

# Policy Advocacy Workshop Tools for Training Medical Students to Act on Climate Change

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## Abstract

**Introduction:** Doctors are trusted voices for communities and can influence lawmakers on climate change. Effective climate policy advocacy requires awareness, knowledge, and skills not typically taught in medical schools. Such curriculum additions could help students describe reasons for physicians to engage in climate policy advocacy and compose advocacy presentations. **Methods:** To empower engagement in climate policies and develop advocacy skills, we deployed three 90-minute workshops at three institutions for first-, second-, and fourth-year students. The workshops included background on various climate policies of concern to health care professionals, advocacy guidance, scripts and factsheets from physicians' meetings illustrating advocacy opportunities for students and physicians, and active learning exercises. The exercises utilized advocacy templates and actual proposed actions on climate change. Students worked in small groups on advocacy presentations' content and format. Each group shared its work, and facilitators provided feedback. **Results:** Out of 102 participants, 29 completed a survey (28% response rate). Using a Likert scale and narratives, students reported significant improvements in readiness to advocate for legislation or policies to mitigate the health effects of climate change, awareness of advocacy opportunities, and capability to prepare advocacy documents. **Discussion:** Workshops on climate policy advocacy can equip medical students with important perspectives on their responsibilities and opportunities, as well as skills to be effective. The physician's voice is critical to promoting policies related to the health impacts of climate change. Targeted workshops with actual examples and exercises on climate advocacy are feasible and important additions to the curriculum.

## Keywords

Policy, Law, Advocacy, Case-Based Learning, Climate Change

## Educational Objectives

By the end of this activity, learners will be able to:

1. Describe the potential of health care providers for climate policy advocacy actions.
2. Describe the elements and methods of effective advocacy actions by physicians in the context of the health impacts of climate change.
3. Compose an advocacy presentation and factsheet for a policy related to the health impacts of climate change.

## Introduction

Climate change presents unprecedented health threats demanding urgent actions from the medical community in patient

care and health care resiliency planning, as well as in policy advocacy and medical curricula. In June 2022, the American Medical Association (AMA) adopted a resolution declaring climate change a public health crisis and directing advocacy for policies that support rapid implementation of clean energy solutions and climate resilience through a climate justice lens. This resolution recognizes the role of physicians in climate advocacy: "Physicians are uniquely trusted messengers and have a responsibility to advocate for science-based policies to safeguard health."<sup>1</sup> Similarly, the American College of Physicians observed:

Physicians can play a substantial role in addressing climate change by advocating for climate change adaptation and mitigation policies and educating themselves about climate change and how it affects public and individual health, and the potential health threats it may pose to their community.<sup>2</sup>

As further support for training medical students on climate policy advocacy, the 2001 AMA Declaration of Professional

### Citation:

Rosencranz H, Ramkumar J, Herzog L, Lavey W. Policy advocacy workshop tools for training medical students to act on climate change. *MedEdPORTAL*. 2023;19:11337. [https://doi.org/10.15766/mep\\_2374-8265.11337](https://doi.org/10.15766/mep_2374-8265.11337)

Responsibility includes a commitment by physicians to educate the public about “present and future threats to the health of humanity” and to “advocate for social, economic, educational, and political changes that ameliorate suffering and contribute to human well-being.”<sup>3</sup> A 2020 study by the Pew Research Center revealed that Americans largely trust their physicians; the survey parameters included gauging how well doctors provide fair and accurate information.<sup>4</sup> A Gallup poll in 2020 revealed that medical doctors have high ratings for honesty and ethics.<sup>5</sup> Having earned public confidence, health care providers have opportunities to influence climate policymakers at the institutional, municipal, state, national, and international levels.

So far, there have been few initiatives or resources to connect climate change education with policy advocacy for medical students. A survey of US medical students reported “strong interest in advocacy, particularly around health issues, consistent with professional standards.”<sup>6</sup> Yet integrating climate policy advocacy into medical education remains a challenge in both content and available time.

While the Liaison Committee on Medical Education (LCME) accreditation standards include structural competency (“the capacity for health professionals to recognize and respond to the role that social, economic, and political structural factors play in patient and community health”<sup>7</sup>), the LCME does not specifically recognize climate change and advocacy as part of how medical school curricula should build capacity for responding to health inequities and threats. These standards do not point to the urgent health risks related to climate change and associated advocacy.<sup>8</sup>

Several *MedEdPORTAL* publications reflect innovations in developing trainees’ advocacy skills, addressing health disparities, bias, navigation of health care systems, and child and community health.<sup>9-12</sup> However, these publications do not connect advocacy specifically to climate change and are not in a single workshop format with active learning exercises using actual recent policies and factsheets.

