



Climate and Health Program  
SCHOOL OF MEDICINE



# DIPLOMA IN **CLIMATE** MEDICINE

# IMPACT REPORT 2022-2025



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## Who are *Climate Medicine Diplomates*?

*As health systems and governments develop climate plans, they will need expert guidance on how operations, infrastructure, and policy decisions shape the health of patients and communities. Climate Medicine Diplomates provide that expertise.*

They are credible and knowledgeable leaders who can connect climate science with real-world health outcomes such as extreme heat and urban illness, biodiversity loss and emerging pandemics, or severe weather and food insecurity. They craft compelling, patient-focused narratives for CEOs, community leaders, and policymakers, advocate for climate-resilient and equity-centered policies, and help healthcare systems decarbonize without compromising care.

## What Drives Our Vision

*A Message from Diploma in Climate  
Medicine Director, Bhargavi Chekuri, MD*



When we launched the Diploma in Climate Medicine three years ago, we did so to address a clear and urgent gap. Like many of you, we were witness to climate impacts daily, yet few had access to structured, practice-relevant education to meet evolving environmental health challenges. The Diploma in Climate Medicine was our response, a novel program integrating climate science, environmental health, clinical practice, and systems thinking into a coherent pathway. Our goal was ambitious but simple: to prepare clinicians to understand the health dimensions of climate change and to lead transformation in their communities and practices.

Along the way, we have learned as much as we have taught. The interdisciplinary and intergenerational community of practice that has emerged is one of the program's greatest strengths. Students and faculty bring diverse expertise and lived experiences. We are also continually reminded of the power of stories, especially those shared by patients and communities, which ground our science, illuminate lived realities, and inspire action.

This work was shaped by the vision of Dr. Terry O'Connor, whose leadership helped bring the program to life. He recognized early that a changing planet would require a new kind of clinician, and his commitment to curiosity, service, and humanity continues to guide us.

What motivates me most now, is the work of our graduates. They are translating knowledge into practice, shaping curricula, advancing preparedness and sustainability programs, promoting health equity, and defining the emerging field of climate medicine.

Whether you are reading this as a learner, partner, supporter, or collaborator, we share this report with deep gratitude. Your contributions have already made a meaningful impact, and this is just the beginning. Together, we can continue building the leaders and change agents our patients, communities, and health systems deserve.

### *In Memoriam:* **Terry O'Connor, MD (1976-2024)**

Dr. Terry O'Connor's life and career stand as a testament to his remarkable dedication and service across disciplines and borders. As an esteemed emergency physician, educator, narrator, and explorer, he continuously pushed the boundaries of medicine and environmental stewardship. Dr. O'Connor died tragically in an avalanche on May 10, 2024 at the age of 48.

His visionary leadership helped launch the University of Colorado's Diploma in Climate Medicine Program. He dreamed of mobilizing health professionals with the knowledge and expertise to advocate for climate and health solutions at the bedside and in community. Terry understood this would be a difficult mountain to climb, but he embraced the challenge as one of the most important of his career. Many of the health professionals he inspired have found their own voices and are proudly carrying his vision forward.

Although Dr. O'Connor's infectious smile and boundless curiosity are deeply missed, his work endures. His legacy is to inspire each of us to act in service of our planet and each other.



*"Awe benefits us all by orienting our actions toward the lives and needs of others around us. What do I hope for you? Go on an adventure. Find your awe. Perhaps our journeys are less about what we have just achieved but more about who we are about to become and what we are going to give in return."*

# Five Certificates. One Diploma.

## Flexibility fuels our vision.

Every aspect of the program is designed with busy professionals in mind. From a hybrid learning environment to adaptable scheduling, participants can engage in ways that fit their lives. Whether completing a single 60-hour certificate or earning the full 300-hour Diploma in Climate Medicine, participants gain CME credits and micro-credentials empowering them as leaders in climate and health.



Community and connection are built into the Diploma in Climate Medicine and are supported as part of the alumni network.



### Foundations in Climate Medicine

#### Understanding the Problem

Helping clinicians connect climate science with real-world health impacts and build the communication and advocacy skills needed to drive change.



### Sustainable Healthcare

#### Addressing Our Emissions

Empowering healthcare leaders to champion initiatives that reduce the environmental footprint of healthcare and improve community health.



