

CONTACT INFORMATION	Harvard T.H. Chan School of Public Health Department of Epidemiology Program in Population Health Sciences 677 Huntington Ave Boston, MA 02115	louisa_h_smith@g.harvard.edu www.louisahsmith.com Google Scholar Publons (207) 653 - 4318 (cell)
EDUCATION	Harvard T.H. Chan School of Public Health , Boston, MA	
	PhD, Population Health Sciences	2021
	Field of Study: Epidemiology Concentration: Epidemiologic Methods Thesis Committee: Miguel Hernán, Tyler VanderWeele, Sonia Hernández-Díaz	
	MS, Biostatistics	2021
	University of California, Berkeley , Berkeley, CA	
	MS, Epidemiology	2016
	Brown University , Providence, RI	
	BA, Comparative Literature and Community Health	2011
AWARDS	Harvard Epidemiology Teaching Assistant Award	2020
	Winner, Harvard Epidemiology Student Podcast Competition	2020
	Bok Center Certificate of Distinction in Teaching (×3)	2017, 2018, 2019
	Runner-up, Harvard T.H. Chan School Poster Day	2019
	Ralph & June Catalano Award Scholarship	2015
	Reshetko Scholarship	2014
	U.C. Berkeley Graduate Division Block Grant	2014
	Phi Beta Kappa	2011
	Magna cum laude; Brown University departmental honors	2011
	C.V. Starr Fellowship for Public Service	2008
PUBLICATIONS	<p>[1] Smith LH, Mathur MB, VanderWeele TJ. Multiple-bias sensitivity analysis using bounds. <i>Epidemiology</i>. 2021;32(5). <i>Pre-print available</i>.</p> <p>[2] Smith LH, Schwartz GL. Mediating to opportunity: The challenges of translating mediation estimands into policy recommendations (commentary). <i>Epidemiology</i>. 2021;32(3). doi:10.1097/ede.0000000000001335.</p> <p>[3] Smith LH. Selection mechanisms and their consequences: Understanding and addressing selection bias. <i>Current Epidemiology Reports</i>. 2020;7(4). doi:10.1007/s40471-020-00241-6.</p> <p>[4] Farland LV, Correia KFB, Dodge LE, Modest AM, Williams PL, Smith LH, Toth TL, Hacker MR, Missmer SA. The importance of mediation in reproductive health studies. <i>Human Reproduction</i>. 2020;36(6). doi:10.1093/humrep/deaa064.</p> <p>[5] Smith LH, VanderWeele TJ. Simple sensitivity analysis for control selection bias (research letter). <i>Epidemiology</i>. 2020;31(5). doi:10.1097/ede.0000000000001207.</p>	

- [6] **Smith LH**, VanderWeele TJ. Mediation E-values: Approximate sensitivity analysis for unmeasured mediator-outcome confounding. *Epidemiology*. 2019;30(6):835–7. doi:10.1097/ede.0000000000001064.
- [7] **Smith LH**, VanderWeele TJ. Bounding bias due to selection. *Epidemiology*. 2019;30(4):509–16. doi:10.1097/ede.0000000000001032.
- [8] Deardorff J, **Smith LH**, Petito L, Kim H, Abrams BF. Maternal prepregnancy weight and children’s behavioral and emotional outcomes. *American Journal of Preventive Medicine*. 2017;53(4):432–40. doi:10.1016/j.amepre.2017.05.013.
- [9] Cohen AK, Richards T, Allen BL, Ferrier Y, Lees J, **Smith LH**. Health issues in the industrial port zone of Marseille, France: the Fos EPSEAL community-based cross-sectional survey. *Journal of Public Health*. 2017;26(2):235–43. doi:10.1007/s10389-017-0857-5.

IN PROGRESS /
SUBMITTED

Smith LH, Dollinger C, VanderWeele TJ, Wyszynski DF, Hernández-Díaz S. Timing and severity of COVID-19 during pregnancy and the risk of preterm birth in the International Registry of Coronavirus Exposure in Pregnancy.

