

*Tuesday, February 24, 1:30PM-3:00PM
Concurrent Breakout Session C*

Fecundity, ART and Birth Defects? Can Directed Acrylic Graphs Help With Causal Thinking?

Moderator: Charlotte Druschel, New York Department of Health, Troy, NY

Germaine Buck Louis, National Institute of Child Health & Human Development, Rockville, MD

Couples with fecundity related impairments often seek medical treatment to help them achieve pregnancy including the use of assisted reproductive technologies. Infants conceived with such technologies are reported to be at higher risk for a spectrum of perinatal and pediatric health concerns including birth defects.

Understanding the causal pathway between fecundity and birth defects may help us understand the relation between ART and birth defects while shedding new light on the relation between fecundity and adverse perinatal outcomes. For example, are women who require longer than six months to conceive really more likely to have an infant with a birth defect in comparison to women conceiving quickly? If so, are there paternally mediated effects on fecundity and, thereby, birth defects?

This talk will present a causal paradigm using directed acyclic graphs (DAGs) for developing testable research questions aimed at understanding the relation between ART and birth defects and, more globally, fecundity and birth defects. With an increasing proportion of infants born following fertility treatments, this avenue of research is timely and relevant for understanding periconceptional influences on human development.