### Disaster Resilience & Response

#### Preparing for Known Impacts

Equipping health professionals with the knowledge and tools to assess risks, strengthen preparedness, and respond effectively to extreme events.



### Community Resilience

#### Navigating the U.S. Policy Landscape

Preparing health professionals to advocate for climate action through policies that strengthen communities and enhance environmental justice.



### Global Challenges

#### Applying A Planetary Health Lens

Helping clinicians explore how climate change, global carbon economics, and international policy intersect to drive health impacts worldwide.

# The Stories Make It Real

Through storytelling, clinicians are better able to process their own experiences while giving voice to the human realities of climate change. We use the 55-word story: a concise and evocative format, long valued in narrative medicine for its accessibility, discipline, and ability to distill meaning into just a few lines.



Understaffed during a pandemic, the new normal.  
Pregnant, but no one knows.  
Burned-out, but I don't know.  
Summer storm?  
No, an inland hurricane!  
No power, no phones, no EMR, no AC.  
We've never practiced this, prepared for this.  
Leave the hospital hours later.  
The trees are all gone.  
This city has changed.  
I have changed.

Jennifer J Schubert, DO

My gloved hands receive babies, always through teary eyes, today sunken behind an N95. Baby's first dramatic breath draws in smoky air. Born pre-polluted by generations before. Happy tears. Sad tears. Welcome to our world, little one. I'm sorry. Fire season. My family's bags packed. Objects left behind. It's ok, kids. We have each other.

Michelle Mertz, MD, ABOIM

Interprofessional and intergenerational classes help extend our educational reach.



# Program Timeline

In just three years, the Diploma in Climate Medicine has met its goal to build a world class, scalable education program committed to training leaders today who will lead the climate and health movement tomorrow.



**80 participants have completed at least one Diploma Certificate**



**27 are now Diplomates in Climate Medicine**

*Our most recent graduates of the Diploma in Climate Medicine represent a diverse range of specialties, including Emergency Medicine, Otolaryngology-Head and Neck Surgery, Gynecologic Oncology, and Family Medicine.*



# Participants At-A-Glance

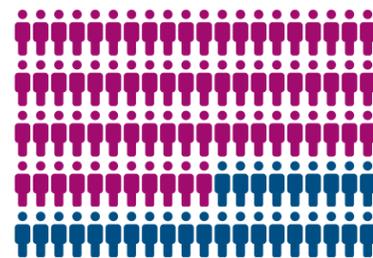
As the Diploma in Climate Medicine expands in both scale and influence, these topline numbers highlight the unique backgrounds of our participants and the broad reach of our impact. 80 participants have completed at least one Certificate, while 27 have completed all five to earn the Diploma in Climate Medicine.



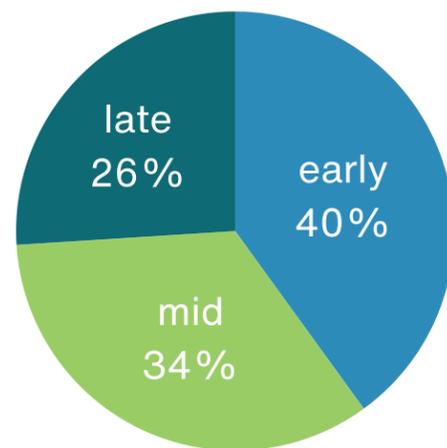
## Multi-disciplinary Cohorts

Our participants are nurses, physical therapists, PAs, NPs, paramedics, public health practitioners, and physicians.