Smith LH, García-Albéniz X, Chan JM, Hernán MA. Emulation of a target trial with sustained treatment strategies: An application to prostate cancer using both inverse probability weighting and the g-formula.

Mathur MB, **Smith LH**, Yoshida K, Ding P, VanderWeele TJ. E-values for effect modification and conservative approximations for causal interaction. *Pre-print available*.

Hernández-Díaz S, **Smith LH**, Dollinger C, Schisterman E, Bellocco R, Wyszynski DF. International Registry of Coronavirus Exposure in Pregnancy (IRCEP) – Cohort description and methodological considerations.

Modest AM, **Smith LH**, Toth TL, Collier AY, Hacker MR. Multifetal gestations mediate the effect of in vitro fertilization (IVF) on ischemic placental disease in autologous oocyte IVF more than donor oocyte IVF. *Abstract available*.

Ramjee D, **Smith LH**, Doanvo A, McNulty A, Charpignon ML, Desai AN, Majumder MS. Understanding criminal justice reform during COVID-19: The need for a novel sentiment analysis package. *Pre-print available*.

CONFERENCE/
SEMINAR
PRESENTATIONS
& WORKSHOPS

Multiple-bias sensitivity analysis using bounds. Joint Statistical Meetings (JSM). August 2021 (planned). *Invited Paper*.

COVID-19 and preterm birth: Understanding the relationship. Society for Pediatric and Perinatal Epidemiologic Research (SPER). June 2021 (planned). *Speed Talk Session*.

Challenges in estimating effects of COVID-19 on preterm birth. Society for Epidemiologic Research (SER). June 2021 (planned). *Oral Abstract Session*.

E-values, unmeasured confounding, measurement error, and selection bias. Society for Epidemiologic Research (SER). June 18, 2019; December 11, 2020; May 21, 2021 (planned). *Online Pre-Conference Workshop, with Tyler VanderWeele / Maya Mathur*.

Simple sensitivity analysis for selection bias using bounds. 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics). December 19, 2020. *Invited Talk for an Organized Session.*

Discussion of "Selection Bias in 2020". Online Causal Inference Seminar. December 8, 2020. *Invited Discussant.*

Simple sensitivity analysis for selection bias. Society for Epidemiologic Research (SER). Minneapolis, MN, June 20, 2019. *Concurrent Contributed Session Oral Presentation.*

TALKS & GUEST LECTURES	<p>SBS 245: Social and Behavioral Research Methods, Harvard T.H. Chan School of Public Health. December 4, 2020.</p> <p>“The Magic of R.” Master of Food and Resource Economics Program, University of British Columbia. August 20, 2020.</p> <p>“Data Manipulation in R”; “Data Gets Personal.” Maine Medical Center R User Group. July 14, 2020.</p> <p>MPH 677: Regression Models in the Health Sciences, University of Southern Maine. April 14, 2020.</p> <p>“Data Gets Personal.” RLadies Boston, January 29, 2020.</p> <p>“Simple Sensitivity Analysis for Selection Bias.” Koenen trauma epidemiology research group, Harvard T.H. Chan School of Public Health. December 4, 2019.</p> <p>“Simple Sensitivity Analysis for Selection Bias.” Department of Medical Epidemiology and Biostatistics student seminar, Karolinska Institute. November 12, 2019.</p> <p>“Simple Sensitivity Analysis for Selection Bias.” Monthly methods call, Vaccine Safety Datalink. September 12, 2019.</p> <p>PHTH 5202: Epidemiology, Northeastern University. September 26 & October 10, 2017.</p>
POSTERS	<p>[1] Smith LH, Zaidi J. Identifying direct effects of in vitro fertilization on placental disease. Harvard T.H. Chan School of Public Health Poster Day. Boston, MA, April 25, 2019. <i>Runner-up: Best graduate student poster.</i></p> <p>[2] Smith LH, Deardorff J, Petito L, Kim H, & Abrams BF. Maternal prepregnancy weight and children’s behavioral and emotional outcomes. Society For Research in Child Development (SCRD). Austin, TX, April 8, 2017.</p> <p>[3] Smith LH, Petito L, Cohen A, Deardorff J, & Abrams B. Gestational weight gain and math and reading achievement among U.S. children. Society for Pediatric and Perinatal Epidemiologic Research (SPER). Miami, FL, June 20, 2016.</p>
SOFTWARE & ONLINE TOOLS	<p>[1] Smith LH. Simple sensitivity analysis for selection bias. <i>Online tool available at http://selection-bias.louisahsmith.com.</i></p> <p>[2] Mathur MB, Smith LH, Ding P, VanderWeele TJ. EValue: Sensitivity Analyses for Unmeasured Confounding or Selection Bias in Observational Studies and Meta-Analyses. <i>R Package.</i></p>

