NATIONAL ACADEMIES Sciences Engineering Medicine

COMMITTEE ON POPULATION

# (Virtual) Seminar on the Consequences of Climate Change for Health at Older Ages

Over the next quarter century, climate change is likely to accelerate rapidly even if countries are successful in reducing carbon and methane emissions. Older adults are likely to have a harder time adapting to climate change and their health is more likely to be affected. While there have been a number of studies examining the direct and indirect effects of climate change on health, few focus specifically on the older population. Furthermore, most research focuses on mortality outcomes, but ignores morbidity. In this seminar, researchers will: (1) discuss the potential health consequences of climate change on older Americans, (2) identify mechanisms through which climate change affects health, and (3) examine the role of socioeconomic status and societal disadvantage (e.g., racism, sexism, ageism, and anti-immigrant sentiment) on coping with these changes. The seminar will also explore options for overcoming data limitations that inhibit our ability to investigate key climate-aging interactions.

## Monday, May 9, 2022

(All times EDT)

**1:00 – 1:15 pm** **Welcome and Introductions; Goals for the Seminar**

- *Emerald Nguyen*, National Institute on Aging
- *Anne Pebley,* University of California, Los Angeles (Chair, Committee on Population)

**1:15 – 2:00 pm** **Session 1: Effects of extreme heat, cold, weather events, and older adult housing on health**

- Including consequences for people with dementia, including Alzheimer's Disease, and other chronic conditions

- *Vijay Limaye,* National Resources Defense Council

**2:00– 2:45 pm** **Session 2: Effects of increases in climate-sensitive infectious disease prevalence on older adults**

- Emphasis on behavioral/social science relevance and dimensions
- Including distributional lessons we have and can learn from the pandemic

- *Ayesha Mahmud*, University of California, Berkeley

2:45 – 3:00 pm BREAK

**3:00 – 3:45 pm** **Session 3: Economic effects of climate change on older adults**

- Potential economic effects of environmentally-induced weather shocks, price shocks (e.g., food prices), and residential displacement on the financial stability and security of older adults
- Including how the costs of transition to a carbon-free economy affect the older and lower-income population

- *Elizabeth Frankenberg,* University of North Carolina at Chapel Hill

**3:45 – 4:30 pm** **Session 4: Cognitive and psychological effects of climate change on older adults**

- *Noah Webster*, University of Michigan

**4:30 – 5:00 pm** **Wrap-Up Discussion; Summary Discussion of Data Needs**

5:00 pm Adjournment

## PRESENTER BIOSKETCHES

**Elizabeth Frankenberg** is the Cary C. Boshamer Distinguished Professor of Sociology at the University of North Carolina at Chapel Hill and Director of the Carolina Population Center. Her research focuses on individual and family response to change and the role of community, broadly construed, in individual behaviors and outcomes across the life course. In addition to these substantive interests, two cross-cutting themes are inherent in her research: health status as a critical dimension of well-being and the close integration of methods and data. She has invested heavily in developing and implementing innovative and ambitious designs for data collection to support her own research and that of the scientific and policy communities more broadly, including the Study of the Tsunami Aftermath and Recovery (STAR). The STAR project assesses the social, economic, demographic, and health impacts of the December 26, 2004 earthquake and tsunami in Indonesia in order to measure population-level response to a disaster over fifteen years. Building on STAR Dr. Frankenberg is now leading the Dynamics of Extreme Events, People, and Places (DEEPP) project, which focuses on the US. Dr. Frankenberg is trained in demography, sociology, and public policy.

**Vijay Limaye** is a climate and health scientist in the National Resources Defense Council's (NRDC's) Science Office. As an epidemiologist, he is broadly interested in addressing international environmental health challenges—quantifying, communicating, and reducing the risks associated with climate change—with a focus on the public health burdens of air pollution and extreme heat. At NRDC, he leads economic valuation research and advocacy to understand and address the significant health costs of climate change and he works to defend the science that underpins the Clean Air Act. Prior to joining NRDC, he worked as a U.S. Environmental Protection Agency scientist, focusing on Clean Air Act regulatory implementation, air quality monitoring policy, and health risk communication. Limaye, who also speaks Spanish and Hindi, has led multiple research studies on the health impacts of climate change, including analyses of air pollution and extreme heat in both the U.S. and India. He holds a bachelor's degree from the University of California, Berkeley and a PhD in environmental epidemiology from the University of Wisconsin, Madison. He is based out of NRDC's Chicago office.

**Ayesha Mahmud** is an Assistant Professor of Demography at the University of California, Berkeley. She is a demographer, broadly interested in the interplay between human population changes, environmental factors, and infectious disease dynamics. Her research draws on theory and methods from demography and disease ecology, to answer questions such as - why do outbreaks occur at certain times of the year? How and why does the mortality burden of infectious diseases vary over time? How do population travel patterns drive the spatial dynamics of outbreaks? How will global environmental and demographic changes alter the landscape of infectious disease burden in the future? Prior to coming to Berkeley, she was a Rockefeller Foundation Planetary Health Fellow at Harvard University. She received her Ph.D. in Demography from Princeton University in 2017.

**Noah Webster, Ph.D.** is an Associate Research Scientist at the University of Michigan's Institute for Social Research. A sociologist by training, he applies theories of social relations and ecological context to study how built, natural, and social environments intersect to create unique forms of disadvantage that perpetuate health disparities across the life course. Dr. Webster has led multiple survey research projects focused on environmental sustainability. This includes most recently an NSF funded study, which involved collection of survey data from representative samples of Ann Arbor, South Bend, and Knoxville residents regarding flood experiences and perceptions of stormwater management practices. Dr. Webster also currently serves as Principal Investigator of an NIA funded study to identify resources (e.g., social capital) within disadvantaged environments that can be utilized to offset environmentally-linked health disparities through development and evaluation of context-specific interventions. His commitment to health disparities research has been recognized through acceptance into the National Institute of Minority Health and Health Disparities Loan Repayment Program, the NIA's Butler-Williams Scholars Program, and the National Heart, Blood and Lung Institute's Saunders-Watkins Leadership Workshop in Health Disparities and Implementation Research. Dr. Webster has served in leadership roles in both national and international societies. This includes serving as Editorial Board Member for the Gerontological Society of America's (GSA) journal *Innovation in Aging*, Steering Committee member for the Society for the Study of Human Development, Chair of the GSA's Publications Committee (2016-2017), and Co-Chair of the International Society for the Study of Behavioral Development's Publications Committee (2020-current).