

CONTACT INFORMATION	l.smith@northeastern.edu www.louisahsmith.com ORCID 0000-0001-9029-4644 Google Scholar +1 (617) 373-7008	316A Robinson Hall Department of Health Sciences Bouvé College of Health Sciences, Northeastern University 360 Huntington Avenue Boston, MA 02115
ACADEMIC POSITIONS	<p>Bouvé College of Health Sciences, Northeastern University, Boston, MA <i>Department of Health Sciences</i> Assistant Professor August 2022 – present</p> <p>Roux Institute of Northeastern University, Portland, ME <i>Observational Health Data Sciences and Informatics Center</i> Affiliate Faculty August 2022 – present Postdoctoral Fellow October 2021 – August 2022</p> <p>École Polytechnique Fédérale de Lausanne, Switzerland <i>Department of Mathematics, Biostatistics Group</i> Visiting Scholar, hosted by Mats Stensrud August – September 2021</p>	
EDUCATION	<p>Harvard T.H. Chan School of Public Health, Boston, MA</p> <p>PhD, Population Health Sciences 2021 <i>Concentration:</i> Epidemiologic methods <i>Thesis:</i> Bias bounds and target trials for causal inference in observational epidemiology <i>Committee:</i> Miguel Hernán, Tyler VanderWeele, Sonia Hernández-Díaz</p> <p>MS, Biostatistics 2021</p> <p>University of California, Berkeley, Berkeley, CA</p> <p>MS, Epidemiology 2016</p> <p>Brown University, Providence, RI</p> <p>BA, Comparative Literature and Community Health 2011</p>	
PUBLICATIONS	<p>[20] Smith LH, García-Albéniz X, Chan JM, Zhao S, Cowan J, Broering JM, Cooperberg M, Carroll P, 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. <i>European Journal of Epidemiology</i>. In press.</p> <p>[19] Stensrud MJ, Smith LH. Identification of vaccine effects when exposure status is unknown. <i>Epidemiology</i>. In press. <i>Pre-print available</i>.</p> <p>[18] 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. <i>BMC Pregnancy & Childbirth</i>. In press.</p> <p>[17] Mathur MB, Smith LH, Yoshida K, Ding P, VanderWeele TJ. E-values for effect modification and conservative approximations for causal interaction. <i>International Journal of Epidemiology</i>. Online ahead of print. doi:10.1093/ije/dyac073.</p>	

- [16] Hernández-Díaz S, **Smith LH**, Wyszynski DF, Rasmussen SA. First trimester COVID-19 and the risk of major congenital malformations – International Registry of Coronavirus Exposure in Pregnancy. *Birth Defects Research*. Online ahead of print. doi:10.1002/bdr2.2070.
- [15] Ramjee D*, **Smith LH***, Doanvo A, McNulty A, Charpignon ML, Lett E, Desai AN, Majumder MS. Evaluating criminal justice reform during COVID-19: The need for a novel sentiment analysis package. *PLOS Digital Health*. 2022;1(7):e0000063. doi:10.1371/journal.pdig.0000063. ***Co-first authors.**
- [14] Westhoff W, **Smith LH**, Wyszynski DF, Hernández-Díaz S. COVID-19 pharmacotherapy utilization patterns during pregnancy: International Registry of Coronavirus Exposure in Pregnancy (IRCEP). *Pharmacoepidemiology and Drug Safety*. 2022;31(7):804–809. doi:10.1002/pds.5440.
- [13] Hernández-Díaz S, **Smith LH**, Dollinger C, Rasmussen SA, Schisterman EF, Bellocco R, Wyszynski DF. International Registry of Coronavirus Exposure in Pregnancy (IRCEP) — Cohort description and methodological considerations. *American Journal of Epidemiology*. 2022;191(6):967–979. doi:10.1093/aje/kwac046.
- [12] Modest AM, **Smith LH**, Toth T, Collier AC, 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. *Paediatric and Perinatal Epidemiology*. 2022;36(2):181–189. doi:10.1111/ppe.12857.
- [11] Cohen AK, Ryan S, **Smith LH**, Ream RK, Glymour MM, Lopez A, Yen IH. Educational attainment past the traditional age of completion for two cohorts of US adults: Inequalities by gender and race/ethnicity. *Race and Social Problems*. 2021. doi:10.1007/s12552-021-09352-1.
- [10] **Smith LH**, Mathur MB, VanderWeele TJ. Multiple-bias sensitivity analysis using bounds. *Epidemiology*. 2021;32(5):625–34. doi:10.1097/ede.0000000000001380.
- [9] Petito LC, **Smith LH**, Important questions deserve rigorous analysis: A cautionary note about selection bias (editorial). *Journal of the American Heart Association*. 2021:e023234. doi:10.1161/JAHA.121.023234.
- [8] **Smith LH**, Schwartz GL. Mediating to opportunity: The challenges of translating mediation estimands into policy recommendations (commentary). *Epidemiology*. 2021;32(3):347–50. doi:10.1097/ede.0000000000001335.
- [7] **Smith LH**. Selection mechanisms and their consequences: Understanding and addressing selection bias. *Current Epidemiology Reports*. 2020;7(4):179–89. doi:10.1007/s40471-020-00241-6.
- [6] 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. *Human Reproduction*. 2020;36(6):1262–6. doi:10.1093/humrep/deaa064.
- [5] **Smith LH**, VanderWeele TJ. Simple sensitivity analysis for control selection bias (research letter). *Epidemiology*. 2020;31(5):e44–e45. doi:10.1097/ede.0000000000001207.
- [4] **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.

- [3] **Smith LH**, VanderWeele TJ. Bounding bias due to selection. *Epidemiology*. 2019;30(4):509–16. doi:10.1097/ede.0000000000001032.
- [2] 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.
- [1] 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.