There is a strong fit between training medical students on climate change and developing their skills to advocate for policies that promote patient and community health. A recent medical student survey found that students want more instruction on climate change health impacts and specifically on climate change advocacy training.<sup>13</sup>

Medical schools have a responsibility to guide future physicians to meet the needs of their patients and community, and training in climate change advocacy can advance this critical role. We

hypothesized that having training on advocacy for climate health policy would be valued by students. By using climate-related policies and legislative bills, our workshop seeks to increase students’ awareness, knowledge, skills, and comfort level in participating in advocating for health initiatives, potentially inspiring a commitment by learners to address climate change health impacts.

The theme of our workshop is that doctors and medical students have the capacity and professional responsibility to influence climate change health policies. Moreover, there are abundant opportunities for medical students and practicing physicians to take meaningful actions. Physicians may be intimidated by the complex, contentious, multiyear process of comprehensive federal climate legislation or the machinations of international climate negotiations. The workshop exposes medical students to five focused pending or recent actions by medical school administrators or governments with important climate and health benefits and ways to advocate for them.

Climate advocacy training can equip medical students with the tools to work effectively for their patients and communities to address challenges that impact health. Our workshop successfully gives students the tools and skills to consider climate advocacy actions. We provide guidance on advocacy methods, actual samples of policies and legislative bills, templates, case studies for presentations to policy- and lawmakers, and active learning exercises on a range of climate change actions with health impacts.

## Methods

The workshop was developed by medical faculty with expertise in climate change policy advocacy, social determinants of health (SDH), clinical medicine, and clinical simulation, assisted by an expert in survey analysis. Faculty chose sites where they had appointments, existing programs invited their participation, and the workshop fit well in both content and form. A simulation-based educational framework was used as an accepted strategy to improve acquisition of knowledge and enhance learning through exercises that were reflective and experiential.<sup>14</sup> A July 2021 pilot with second-year medical students guided the faculty in modifying and simplifying the content.

We deployed a 90-minute workshop—Using Your Voice: Advocacy 101; Through the Lens of Climate Change—to three groups of medical students via videoconferencing due to COVID-19 restrictions between September 2021 and February 2022. One workshop was delivered to preclinical students at the University of Illinois College of Medicine (UICOM, at three

campuses) participating in a colloquium to augment the core curriculum with medically related content. Next, we worked with preclinical students in the American University of Antigua (AUA) Global Health track, which offered sessions on global health issues and health care systems. Lastly, we presented the workshop at the University of Illinois College of Medicine at Urbana (UICOM-Urbana) to fourth-year medical students participating in the Medicine and Society program, which addressed societal influences on medical practice, public health, policy, and SDH.

The workshop had two major parts of about 45 minutes each: (1) background and guidance and (2) active learning exercise. Appendix A is a facilitator guide reflecting the construction and deployment of this workshop.

#### Background and Guidance

A facilitator provided the PowerPoint presentation *Using Your Voice: Advocacy 101 Through the Lens of Climate Change, Part 1* (Appendix B). The presentation covered support for the importance of physicians' voices for policies related to climate change and health, physicians' credibility and trust by the public, and examples of physicians' climate policy advocacy actions for patients' health going beyond an individual prescription. For climate's health impacts, risks, and vulnerabilities, the facilitator used an infographic entitled *the Impact of Climate Change on Human Health* provided by the Centers for Disease Control and Prevention.<sup>15</sup>

Examples of climate advocacy actions included speaking at community rallies, writing op-eds and letters to the editor, meeting with government officials, and responding to action alerts from environmental organizations and health care providers. To illustrate here, the Medical Society Consortium on Climate and Health website points to readily performed actions for individual physicians, including signing the *US Call to Action on Climate, Health, and Equity: A Policy Action Agenda*, as well as contacting policymakers.<sup>16</sup>

The facilitator then discussed examples of the wide range of legislative priorities for national and state medical professional associations, demonstrating that physicians were and should be engaged in many policy issues going beyond traditional concerns such as payment for medical services, licensure and scope of practice, and physician liability. The legislative examples included climate change, LGBTQ+ health, immigration, and opioids.<sup>17</sup>

The presentation turned to guidance on climate policy advocacy for physicians with a focus on meeting with lawmakers. The

facilitator provided a step-by-step framework with key points to prepare for advocacy meetings based on AMA and other advocacy resources.<sup>16-18</sup> The framework included instructions for logistics, preparation, and messaging, as well as for the development of a factsheet to enhance the communication and leave with the lawmaker. Details for the presentation included awareness of the time limitation of the meeting; need for a concise, understandable statement of the evidence; explanation for support or opposition; storytelling of impactful personal or patient experiences; knowledge of counterarguments; need for a calm and positive approach; and posing a specific request for action.