## Gender Demographics



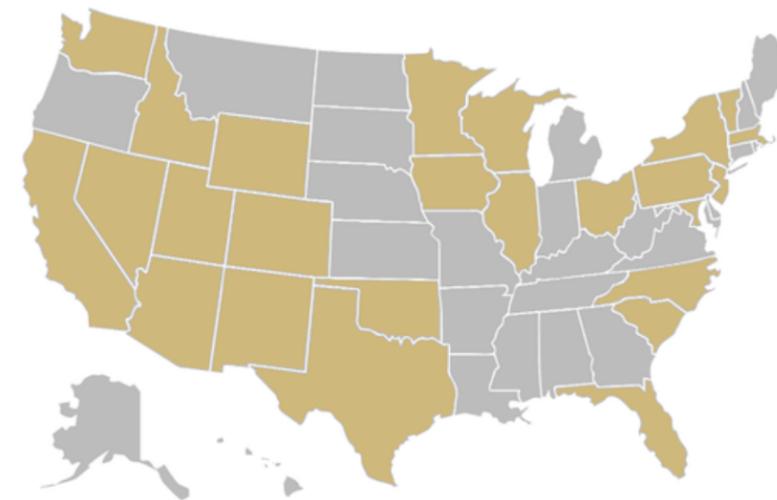
## Career Stage



## 16 Medical Specialties

- Allergy & Immunology
- Cardiology
- Emergency Medicine
- Family Medicine
- Gastroenterology
- Infectious Disease
- Internal Medicine
- Neurology
- Obstetrics and Gynecology
- Oncology
- Otolaryngology
- Palliative Care
- Pediatrics
- Psychiatry
- Radiology
- Trauma Surgery

# National Reach



**27**  
States & Provinces  
Represented



**Only 17%**  
of participants had previously received training about climate change and health



**28% of**  
alumni have taken on new designated climate and health roles



**95%**  
of participants felt prepared to advocate for environmental and climate health justice after completing at least one Certificate

# Building a Climate-Informed Workforce



Disaster Resilience and Response Certificate participants briefing for Texas A & M's Disaster Day, a full-scale interprofessional emergency response simulation involving 700 students.

*Reaching and engaging the practicing healthcare workforce is one of the greatest challenges in advancing climate medicine literacy.*

Our approach focuses on training tomorrow's leaders while equipping them to educate and inspire their own communities. By investing in those who can influence systems, colleagues, and patients, we amplify our impact, creating a ripple effect that extends far beyond individual participants.

*"I've always been an educator, but I feel like I am more than an educator now in climate medicine. I feel like I can advocate and hopefully solve sustainability issues at my hospital and really become a change maker not just within my own department or city, but within my own profession and on the national level."*

**– Aaron Hultgren, MD, MPH, DCM, Emergency Medicine**

## Turning Concern into Leadership

**Sheetal Khedkar Rao, MD** 



Sheetal Khedkar Rao, MD

Sheetal Rao, MD, has spent the last four and a half years making local communities healthier and greener through [Nordson Green Earth Foundation](#), the nonprofit organization she founded as a result of her growing concern and passion for environmental health throughout her medical career.

In 2023, Rao completed a Climate and Health Science Policy Fellowship at the University of Colorado School of Medicine, a program centered on education, policy, and clinical experience. In addition to the fellowship, Rao completed three of the five certificates available in the Diploma in Climate Medicine at the CU School of Medicine: Foundations in Climate Medicine, Sustainable Healthcare, and Community Resilience.

These programs deepened her understanding of environmental health issues, and she was able to bring the knowledge gained from collaborating with an array of industry professionals back to her non-profit work.

"I was amazed that something like this existed," Rao says. "I didn't know it was possible to combine my love of the environment with medicine in this revolutionary way."

When a dear friend, Christine Diploma, approached her to start an environmental non-profit, indoor restrictions from COVID policies drew their attention to the lack of availability of safe, green, and accessible outdoor spaces. They focused on previously redlined communities which have roughly 30% less tree canopy, which can make them 5-12 degrees Fahrenheit warmer than non-redlined areas and more prone to flooding.

Rao decided to take action.

Rao and Diploma created the Nordson Green Earth Foundation. The mission of Nordson is to work with communities that have historically been disinvested of tree canopy and green spaces, adding nature back into those communities with a focus on physical and mental health benefits.

Using the Miyawaki method of planting for urban areas, Nordson implemented the first Miyawaki mini-forest in Illinois. "All you need is a couple of parking spots worth of space, and you can plant a tiny forest with all native plants that will grow to maturity in 20 years," Rao says. "It requires no pesticides and only three years of weeding and watering, followed by periodic invasive species removal throughout its life."

Their forest reached the three-year mark this May.

Across all her fields of work, Rao strives to bring community, health, and justice to people on the front lines of climate change.

***"Working in the climate and health field can be very challenging because there are so many ups and downs," Rao says. "Yet having this kind of upstream impact on health and a chance to work with smart, caring, like-minded people from different backgrounds and disciplines – it gives me hope."***

# Our Graduates are Change Agents

Our graduates are educators, advocates, award winners, authors, and engaged citizens. By focusing on training the next generation of climate and health clinical leaders, we extend our impact through their remarkable contributions.

