Climate and health education for health professions schools and programs

CLEAN Network Teleconference
September 10, 2019 1-2pm ET

Brittany Shea, MA
GCCHE Project Director
Rationale
Impacts of Climate Change
The Role of Health Professionals

Asthma and cardiovascular disease from air pollution
Natural emergencies: intense storms, flooding, fires, drought
Spread of viruses and infectious diseases
Vulnerable populations
Heat-related illness and death
Mental health impacts
Water quality impacts
Food insecurity
Allergies and asthma due to increasing allergens
Knowledge Gap
Four Levels of Interventions

2. Health Systems: preparation for climate-related health events and decreasing carbon footprint
3. Clinical care for climate-related health impacts
4. Science to advance knowledge
Global Consortium on Climate and Health Education

gcche.mailman.columbia.edu
Vision and Aims

All health professionals will be trained to prevent, mitigate, and respond to the health impacts of climate change.
Origin
Structure

- **Global Advisory Council**: provides high-level, strategic guidance and direction; comprised of global leaders on health education, climate change, and community resilience.

- **Expert Coordinating Committee**: experts in building climate resilience and climate-health training, works closely with GCCHE leadership in advising on developing educational aims, crafting curricula, and carrying out other activities.

- **Climate and Health Program Science-to-Education Team**
Global Advisory Council

**Linda Fried** (chair), MPH, MD; Dean, Mailman School of Public Health, DeLamar Professor of Public Health Practice

**Richard M Adanu**, MPH, FWACS, MB ChB; Dean, School of Public Health, University of Ghana

**Laurent Chambaud**, MD; Dean, Ecole des hautes études en santé publique

**Carlos Dora**, MD, PhD; Visiting Professor, Columbia University, Mailman School of Public Health

**Howard Frumkin**, MD, DrPH; Head of Our Planet, Our Health, Wellcome Trust

**Lynn R. Goldman**, MD, MS, MPH, Dean, Milken Institute School of Public Health at George Washington University

**Jean-François Guégan**, PhD; Senior Research Professor, Institut de Recherche pour le Développement
Global Advisory Council (cont.)

Sir Andrew Paul Haines, MD; Professor Environmental Change and Public Health, London School of Hygiene & Tropical Medicine

Keith Hansen, MPA, JD; Senior Adviser, The World Bank

Alice C. Hill, JD; Senior Fellow for Climate Change Policy, Council on Foreign Relations

Haidong Kan, MD, PhD; Professor Public Health and Environmental Sciences, Fudan University

Linda A. McCauley, PhD, RN, FAAN, FAAOHN; Dean and Professor, Nell Hodgson Woodruff School of Nursing at Emory University

Michael Myers, MA; Managing Director, Policy, The Rockefeller Foundation

Jonathan Patz, MD, MPH, Professor, Director, Global Health Institute, University of Wisconsin

Jean-Marc de Royere, MBA; Senior Vice President, Corporate Sustainability Program, Air Liquide
Coordinating Committee

**John Balbus**, MD, MPH, Senior Advisor for Public Health, Director, NIEHS-WHO Collaborating Centre for Environmental Health Sciences

**Robyn Gilden**, PhD, RN, Assistant Professor, FCH, University of Maryland, School of Nursing

**Jay Lemery**, MD, FACEP, FAWM, Associate Professor of Emergency Medicine, University of Colorado School of Medicine, Chief, Section of Wilderness & Environmental Medicine

**Gilma Mantilla**, MD, MSc, Adjunct Associate Research Scientist, The International Research Institute for Climate and Society (IRI), Professor, Social and Preventive Medicine at Pontificia Universidad Javeriana

**Teddie M. Potter**, PhD, RN, FAAN, Clinical Professor, University of Minnesota, School of Nursing

**Caroline Wellbery**, MD, PhD, Professor, Department of Family Medicine, Associate Deputy Editor, American Family Physician, Georgetown University Medical Center
Coordinating Committee (cont.)

**Anneliese Depoux**, PhD, Co-Director of the Centre Virchow-Villermé, Paris

**Dana Haine**, MS, Science Educator, Community Outreach and Engagement Core, University of North Carolina Center for Environmental Health and Susceptibility

**George Luber**, PhD, Associate Director for Climate Change, Division of Environmental Hazards and Health Effects, National Center for Environmental Health, Centers for Disease Control and Prevention

**Ruth McDermott Levy**, PhD, MPH, RN, Associate Professor & Director of the Center for Global & Public Health, Villanova University, M. Louise Fitzpatrick College of Nursing

**Janet Richardson**, PhD, PGCE, RN, DN, CPsychol, Consultant in research and education for sustainable healthcare and wellbeing
Mailman School Team

**Jeffrey Shaman, PhD: GCCHE Faculty Lead**
Professor of Environmental Health Sciences; Director, Climate and Health Program

**Kim Knowlton, DrPH: GCCHE External Faculty Advisor**
Assistant Professor, Climate and Health Program
Senior Scientist, Deputy Director NRDC Science Center, Natural Resources Defense Council

**Brittany Shea, MA: GCCHE Project Director**
Activities and Services
Virtual Town Square
Membership

~200 members
~30 countries
6 continents
150,000+ students
Baseline Survey

- Offer Climate-Health Education

63%

Type of Climate-Health Education Offered

- Session during non-required course
- Session during required core course
- Standalone elective course
- Standalone required course
- Masters or certificate program
- Doctoral program
- Post-doctoral positions
A Public Health Student Exploration of the Impacts of Climate Change on Human Health in the United States

Climate Change | A Human Health Perspective
Developing Global Standards for Knowledge & Practice

- Core Competencies
- Licensure exam questions & credentialing criteria

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<th>Unit of Competency</th>
<th>Elements of Competence</th>
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<td>Applies fundamental knowledge of ecology, biology, and complex systems in environmental science.</td>
<td>Understands feedback loops, tipping points, and cascades of effects phenomena.</td>
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<td>Applies knowledge of climate drivers, weather, climate change, and climate variability.</td>
<td>Describe the measurement and evidence base of climate change.</td>
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<td>Describe the differences between &quot;climate&quot; and &quot;weather&quot; and between climate change and climate variability.</td>
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<td>Explain the general mechanism of the greenhouse effect.</td>
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<td>Explain the local manifestations of climate drivers, including population growth and economic growth.</td>
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<td>Applies knowledge of the health impacts of climate change relevant to outdoor health services.</td>
<td>Describe all of the major health effects of climate change, including both direct and indirect impacts, and their mechanisms. Impacts include: increases in mortality and morbidity due to increasing allergic sensitivities; increased water quality impacts; impacts to water and food supplies; environmental degradation (forest degradation, deforestation, and desertification); increased human and animal migration; exacerbation of socioeconomic, demographic, political, cultural, and conflict-related threats to health security; heightening of existing health and economic inequalities and their effects on the delivery of health care; consequences for mental health; impacts of extreme heat including heat-related illness and death; and cardiovascular disease, injury, death, and mental health impacts from severe weather.</td>
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<td>Explain how the human health impacts of climate variability/change will vary within and among different populations.</td>
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Sharing Strategies & Best Practices

- Infusion into existing courses
- Electives
- Fellowships
- Projects for students
Where We Are Going
Thank you!

Acknowledgements: ClimateWorks Foundation, Rockefeller Foundation

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