The workshop continued with discussion of a nine-point guide (Appendix C) that walked the students through the steps for the development of a presentation and factsheet using a hypothetical case study advocating for closure of a coal-fired power plant in Waukegan, Illinois. Prior to the workshop, the content creators had researched relevant information regarding the risks of continued operation of this power plant. The process included background research on the impacts of climate change on community health related to greenhouse gas emissions as well as other air and water pollution from the power plant. This research allowed for the development of points to populate a sample script and factsheet (Appendix D). This approach and the resulting materials offer a model that is portable and reproducible and that other facilitators can use to develop content for climate health advocacy issues relevant to their own participants. Using this case study, the facilitator demonstrated to students how physicians could act as climate policy advocates, focusing on key points regarding the health impacts of air pollution and climate change, and provided students with a guide for the active learning exercise.

#### Active Learning Exercise

To deploy the active learning exercise, the facilitator delivered the PowerPoint presentation *Using Your Voice: Advocacy 101 Through the Lens of Climate Change, Part 2* (Appendix E). Depending on the number of students, the exercise used up to five actual proposed legislative or policy actions reflecting a variety of challenges and adverse health impacts related to climate change (Appendix F). A document with a summary of the bills was provided electronically. The actions involved proposals to medical school leadership to include climate change in the curriculum, to local government officials to purchase electric school buses, to a state senator to fund a tree planting program, to a member of a legislative labor committee for a law protecting outdoor workers from heat stress, and to a state senator to fund a green infrastructure project to reduce urban flooding.

For about 20 minutes, each group of students worked together to plan a presentation for a meeting with a policymaker on a specific proposed action related to climate change. Recognizing the workshop time constraint, participants were instructed to develop a presentation based on an abbreviated version of the nine-point guide shared in the Part 1 PowerPoint. A template (Appendix G) was provided that included six items: description of the bill or policy being addressed, explanation of the problem requiring action, health risks and benefits of the issue, recognition of the objections including challenges and costs, relevant personal or patient stories, and a specific request for action. The students could perform online research on the topic during this time and also selected identities for their presenters (pediatrician, pulmonologist, cardiologist, psychiatrist, etc.).

Next, all workshop participants reconvened, and the groups gave their advocacy presentations, including the factsheets. Three faculty members facilitated the discussion regarding the presentations and factsheets; however, it would be feasible to offer the workshop with fewer facilitators. Each group presentation lasted 5-8 minutes, with facilitator feedback lasting 2-3 minutes. Most groups shared images and graphics from their factsheet.

In closing the workshop, the facilitators thanked the participants for their work and noted that they had future opportunities to help address these issues and apply their climate policy advocacy skills outside the classroom. These opportunities included green teams in their university and hospital, individual actions such as writing letters or blogs, and joining associations of medical students and health care practitioners, community organizations, environmental advocacy groups, and associations of scientists.

#### Evaluation

The facilitators assessed the success of the workshops in three ways: statistical analysis of participants' attitudes, review of participants' narrative responses, and evaluation of participants' work on the active learning exercise.

At the end of the workshop, the students were informed that the workshop was being studied and were invited to participate in an institutional review board–approved survey (Appendix H). The consent for the survey was read aloud and posted in the chat function of the virtual session. The survey included four questions on participants' attitudes before and after the session regarding their knowledge and skills as well as an option for narrative feedback. The four attitudinal questions were rated on 5-point Likert scales (1 = *not at all ready/aware/capable*, 5 = *very ready/aware/capable*).

## Results

Over the three deployments, 58 first- and second-year medical students participated in UICOM's colloquium, 31 second-year medical students participated in AUA's Global Health program, and 13 fourth-year medical students took the workshop in UICOM-Urbana's Medicine and Society seminar. Of the 102 participants, 29 returned surveys (28% response rate) using SurveyMonkey.

Comparing answers to the four attitudinal questions before and after the workshop, students reported improvements in readiness to advocate for legislation to mitigate the health effects of climate change, awareness of advocacy opportunities, capability to prepare advocacy documents for lawmakers, and readiness to advocate for legislation that would improve overall community health. Paired sample *t* tests were applied, and each comparison was significant at  $p < .001$  (Table).

In their narrative responses to the workshop, the survey respondents wrote that they found it worth their time, interesting, and informative, with relevant topics, good skill-building, and enjoyable group exercises. These notes were consistent with the facilitators' observations of informed group discussions and presentations. Several participants said that there was insufficient time for their groups to develop presentations and factsheets.

## Discussion

To address gaps in medical training on the health impacts of climate change and climate policy advocacy, we developed a workshop that fit with existing colloquia and programs outside of core coursework. The workshop succeeded in its unique focus on building skills in communicating as health care providers on climate policies and pointed toward opportunities for engaging in climate advocacy as an individual medical student or physician or through associations.

