

April, 2013

HEI FORMS EXPERT PANEL TO REVIEW DIESEL EPIDEMIOLOGY STUDIES

The Health Effects Institute (HEI)¹ is pleased to announce the leadership and members of the HEI Diesel Epidemiology Panel, an expert panel formed by the HEI Board of Directors to evaluate the strengths and limitations of current epidemiologic evidence to estimate the cancer risks associated with exposures to diesel exhaust. This multi-disciplinary panel was formed in response to requests from HEI's sponsors in government and industry, and their selection resulted from over 80 nominations received from HEI sponsors and the scientific community. The Panel will now set to work to review the latest epidemiologic evidence over the next 15-18 months.

HEI first explored these issues in a special report published in 1999, titled "Diesel Emissions and Lung Cancer: Epidemiology and Quantitative Risk Assessment." That report concluded that the evidence then available did not support quantitative risk assessment. However, since that time, several new studies examining the association between diesel emission exposure and lung cancer have been published. These include cohort studies of miners who worked in non-metal mines in the US (the NCI/NIOSH Study) and of US trucking industry employees. These studies have made stronger efforts to estimate exposures more precisely than had been possible in the past. They also contributed to the June 2012 diesel exhaust hazard assessment by the International Agency for Cancer Research (IARC) and have raised the question for environmental and other agencies of whether they should consider quantitative risk assessment for diesel exhaust. The new HEI Diesel Epidemiology Project is an effort to revisit and update HEI's 1999 assessment based on these new studies.

The Panel was appointed by the HEI Board of Directors following careful review of the wide range of nominations received. It brings distinguished expertise in biostatistics, epidemiology, diesel engines/emissions, exposure assessment, occupational medicine, and risk assessment.

The HEI Diesel Epidemiology Panel

Chair - Daniel Krewski, PhD, University of Ottawa, Canada

Dr. Daniel Krewski brings a number of key attributes that will be critical to the success of the panel – high level committee leadership experience, scientific expertise, and understanding of risk assessment issues. Dr. Krewski is currently a professor and director of the R. Samuel McLaughlin Centre for Population Health Risk Assessment at the University of Ottawa. Prior to joining the University of Ottawa, Dr. Krewski was director of risk management in the Health Protection Branch of Health Canada, and chief of the Environmental Health Directorate's Biostatistics Division. He is a lifetime national associate of the U.S. National Academy of Sciences and chair of two National Academy committees; chair of a Royal Society of Canada

¹ The Health Effects Institute is an independent, non-profit research institute funded jointly by the US Environmental Protection Agency and industry, as well as foundations and others to provide credible, high quality science on air pollution and health for air quality decisions.

expert panel; a member of the Scientific Council of the International Agency for Research on Cancer; and a fellow of the Society for Risk Analysis and the American Statistical Association. He has a Ph.D. in statistics from Carleton University and an M.H.A. from the University of Ottawa.

Members

- **Paul Demers, PhD**, Director Occupational Cancer Research Centre, Cancer Care Ontario. *Cancer and other health effects of workplace exposures.*
- **David Foster, PhD**, Professor Emeritus, Department of Mechanical Engineering, University of Wisconsin Madison. *Engine combustion and emissions.*
- **Joel Kaufman, MD, MPH**, Professor, Environmental and Occupational Health Sciences; Director of the Occupational and Environmental Medicine Program, School of Public Health, University of Washington. *Physician and epidemiologist; environmental exposures and respiratory and cardiovascular disease.*
- **Jonathan Levy, ScD**, Professor and Associate Chair, Department of Environmental Health, Boston University School of Public Health. *Air pollution exposure and risk assessment, and issues of heterogeneity and equity.*
- **Charles Poole, ScD, MPH**, Associate Professor, Department of Epidemiology, University of North Carolina School of Public Health. *Epidemiologic and statistical methods and concepts, systematic review and meta-analysis.*
- **Nancy Reid, PhD**, University Professor of Statistics, Canada Research Chair in Statistical Theory and Applications, University of Toronto. *Statistical theory, likelihood inference, and design of studies.*
- **Martie van Tongeren, PhD**, Director of Centre for Human Exposure Science, Institute of Occupational Medicine, Edinburgh, Scotland, UK. *Development and application of tools to estimate current and past exposures in the work and home environments.*
- **Susan R. Woskie, Ph.D., C.I.H.**, Professor, Department Work Environment, University of Massachusetts Lowell. *Methods for sampling and analysis of personal exposures to chemicals in occupational and environmental settings, exposure modeling, statistical analysis of exposure data.*

Next Steps

After an organizational meeting this Spring, and a presentation on the Panel's work by Dr. Krewski at the HEI Annual Conference, the Panel will set to work over the next 15-18 months to:

- Set clear *a priori* criteria for assessing the suitability of the studies for quantitative risk assessment;
- Review in detail the newest published studies, as well as critiques published to date;
- Convene a public workshop to which the original investigators, scientific investigators who have reviewed the studies, and other experts are invited to discuss the strengths and limitations of the studies;
- Determine the Panel's initial conclusions on the suitability of the studies and/or the need for the Panel to access and conduct additional analyses in the data sets; and
- Prepare a report of its findings which will be subjected to independent and rigorous peer review before publication.