**Our graduates are shaping the national narrative on climate and health solutions. Since 2022 they have authored:**

**106** publications    **32** peer-reviewed journal articles  
**33** op-eds and public commentary pieces

**Examples:**

- **Nisha Shah, MD** [The impact of climate change on hospice and palliative medicine: A scoping and narrative review](#)
- **Hilary Ong, MD** [Health Care Actions for Reducing Plastic Use and Pollution \(Viewpoint\)](#)

**The Diploma prepares clinicians to influence systems and policy.**

**22** participants assumed new climate-related roles or leadership positions, demonstrating how the Diploma equips clinicians to drive organizational and system-level change.  
**7** provided testimony to state or national policy makers.

**Examples:**

- **Mark McShane, MD**, Public testimony to the EPA against the repeal of the Endangerment Finding
- **Anne Getzin MD**, Medical Director of Sustainability at Advocate Health
- **Sara Carpenter, MD**, Board Chair, Healthy Air and Water Colorado
- **Ankush Bansal, MD**, President-elect, Physicians for Social Responsibility

Education is central to our mission. Graduates are bringing their knowledge to clinical teams, professional societies, and public audiences through:

**68** presentations, webinars, and grand rounds  
**17** podcast or media interviews  
 representation on undergraduate and graduate medical education curriculum committees

**Examples:**

- **Elizabeth Cerceo, MD**, [Lungcast: Resilience and Sustainability: Preparing Healthcare for the Future](#)
- **Ali Saad, MD**, Climate Change and Brain Health: What Do We Know and What Can We Do? - presentation at the American Academy of Neurology 2025 Annual Meeting
- **Laurie Lalakea, MD** and **Duncan Meiklejohn, MD**, Little Patients, Big Impact: Climate Health and Sustainability in Pediatric Otolaryngology - presentation at the American Academy of Otolaryngology–Head and Neck Surgery 2025 Annual Meeting
- **Heather Whelan, MD**, Founded [Climate Crossing](#) podcast

**Participants launched projects, earned awards, mentored learners, and even initiated clinical practice changes, translating knowledge into tangible improvements in patient care and community resilience.**

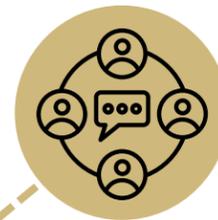
**Examples:**

**Karen Glatfelter, MD**, implemented a Sustainable Quality Improvement project that reduced metered-dose inhaler use in her hospital by 80 percent, yielding environmental and cost benefits.

**Thought Leadership**



**Education and Engagement**



**Advocacy and Professional Influence**



**Real-World Projects and Implementation**

# In Their Own Words: Leadership in Action

Across the country, Diploma in Climate Medicine graduates are shaping climate-health policy through communication, advocacy, systems thinking, and community partnerships. Their voices are helping guide legislation, public messaging, and institutional change.

“The skill that is going to help me most in my climate health work is public-facing communication. Repeating simple and clear messages from a trusted and caring messenger doesn’t seem that complicated, but remembering the importance of simplicity, clarity, and repetition is something that is going to make all of our advocacy efforts more effective.”



Logan Harper, MD, DCM, Family Medicine

Logan is now the Assistant Director of [CU’s Climate and Health Science Policy Fellowship](#) and has collaborated with the Centers for Disease Control and Prevention including partnering with the American Public Health Association and [ecoAmerica](#) to design and facilitate a three-hour CME training for healthcare and public health professionals on heat-related health impacts and preparedness.

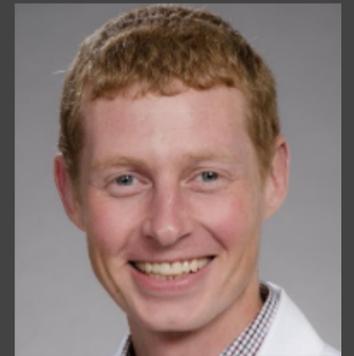
“Having five Certificates with a separate focus for each gave me the whole breadth of what is possible. I don’t think that any of us will do all of it, but it gave me the skills to know which questions to ask, where to focus my energy, and which groups are doing the work. I feel much more prepared.”



Lauren Grossman, MD, SM, DCM, Emergency Medicine and Prevention Wellness

Lauren is designing and launching a new 10-week course for Doerr School of Sustainability and the Stanford School of Medicine called *Solutions in Human and Planetary Health* in 2026.

