and increasing consumption of fresh, unprocessed, and locally produced food. These behaviors have direct health benefits to those who practice them and indirect health benefits by reducing the carbon emissions that drive climate change.

Conclusion

We conclude that physicians as a group, and many individual physicians, have a professional responsibility to speak out about the health impacts of climate change and that including advocacy-related skills in medical curricula would better equip them to speak out constructively on this and other health threats. Our seven-criterion framework that supports this conclusion also provides a strong argument in favor of the 2016 American Medical Association policy that calls for "aiding physicians in adopting environmentally-sustainable programs in their practices and sharing these concepts with their patients and communities" [32].

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