

What will be the role of epidemiological research in future air quality management?

Chair:

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Aims and Short Description: In many high-income and some middle-income countries, great progress has been made in controlling outdoor air pollution. Over the last half-century, this progress has been driven and sustained by the findings of epidemiological research, which initially documented the public health threat posed by outdoor air pollution and then showed persistence of this threat, even as ambient pollutant concentrations declined. For the major pollutants, particularly ambient particles and ozone, the foundation of evidence is substantial and clear in indicating the levels at which adverse effects occur. Research in high-income countries is consequently shifting towards difficult research questions that would support source-oriented and multi-pollutant strategies. In many middle- and low-income countries, outdoor air pollution concentrations are in a range that is known to be unhealthy; while local research might add to the rationale for stricter control, a lack of epidemiological evidence is not constraining implementation of control measures. This symposium reflects on the future of epidemiological research on air pollution, after decades of progress.

Presentations:

1. Epidemiology and air quality standards

Speaker: Bert Brunekreef, PhD. Professor of Environmental Epidemiology, Institute for Risk Assessment Sciences, Utrecht University, The Netherlands

2. Global air pollution and health: what to do with non-linear exposure response relationships?

Speaker: Kirk R. Smith, University of California, Berkeley, USA and Jonathan Samet*, University of Southern California, USA

3. Biologically driven approaches to the study of air-pollution: the example of lung cancer

Speaker: Paolo Vineis* and Christiana Demetriou, MRC-HPA Centre for Environment and Health, Imperial College, London UK

4. Satellite-based PM_{2.5} exposure assessment and its implications for epidemiological studies

Speaker: Hyung Joo Lee and Petros Koutrakis*, School of Public Health, Harvard University, Boston MA, USA

5. An approach to multi-pollutant accountability research using principal stratification

Speaker: Corwin Zigler and Francesca Dominici*, Harvard School of Public Health, USA

6. Maintaining the relevance of epidemiology: addressing the full scale from exposure to policy within an interactive environment

Speaker: Klea Katsouyanni*, Evi Samoli, Antonis Analitis, University of Athens Medical School, Greece