“The thing that I didn’t expect was just how meaningful this would be for me personally. The focused time with other members of this community helped me process my own climate grief I hadn’t realized was there. Over the last two years I feel like I have effectively done that and come out of this in a place where I am super motivated and feel unencumbered to tackle these very hard issues with an open mind and a motivated heart.”



Paul Charlton, MD, DCM, Emergency Medicine

Paul helped found [Healthy Climate New Mexico](#), a chapter of the Medical Society Consortium on Climate and Health and serves as its board chair. He continues to engage with the Diploma in Climate Medicine as co-director of the Certificate in Community Resilience.

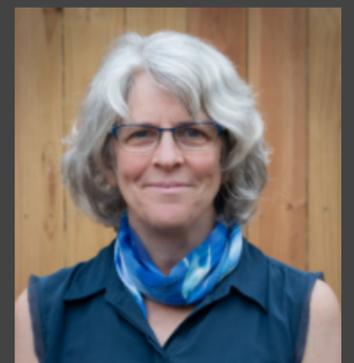
“We need to understand the relationships between our healthcare systems, the health of the patients that we treat, and what’s going on in our communities, our states, and our workplaces. Learning to think in a systems-wide way is a big lesson that I’m taking from this course.”



Joanne Leovy, MD, DCM, Family Medicine

Joanne Leovy is the founder of [Nevada Clinicians for Climate Action](#), volunteers as Nevada state co-coordinator for [Citizens’ Climate Lobby](#), and has given heat resilience presentations for [Clinicians for Climate Action New Jersey](#), [Citizens Climate Lobby CO](#), and [Moms Clean Air Force](#).

“The Diploma in Climate Medicine has given me the confidence to speak to people about the connections between climate and health and equity. This has been a real gift.”



Kathleen Shapley-Quinn, MD, DCM, Family Medicine

Kathleen now serves as Executive Director for [Carolina Advocates for Climate, Health, and Equity](#) and was a Fellow of the Center for Health Equity Education & Advocacy.

# A Community of Practice



*We understand how isolating it can feel to be the lone voice tackling the connections between climate change and health.*

From the start, we've invested in building a vibrant community of practice so that our graduates never have to wonder where to turn when they need guidance and support.

Through an active online network, regular gatherings at national events, and climate medicine rounds, we foster the power of collaboration and synergy. Whether you earn a single Certificate or the full Diploma, you are part of a growing collective of leaders dedicated to advancing meaningful climate action.

*We're creating a network of climate-aware healthcare leaders who champion solutions that improve both patient outcomes and environmental health.*

# Guided by Experts

Recognizing that complex challenges require interdisciplinary expertise, we moved beyond the traditional small-faculty model and built an instructional collective of more than 160 experts working on the front lines of climate science, sustainability, policy, risk communication, and emergency response. Their involvement keeps the curriculum current and helps participants quickly expand their professional networks.

A few of the instructors who educate and mentor our participants:

## Foundations in Climate Medicine

**Anthony Nicome, MHS, MPH**

Advisor, Climate Communities Network, National Academy of Medicine, EJ Consultant

**Ed Maibach, PhD**

Founding Director George Mason University Center for Climate Change Communication

## Sustainable Healthcare

**Hayley Blackburn, PharmD**

Co-founder Rx for Climate

**Cassandra Thiel, PhD**

CEO Clinically Sustainable Consulting

## Disaster Resilience and Response

**Vijay Limaye, PhD**

Senior Scientist, Natural Resources Defense Council

**Jason Moats, PhD, FSCEO, CTT**

Director USA Center for Rural Public Health Preparedness, Texas A&M University

## Community Resilience

**Kyle Leggott, MD**

Health Policy Scholar at the Eugene S. Farley, Jr. Health Policy Center

**John Balbus, MD, MPH**

Former Director, Office of Climate Change and Health Equity, HHS

## Global Challenges

**Olga Gonzalez**

Executive Director, Cultivando

**Courtney Howard, MD, MPP**

Chair, Global Climate and Health Alliance



*"From a faculty perspective, I appreciate how the program blends rigorous training in climate-health science with opportunities for interdisciplinary dialogue. It gives clinicians both the confidence to translate complex knowledge into action and the network and respect for diverse expertise needed to lead meaningful change." - Hayley Blackburn, PharmD*

For a complete list of instructors, please [visit the website](#)

# Powerful Partnerships

We are grateful to work alongside outstanding educational partners who bring knowledge and innovation to the Diploma in Climate Medicine. Their collaboration and synergy strengthens our impact and enhances what we can achieve together.



