

# Environmental Epidemiology for Risk Assessment



## Our Mission

The committee's mission is to engage the epidemiology, exposure, and regulatory communities in discussing what risk assessors need from epidemiology studies to make informed decisions, discuss incentives and barriers to making epidemiology studies better adapted to risk assessment, develop areas of consensus between risk assessors and epidemiologists, and identify a path forward to realize the full potential of epidemiology data in risk assessment.

## Chairs

### Public Chairs

Dr. David Miller (US Environmental Protection Agency)  
Pr. Igor Burstyn (Drexel University)

### Private Chair

Dr. Heidi Erickson (Chevron)

## HESI Staff

Dr. Sandrine Deglin ([sdeglin@hesiglobal.org](mailto:sdeglin@hesiglobal.org))  
Dr. Connie Chen ([cchen@hesiglobal.org](mailto:cchen@hesiglobal.org))

## Webpage

<https://hesiglobal.org/environmental-epidemiology-for-risk-assessment/>

## 2022 Committee Highlights



### Participating Organizations

3 government/regulatory agencies,  
2 academic/research institutes, 6 industry,  
1 consulting



### Publications

1 publication



### Tools, Assays and Resources

<https://epifora.org>



### Outreach

5 webinars

- *A case for good epidemiology practice guidelines for regulatory risk assessment.* Dr. Julie Goodman (Gradient).
- *Understanding the replication crisis and its implications for environmental epidemiology.* Dr. Scott Bartell (University of California, Irvine).
- *Causal reasoning in public health: philosophy and logic.* Dr. George Maldonado (University of Michigan).
- *Evidence integration in epidemiology and risk assessment.* Dr. Paolo Boffetta (Stony Brook University).
- *Transparency and data sharing in epidemiology.* Dr. Tim Lash (Emory University) and Dr. Brian Nosek (Center for Open Science).



### Geographic Representation

United States

## Working Groups

- **Focus Group Summary.** This group developed a manuscript summarizing the outcome of two years of focus group meetings.
- **Webinar Series.** Webinar series to illustrate the critical role epidemiology can play in the field of quantitative risk assessment. Speakers provide insight on how to best realize the full potential of human studies in risk assessment and regulatory decision-making and feature ongoing efforts in this space.
- **Web Platform.** Development of a web platform (<https://epifora.org>) to create a community of practice and foster collaboration among epidemiologists, risk assessors, exposure scientists, toxicologists, and other experts as well as students. The web platform will provide access to a searchable database of the members of this community of practice and facilitate interactions and potential collaborations.



**Risk Assessors Survey.** Developed a survey to explore how much risk assessors use epidemiology, and let them express in their own words what might help them rely on epidemiological data more in their work.

## Areas of Focus for 2023

- Continue the webinar series to raise awareness of this committee and its mission.
- Continue populating and advertising the Epifora web platform and expert database.
- Organization of an expert panel on PFAS to explore the role of human data in complex risk assessments.
- Increase presence and outreach at conferences.
- Analysis and potential publication of the risk assessors survey results.

## Strategic Impact Areas

### Enhanced efficiency and accuracy in safety assessment practice

The inclusion of human data in quantitative risk assessment will result in more relevant public health policies.



## Publications

### Published

Déglin et al. 2022. Considerations towards the better integration of epidemiology into quantitative risk assessment. *Global Epidemiology*. <https://doi.org/10.1016/j.gloepi.2022.100084>



## Participating Organizations

### Government/Regulatory Agencies

Oregon State Health Authority  
 US Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry  
 US Environmental Protection Agency (EPA)

### Academic/Research Institutes

Drexel University  
 University of Alabama Birmingham

### Industry

Chevron  
 Corteva Agriscience  
 ExxonMobil  
 Shell Chemicals, Ltd.  
 Syngenta  
 Bayer

### Consulting

Exponent, Inc.