June 10, 2021 CATS symposium:

Data Collection and Integration to Enhance Public Health: Making Sense of a Patchwork of Data

As policymakers and community leaders have worked to respond to the COVID-19 pandemic, it has become increasingly clear that statistics and data science can play a critical role in protecting public health and determining the best path forward. Moving from theory to practice presents challenges for working with a patchwork of data from many different sources across public and private sectors.

Join the National Academies for a symposium on **June 10, 2021 from 1:00-5:30pm ET** to explore the latest statistics and data science methods and how they can be applied to real-world situations. Speakers will discuss how their work in modeling, inference, predictive analysis, and machine learning has been applied to track the spread of COVID-19, drug use, air pollution, and human trafficking. Panelists will explore the strengths and weaknesses of available surveillance data and how to integrate and draw insight from multiple imperfect data sources.

Session 1: Data Collection, Surveillance, and Modeling
1:00 - 3:00 PM Eastern

Moderator: Amy Herring (Duke University)
Panelists:

Data fusion of observations and computer model output for air pollution exposure assessment
Veronica Berrocal (University of California Irvine)

Effects of the Pandemic on Surveillance Surveys
Stephanie Eckman (RTI International)

The past, present, and future of infectious disease forecasting
Nick Reich (University of Massachusetts Amherst)

Delphi's COVIDcast Project: Lessons from Building a Digital Ecosystem for Tracking and Forecasting the Pandemic
Ryan Tibshirani (Carnegie Mellon University)

Session 2: Data Integration
3:30 - 5:30 PM Eastern

Moderator: Elizabeth Stuart (Johns Hopkins University)
Panelists:

What's in a model? Integrating mechanistic and statistical models in HIV epidemiology

Joe Hogan (Brown University)

The prevalence of modern slavery and human trafficking: three approaches which may or may not work, what they tell us, and how they have made a difference

Bernard Silverman (University of Nottingham)

Fusion learning in finance and health research: A statistical learning method for making targeted inference using integrated data information

Minge Xie (Rutgers University)

Handling Selection Bias and Outcome Misclassification in Electronic Health Records: Reports from the Michigan Genomics Initiative

Bhramar Mukherjee (University of Michigan)