The survey results indicated significant value in climate health policy advocacy workshops for medical students. Students improved on readiness to advocate for legislation that would mitigate the health effects of climate change as well as on awareness of advocacy opportunities and skills required for effective meetings with policymakers.

Workshops varied in terms of the attendees' backgrounds. Some attendees had never previously viewed themselves as engaging in policy advocacy as a citizen or future health care professional. Their focus may have been solely on developing their clinical skills. For this group of policy novices, the workshop opened opportunities to engage in supporting their patients outside of

**Table.** Survey Results Before and After the Climate Advocacy Workshop ( $N = 29, p < .001$ )

Metric	Preworkshop M (SD)	Postworkshop M (SD)
Readiness to advocate for legislation that would mitigate the health effects of climate change <sup>a</sup>	2.3 (1.1)	4.0 (0.6)
Awareness of advocacy opportunities <sup>b</sup>	2.8 (0.8)	4.2 (0.8)
Capability of preparing supporting documentation for lawmakers <sup>c</sup>	2.7 (1.0)	4.3 (0.6)
Readiness to advocate for legislation that would improve overall community health <sup>a</sup>	2.6 (1.2)	4.2 (0.7)

<sup>a</sup>Rated on a 5-point Likert scale (1 = *not at all ready*, 5 = *very ready*).

<sup>b</sup>Rated on a 5-point Likert scale (1 = *not at all aware*, 5 = *very aware*).

<sup>c</sup>Rated on a 5-point Likert scale (1 = *not at all capable*, 5 = *very capable*).

the bedside or clinical setting. Our experience demonstrated that instruction in advocacy skills through a workshop approach was well received and successfully guided students to use tools to promote policies addressing the health impacts of climate change.

After the initial pilot, we recognized that the bills used in the active learning exercise should focus on one action, be easy for the students to grasp the health impacts of, and preferably address topics close to students' clinical or personal experiences. We learned that the groups were unable to develop full factsheets in the limited time allowed. Students generally enjoyed the challenge of selecting visuals for factsheets and were frustrated if not given enough time to do creative work. Subsequently, we simplified and shortened the wording of the bills, eliminated one bill that was overly complex, and asked the students to simplify their presentations and factsheets. We also recommend providing links to resources pertaining to the bills to expedite the research, as now shown in Appendix F.

Additionally, the workshops were done virtually, which may have impaired engagement between students and facilitators. Our experience from other in-person workshops with medical students and faculty showed that the in-person format had advantages over virtual sessions.

We recognize that a single 90-minute session is less effective in training medical students on climate change and policy advocacy than integration of these topics and skills throughout curriculum.<sup>19</sup> Nevertheless, this workshop was successful and well received while fitting within existing programs. As an alternative to a single workshop, longitudinal exposure throughout the curriculum could be developed and would allow students to learn how to consider climate health advocacy in the context of the broad spectrum of interactions based on their own personal and patient-related experiences.

We recommend starting the workshop by asking the participants to describe any actions they have taken to influence a policy

(not limited to climate change), such as joining or contributing to an organization, signing a petition, attending a rally, posting on social media, writing an email or letter to a lawmaker or publication, or meeting with a lawmaker. This discussion allows the facilitator to assess and refer to the participants' experiences during the workshop. These personal stories also help overcome some reluctance to engage in climate policy advocacy by exposing those students who have not taken such actions to their colleagues' engagements and experiences.

While exercises using standardized patients and mannequins are well-recognized strategies in medical education, we found that our workshop's use of simulations in climate policy provided active learning experiences that built awareness, knowledge, and skills. This workshop model can be applied to numerous timely climate-related topics that impact public health. Policies and legislative bills can be modified for key climate health issues facing our profession, communities, nation, and world.

## Appendices

- A. Facilitator Guide.docx
- B. Workshop Presentation Part 1.pptx
- C. Nine-Point Guide.docx
- D. Example Case Study.docx
- E. Workshop Presentation Part 2.pptx
- F. Description of Policy & Bills.docx
- G. Abbreviated Six-Point Factsheet.docx
- H. Pre- and Postworkshop Survey.docx

*All appendices are peer reviewed as integral parts of the Original Publication.*

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### Acknowledgments

We would like to thank Leslie Walwyn, MD, Director of the Global MD program, and faculty and staff at American University of Antigua for access, guidance, and support.

### Disclosures

None to report.

### Funding/Support

None to report.

### Ethical Approval

The American University of Antigua Center for Research and Evaluation and the University of Illinois Institutional Review Board approved this project.

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**Received:** October 19, 2022

**Accepted:** May 19, 2023

**Published:** August 17, 2023