

ISABEL FULCHER

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EDUCATION

Harvard University
Doctor of Philosophy, Biostatistics

Cambridge, MA
Expected: May 2019

Harvard University
Masters of Arts, Biostatistics

Cambridge, MA
May 2016

McGill University
Bachelor of Arts and Science, Mathematics and Anthropology

Montreal, QC
May 2012

RESEARCH EXPERIENCE

Department of Biostatistics, Harvard T.H. Chan School of Public Health
Graduate Researcher

Boston, MA
January 2016 – Present

Dissertation Advisor: **Eric Tchetgen Tchetgen, PhD**

My dissertation research aims to develop statistical methods to enable scientists to infer causation about an intervention of interest in the presence of (1) unmeasured confounding of the relationship of interest and (2) spillover effects of the intervention given to one person on another person's outcomes.

Graduate Researcher

June 2016 – March 2017

Supervised by: Paige Williams, PhD

Estimated the direct and indirect effects of perinatal HIV infection on timing of sexual maturity mediated by height in the Pediatric HIV/AIDS Cohort Study.

Department of Global Health and Social Medicine, Harvard Medical School
Graduate Researcher

Boston, MA
June 2016 – March 2017

Supervised by: **Bethany Hedt-Gauthier, PhD**

Assessed the effectiveness of D-tree International's Mobilizing Maternal Health program in rural Tanzania.

CONSULTING EXPERIENCE

Research Center, Planned Parenthood League of Massachusetts
Statistical Consultant

Boston, MA
August 2017 – Present

Leading statistical analyses to evaluate the impact of the Massachusetts parental consent law on contraceptive choice among minors.

Safer Deliveries Program, D-tree International
Researcher

Zanzibar, Tanzania
May 2017 – August 2017

Conducted research and evaluation question development, analysis planning, and application of statistical methods to assess the program's effectiveness at reducing high rates of maternal and neonatal mortality in Zanzibar.

INDUSTRY EXPERIENCE

ZS Associates

Evanston, IL

Business Associate

September 2012 – July 2014

Engaged with global pharmaceutical and biotech companies on a variety of market research projects for drugs and their indications. Created and fielded online surveys and in-person interviews. Led statistical analysis, project planning, and deliverable creation.

TEACHING EXPERIENCE

Global Initiative for Neuropsychiatric Genetics Education in Research

Boston, MA

Teaching Fellow

Spring 2018

Harvard T.H. Chan School of Public Health

Boston, MA

Head Teaching Assistant, ID 201: Core Principles of Biostatistics and Epidemiology

Fall 2016, 2017

Session Instructor, Stata Orientation for Incoming Graduate Students

Summer 2016, 2017

Teaching Assistant, HPM 543: Quantitative Methods in Program Evaluation

Spring 2017

Teaching Assistant, BIO 507: Methods for Monitoring and Evaluation

Spring 2016

Teaching Assistant, ID 201: Core Principles of Biostatistics and Epidemiology

Fall 2015

University of Global Health Equity

Kigali, Rwanda

Teaching Assistant, Program Monitoring, Evaluation, and Research Methods

Spring 2017, 2018

D-tree International

Zanzibar, Tanzania

Course Organizer and Lead Instructor, Data Analysis and Stata Software Training Course

Summer 2017

McGill University

Montreal, QC

Teaching Assistant, MATH 323: Probability

Fall 2010, 2011

Teaching Assistant, MATH 324: Statistics

Spring 2012

HONORS & AWARDS

Harvard University Distinction in Teaching (outstanding teaching assistant during 2016-2017 school year)

2017

Harvard T.H. Chan School of Public Health Rose Traveling Fellowship

2017

Maternal Health Task Force at the Women and Health Initiative Travel Award

2017

Statistics in Epidemiology Young Investigator Award (1 of 4 graduate students to win best paper in Epidemiology)

2017

McGill University Dean's Honour List (awarded to top 10% of graduating class)

2012

McGill University Golden Key Society (awarded to top 15% of class)

2010, 2011, 2012

SELECTED INVOLVEMENT

Department of Biostatistics Chair of the Student Committee

2017, 2018

Harvard T.H. Chan School of Public Health Student Tutor

2017

Department of Biostatistics HIV Working Group Coordinator

2016, 2017

Boston Cares X-Cel Adult Education Math HiSeT Tutor

2014 – 2017

Appalachia Service Project, Adult Group Leader

2012, 2013

PUBLICATIONS

Tchetgen Tchetgen, Eric J., **Fulcher, I.**, and Shpitser, I. (2017). Auto-G-Computation of Causal Effects on a Network. *Journal of the American Statistical Association* (Under review). arXiv:1709.01577.

Fulcher, Isabel R., Shpitser, I., & Tchetgen Tchetgen, E. J. (2017). The Generalized Front-door Criterion for Estimation of Indirect Causal Effects of a Confounded Treatment. *Journal of the American Statistical Association* (Under review). arXiv:1711.03611.

Fulcher, Isabel R., Tchetgen Tchetgen, E. J., & Williams, P. L. (2017). Mediation Analysis for Censored Survival Data Under an Accelerated Failure Time Model. *Epidemiology*, 28(5), 660-666.

PRESENTATIONS

Fulcher, Isabel R., Data for decision-making in digital health programs: how analysis of routine data from the Safer Deliveries program in Zanzibar improved program implementation and mothers' outcomes. Global Digital Health Forum, Washington, DC (2017).

Fulcher, Isabel R., Tchetgen Tchetgen, E., and Williams, P.L. Mediation Analysis for Censored Survival Data under an Accelerated Failure Time Model. Joint Statistical Meetings, Baltimore, MD (2017).

Fulcher, Isabel R., Tchetgen Tchetgen, E., and Shpitser, I. The Generalized Front-door Formula for Identification of Partial Causal Effects. ENAR Spring Meeting, Washington, DC (2017).

Fulcher, Isabel R., Tchetgen Tchetgen, E., and Williams, P.L. Mediation Analysis for Censored Survival Data under an Accelerated Failure Time Model. ENAR Spring Meeting, Austin, TX (2016).

SOFTWARE

frontdoorpie R package for estimation and inference of the Population Intervention Indirect Effect