- [3] **Smith LH.** PHS Summer Prep. *Online introduction to R, probability, and statistics for incoming PhD students available at bit.ly/phs-prep.*

TEACHING
EXPERIENCE

Harvard T. H. Chan School of Public Health, Boston, MA

EPI 207: Advanced Epidemiologic Methods (head teaching fellow) Fall 2018–2020

- Required course for epidemiology PhD students
- Causal inference for time-varying exposures: g-formula, inverse-probability weighting, marginal structural models, static and dynamic treatment regimes

BST 256: Theory and Methods for Causality I (teaching fellow) Fall 2020

- Advanced course in causal inference for biostatistics and epidemiology PhD students
- Graphical models and algorithms for causal identification

Introduction to R (instructor) Fall 2019, Summer 2020

- Quarter-long course to help epidemiology graduate students develop data management and analysis skills in R
- Developed course materials to scaffold new R concepts (intro-to-R-2020.louisahsmith.com)
- Graphics, manipulating data, writing functions

Introduction to Epidemiology (co-instructor) Summer 2019–2020

- Short course for undergraduate students in the Summer Program in Biostatistics & Computational Biology
- Epidemiologic thinking and causal inference, study design, biases

PHS 2000: Quantitative Research Methods (teaching fellow) Fall 2017, 2019; Spring 2018

- Year-long required course for first-year PhD students
- Created supplementary materials for summer preparation (bit.ly/phs-prep) and learning R programming (bit.ly/R-OH)
- Regression models, sampling, longitudinal and multilevel analysis, time-varying confounding, mediation and interaction, econometric methods, missing data

University of California, Berkeley, Berkeley, CA

Graduate Student Instructor

PH 150A: Introduction to Epidemiology and Human Disease Spring 2016

- Advanced undergraduate course
- Basic epidemiologic methods, overview of epidemiology of diseases/conditions of public health importance

PH 250A: Epidemiologic Methods Fall 2015

- Introductory graduate-level course
- Study design, sampling, data collection, analysis, inference

OTHER Ad-hoc reviewer: *American Journal of Epidemiology* (×4), *Biometrika*, *Epidemiologic Reviews*, *Epidemiology* (×5), *International Journal of Epidemiology* (×2), *Paediatric and Perinatal Epidemiology* (×2)
 Member, Society for Epidemiologic Research (SER)
 Member, SER Education Committee
 Member, Society for Perinatal Epidemiologic Research (SPER)
 Tutor, Harvard Bureau of Study Counsel Peer Tutoring & Department of Epidemiology
 Co-chair, Harvard T.H. Chan Student Epidemiologic Methods Forum
 Co-chair, John Graunt Society (Harvard epidemiology doctoral student group)

OTHER **Little Wound School**, Kyle, SD
 PROFESSIONAL Elementary school teacher 2011 – 2014
 EXPERIENCE

- 3rd grade teacher of 10-20 students
- Taught reading, writing, math, science, social studies
- Lesson planning, curriculum mapping, analysis of student progress