AWARDS	Harvard Biostatistics Certificate of Distinction in Teaching	2020
	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

INVITED TALKS	“Challenges in estimating effects of time-varying exposures during pregnancy.” Advanced Methods Workshop, Society for Pediatric and Perinatal Epidemiologic Research (SPER). June 16, 2022. (Chicago, IL)
	“Causal inference in epidemiology using target trial principles: Applications in pregnancy and prostate cancer.” Statistics seminar, École Polytechnique Fédérale de Lausanne. September 17, 2021. (Lausanne, Switzerland)
	“Multiple-bias sensitivity analysis using bounds.” Joint Statistical Meetings (JSM). August 9, 2021. (Virtual)
	“Simple sensitivity analysis for selection bias using bounds.” 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics). December 19, 2020. (Virtual)
	“Discussion of ‘Selection bias in 2020’.” Online Causal Inference Seminar. December 8, 2020. (Virtual)
	“The magic of R.” Master of Food and Resource Economics Program, University of British Columbia. August 20, 2020. (Virtual)
	“Data gets personal.” Maine Medical Center R User Group. July 16, 2020. (Virtual)
	“Data manipulation in R.” Maine Medical Center R User Group. July 14, 2020. (Virtual)
	“Data gets personal.” RLadies Boston, January 29, 2020. (Boston, MA)
	“Simple sensitivity analysis for selection bias.” Koenen trauma epidemiology research group, Harvard T.H. Chan School of Public Health. December 4, 2019. (Boston, MA)

“Simple sensitivity analysis for selection bias.” Department of Medical Epidemiology and Biostatistics student seminar, Karolinska Institute. November 12, 2019. (Stockholm, Sweden)

“Simple sensitivity analysis for selection bias.” Monthly methods call, Vaccine Safety Datalink. September 12, 2019. (Virtual)

- CONTRIBUTED PRESENTATIONS & WORKSHOPS
- Reproducible epidemiology in R. Society for Epidemiologic Research (SER). Planned for June 12, 2023 (Portland, OR). *Pre-Conference Workshop*.
 - “COVID-19 and preterm birth: Understanding the relationship.” Society for Pediatric and Perinatal Epidemiologic Research (SPER). June 16, 2021 (Virtual). *Speed Talk Session*.
 - “Challenges in estimating effects of COVID-19 on preterm birth.” Society for Epidemiologic Research (SER). June 23, 2021 (Virtual). *Oral Abstract Session*.
 - “E-values, unmeasured confounding, measurement error, and selection bias.” Society for Epidemiologic Research (SER). June 18, 2019 (Minneapolis, MN); December 11, 2020 (Virtual); May 21, 2021 (Virtual). *Pre-Conference Workshop, with Tyler VanderWeele / Maya Mathur*.
 - “Simple sensitivity analysis for selection bias. Society for Epidemiologic Research (SER).” June 20, 2019 (Minneapolis, MN). *Concurrent Contributed Session Oral Presentation*.

- POSTERS (FIRST AUTHOR)
- [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. *Runner-up: Best graduate student poster*.
 - [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.
 - [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.

- SOFTWARE & ONLINE TOOLS
- [1] **Smith LH**. Simple sensitivity analysis for selection bias. *Online tool available at <http://selection-bias.louisahsmith.com>*.
 - [2] Mathur MB, **Smith LH**, Ding P, VanderWeele TJ. EValue: Sensitivity analyses for unmeasured confounding or selection bias in observational studies and meta-analyses. *R Package on CRAN*.
 - [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

2018 – 2020

Head teaching fellow

Instructor: James Robins

BST 256: Theory and Methods for Causality I	2020
Teaching fellow	
<i>Instructor:</i> Andrea Rotnitzky	
Introduction to R	2019 – 2020
Instructor and course developer	
Introduction to Epidemiology	2019 – 2020
Co-instructor	
<i>Co-instructor:</i> David Cote	
PHS 2000: Quantitative Research Methods	2017 – 2019
Teaching fellow	
<i>Instructors:</i> Tyler VanderWeele, Jarvis Chen, Michael Hughes, Jessica Cohen	

University of California, Berkeley, Berkeley, CA

PH 150A: Introduction to Epidemiology and Human Disease	2016
Graduate student instructor	
<i>Instructors:</i> Lisa Barcellos and Mahasin Mujahid	
PH 250A: Epidemiologic Methods	2015
Graduate student instructor	
<i>Instructor:</i> Sandra McCoy	

Guest lectures

SBS 245: Social and Behavioral Research Methods, Harvard T.H. Chan School of Public Health.

MPH 677: Regression Models in the Health Sciences, University of Southern Maine.

PHTH 5202: Epidemiology, Northeastern University.

OTHER	Ad-hoc reviewer: <i>American Journal of Epidemiology</i> , <i>Biometrika</i> , <i>Epidemiologic Methods</i> , <i>Epidemiologic Reviews</i> , <i>Epidemiology</i> , <i>International Journal of Epidemiology</i> , <i>JAMA Psychiatry</i> , <i>Journal of Causal Inference</i> , <i>Journal of Epidemiology</i> , <i>Paediatric and Perinatal Epidemiology</i> , <i>Scientific Reports</i> , <i>Sociological Methods and Research</i>
	Member, Society for Epidemiologic Research (SER), SER Education Committee
	Member, Society for Pediatric and Perinatal Epidemiologic Research (SPER)

OTHER	Little Wound School, Kyle, SD	
PROFESSIONAL	Elementary school teacher	2011 – 2014
EXPERIENCE	<ul style="list-style-type: none"> • 3rd grade teacher of 10-20 students • Taught reading, writing, math, science, social studies • Lesson planning, curriculum mapping, analysis of student progress 	