

**HEI Annual Conference Program
May 5–7, 2019
Seattle, Washington**

Sunday, May 5

11:30 am Lunch

1:00 pm Welcome and Conference Opening
Dan Greenbaum, Health Effects Institute

1:10 pm New Mobility: Changing Health?
Chairs: *David Foster, University of Wisconsin, Madison, and HEI Research Committee; and Frank Kelly, King's College London, United Kingdom, and HEI Review Committee*

Mobility systems are undergoing a paradigm shift and have the potential to significantly change the way people travel. Rideshare businesses are expanding, and innovations and investments in electric and autonomous vehicles are increasing. In response, the relationship between transportation and air quality is also expected to change, but the actual path that change will take is not yet known. This session will explore the likely impact of emerging mobility trends on current and future air quality and health.

- 1:10 Introduction
Frank Kelly
- 1:15 Global Overview of the Transportation Revolution
Dan Sperling, University of California, Davis
- 1:45 Connection Between Changing Mobility and Infrastructure
Charlene Rohr, RAND, United Kingdom
- 2:15 Effects of Technologies and Their Deployment on Air Pollution
Marianne Hatzopoulou, University of Toronto, Canada
- 2:45 Potential Health Implications of New Mobility
Haneen Khreis, Texas A&M University
- 3:15 Panel Discussion
Moderator: *David Foster*
Discussants: *Shannon Walker, City of Seattle Department of Transportation, Britta Gross, General Motors, and the speakers*

3:45 pm Break

4:00 pm Poster Session I

6:00 pm Opening Reception, Dinner, and Awards Presentation

Monday, May 6

7:00 am Breakfast

8:00 am **Health Effects of Early-Life Exposure to Air Pollution**

Chairs: *Barbara Hoffmann*, University of Düsseldorf, Germany, and HEI Research Committee; and *David Savitz*, Brown University and HEI Research Committee

Evidence for potential impacts of prenatal and early-life air pollution exposure on health is rapidly increasing, and some birth outcomes are currently being considered for inclusion in Global Burden of Disease estimates. This session will provide an overview of the state of knowledge on various birth and other childhood health outcomes, consider methodological issues unique to this topic, and discuss longer-term consequences of early-life exposures for adult health.

- 8:00 Introduction
Barbara Hoffmann
- 8:10 Epidemiological Evidence for Adverse Birth Effects Associated with Prenatal Exposure to Air Pollution
Marie Pedersen, University of Copenhagen, Denmark
- 8:35 Respiratory Effects and Asthma in Children
Rosalind Wright, Icahn School of Medicine at Mount Sinai
- 9:00 Neurodevelopmental Effects
Sharon Sagiv, University of California, Berkeley
- 9:25 Obesity and Type 2 Diabetes in Children
Tanya Alderete, University of Colorado, Boulder
- 9:50 General Discussion

10:00 am Break

10:30 am **Poster Session 2**

12:15 pm Lunch

1:15 pm **Global Health: Building Science for Informed Action**

Chairs: *Kiros Berhane*, University of Southern California and HEI Review Committee; and *Aaron Cohen*, Health Effects Institute and Institute for Health Metrics and Evaluation, University of Washington, Seattle

In regions where air pollution levels are high, local data on exposures, sources, and related health effects are often limited. While current health burden estimates draw primarily from studies conducted in North America and Europe, efforts are underway to generate locally relevant air quality and health data in developing countries. This session will explore data, methods, and technology developments to characterize air pollution and its sources and health effects in these countries.