Metaphora Consulting



# Generous Support

We thank Kaiser Permanente for their generous financial support. This grant helps us expand our efforts and deepen our impact.



*"This certificate brought together disciplines that influence climate and health issues at a global scale."  
Global Challenges 2024*

# Diploma in Climate Medicine Program Team



Anschutz



**Jay Lemery, MD, FACEP, FAWM**  
Director, Climate & Health Program  
Professor, Emergency Medicine



**Bhargavi Chekuri, MBBS, MD, MS**  
Director, Climate & Health Science  
Policy Fellowship  
Director, Diploma in Climate  
Medicine



**Shana Tarter, WEMT, FAWM**  
Managing Director, Diploma in  
Climate Medicine



**Berit Evans**  
Coordinator, Diploma in Climate  
Medicine

## Contact Us



# The Past is Not a Reliable Predictor of the Future

*One of the most critical insights in climate-driven disaster response is that the past is no longer a reliable predictor of the future.*

We now face a "new normal" defined by compounding, increasingly severe events. For health systems, communities, and educators, relying on historical norms can leave us dangerously unprepared for emerging threats. Instead, we must adopt future-focused approaches that challenge outdated assumptions and equip leaders to build resilience in a rapidly changing world.

# Our Path Forward

*A Message from The Climate & Health Foundation Endowed Chair in Climate Medicine, Jay Lemery, MD, FACEP, FAWM*



We present this report with passionate conviction and deep humility as we face a defining moment for health and science, shaped not by one challenge but by the compounding assault of shrinking budgets, the politicization of science, the rollback of public health protections, and the retreat from climate-smart policies that protect human health. As the scope and scale of climate threats accumulate, we continue to muster all our creative energies; leverage our health science communities; and engage in deft communication to forge solutions.

Five years ago, we were a program with just four early-career graduates. Today, we celebrate the impact of nearly 30 Climate Health Science Policy Fellowship graduates, 27 Climate Medicine Diplomates, 53 Diploma candidates, and scores of student physicians. This year also marked the strongest Fellowship recruitment in our nine-year history. Our program has become synonymous with climate health leadership, and with the origination of a novel medical specialty: Climate Medicine.

While many academic peers, private sector colleagues, and government programs have had to constrict or even cease their work, 2025 was a year of growth and expansion for us. Rather than retreat in the face of challenge, we recognize this moment as an opportunity to invest in ourselves and demonstrate bold leadership. In 2026, we will:

- Launch the nation's first MD/PhD in Climate Health in partnership with the Colorado School of Public Health, affirming our commitment to training the highest level of science leaders in medicine.
- Demonstrate AI-driven methodologies to generate bespoke data for healthcare systems providing actionable pathways for decarbonization and sustainability.
- Expand our connectivity with state-level health agencies and advance best practices in climate health policy.
- Continue to recruit top-level thought leaders, including Dr. John Balbus, the highest-ranking climate and health official to serve in the federal government.
- Convene annual gatherings with leaders across the four University of Colorado campuses and state-level climate health policymakers to streamline collaboration, engagement, and impact.
- Grow our community of practice across our alumni and affiliate faculty, through increased virtual and in-person convenings throughout the year.

We envision opportunity even amidst formidable challenges. We are doubling down on our commitment to be the nation's top program in climate medicine and to deliver transformative, multi-faceted thought leadership. There is no endeavor more urgent, nor more worthy of our professional energies and personal passions than advancing and effectively advocating for innovative solutions for health. As the climate threat accelerates, so will we: caring for and protecting our patients, our communities, and the environments that sustain us.



*Our Climate and Health Science Policy Fellows have the opportunity to complete the Diploma during their fellowship year.*



*Small group discussions and case studies help turn concepts into action.*



*Our graduates are dedicated advocates for environmental health, pictured here at the Certificate in Community Resilience on Capitol Hill.*

*“This has been a wonderful opportunity to learn about true advocacy. As a physician I’ve always thought of myself as an advocate for my patient but this is my opportunity to grow that skill and start to see myself as an advocate for the environment and the world in which we inhabit.”*

**- Kate Jennings, MD, Hospital Medicine and Palliative Care**