DS DE

Public Health Data Science and Data Equity

YALE SCHOOL OF PUBLIC HEALTH

CAUSAL CONTROVERSIES · FALL 2026

When are Causal Inference Methods Needed to Answer Causal Questions?



Donna Spiegelman, ScD

Susan Dwight Bliss Professor of Biostatistics

Yale School of Public Health

About the Event

When do specialized causal inference methods add value beyond standard approaches? Drawing from her unique perspective as both an epidemiologist and a biostatistician, Donna Spiegelman will consider the circumstances under which commonly invoked causal assumptions are necessary for causal inferences to be validly made from data, arguing that often they are not. She will show that valid learning can occur 1) under conditions much less restrictive than required by current widely used methods, 2) when real-world implementation of interventions varies, and 3) when interventions spill over to others not directly exposed, thereby obviating components of the SUTVA assumption.

She will present evidence for her argument that measurement error is the major source of bias in observational research, not confounding, whose bias is rather tightly bounded. Finally, she will discuss the eternal challenge in science: after exhaustive efforts to collect data to predict important outcomes, a substantial proportion of the variation in occurrences of these outcomes appears to be entirely random.

A discussion will follow, featuring formal remarks by Lee Kennedy-Shaffer and contributions from Bhramar Mukherjee and others to examine and debate the ideas raised in the lecture. Refreshments will be provided after the lecture, in addition to food for thought.

DATE & TIME

Monday, October 12

2026 · 3:30–5:30 p.m. Eastern

Panel discussion to follow

LOCATION

Winslow Auditorium, 60 College Street

Join the conversation.

Registration required.

Scan for event details.

www.ysph-dsde.org