- 1:15 Introduction and Overview of HEI Global Health Program
Katy Walker, Health Effects Institute
- 1:25 Harmonizing Disparate Global and Local Air Quality Data to Support Research and Communication
Christa Hasenkopf, OpenAQ

- 1:45 New Developments and Opportunities in Global Satellite Technology for Air Pollution and Health Research
Bryan Duncan, National Aeronautics and Space Administration
- 2:05 Improving Understanding of Concentration Response Functions in Countries with High Ambient Particulate Matter Exposure: China Cohort Studies of Air Pollution and Health
Haidong Kan, Fudan University, Shanghai, China
- 2:25 GBD 2017 State-Level Burden of Disease from Air Pollution in India: Findings and Future Research Needs
Lalit Dandona, Public Health Foundation of India
- 2:45 General Discussion

3:15 pm Break

3:30 pm Where There's Wildfire, There's Smoke

Chairs: *Jennifer Peel*, Colorado State University and HEI Review Committee; and *Allen Robinson*, Carnegie Mellon University and HEI Research Committee

Wildfire smoke is increasingly recognized as an important source of air pollution, and frequency and intensity of wildfires are likely to increase with climate change. Wildfires and wildfire smoke composition are complex and dynamic, making exposure characterization difficult. Increasing evidence links air pollution from wildfire smoke to adverse health effects, in particular respiratory morbidity. This session will explore perceptions and realities about wildfires and their global impacts.

- 3:30 Why Study the Health Effects of Wildfires?
Jennifer Peel
- 3:50 Where There's Wildfire, There's Smoke: An Epidemiological Perspective
John Balmes, University of California, San Francisco
- 4:10 Modeling, Monitoring, and Messaging Wildfire Smoke for Air Quality and Public Health
Sim Larkin, U.S. Department of Agriculture, Forest Service
- 4:30 Hands-On Experience Mitigating Wildfire Impacts
Sarah Coefield, Missoula City-County Health Department
- 4:50 U.S. EPA's Research Perspectives on the Health Impacts of Wildfires and Wildfire Smoke
Alan Vette, U.S. Environmental Protection Agency
- 5:10 General Discussion

5:30 pm Free Evening

(Program continues on next page)

Tuesday, May 7

7:00 am Breakfast

8:30 am How Low? Testing Health Effects at the Lowest Levels of Air Pollution
Chairs: *Amy Herring*, Duke University and HEI Research Committee; and *Sverre Vedal*, University of Washington, Seattle

Although ambient air pollution levels are declining in high-income regions, epidemiological studies report associations with health effects at levels below current standards, raising questions about even lower standards. HEI is in the midst of funding three studies investigating the health effects of low-level exposure in very large populations in the United States, Canada, and Europe. This session will present the results currently available from those studies and their strengths and weaknesses identified by an independent HEI Review Panel, and discuss implications for future risk assessment and regulation.

8:30 What Are the Risk Assessment and Policy Decisions to Be Informed?
Dan Greenbaum, Health Effects Institute

8:40 Introduction to HEI's Program to Assess Health Effects of Long-Term Exposure to Low Levels of Ambient Air Pollution
Hanna Boogaard, Health Effects Institute

8:50 Results from the European Analysis Using ESCAPE Cohorts and Various Large Administrative Data Sets
Maciej Strak, Utrecht University, the Netherlands

9:10 MAPLE: Mortality–Air Pollution Associations in Low Exposure Environments in Canada
Dan Crouse, University of New Brunswick, Canada

9:30 Results from the U.S. Study Using Medicare Data
Qian Di, Harvard T.H. Chan School of Public Health

9:50 General Discussion

10:00 am Break

10:30 Comments from the HEI Review Panel
Sverre Vedal

10:45 The Current Knowledge on Adverse Effects of Low-Level Air Pollution: Have We Filled the Gap?
Jon Samet, Colorado School of Public Health

11:00 General Discussion

11:30 am Boxed Lunch

12:00 pm The HEI Strategic Plan 2020–2025
Chairs: *Dan Greenbaum*, *Robert O'Keefe*, and *Rashid Shaikh*; Health Effects Institute

The Institute's draft blueprint for the future, the HEI Strategic Plan for 2020–2025, will be presented and discussed. Conference participants are encouraged to suggest and comment on upcoming policy decisions for which enhanced science will be needed and on priorities for HEI's research programs and other activities during the next five years.

1:30 pm Conference Adjourns