

CONTACT INFORMATION	<p><a href="mailto:l.smith@northeastern.edu">l.smith@northeastern.edu</a>  <a href="http://www.louisahsmith.com">www.louisahsmith.com</a>  <a href="https://orcid.org/0000-0001-9029-4644">ORCID 0000-0001-9029-4644</a>  <a href="#">Google Scholar</a>  +1 (617) 373-7008</p>	<p>316A Robinson Hall  Department of Health Sciences  Bouvé College of Health Sciences, Northeastern University  360 Huntington Avenue  Boston, MA 02115</p>
EMPLOYMENT	<p><b>Bouvé College of Health Sciences, Northeastern University</b>, Boston, MA  <i>Department of Health Sciences</i>  Assistant Professor August 2022 – present</p> <p><b>Roux Institute of Northeastern University</b>, Portland, ME  <i>Observational Health Data Sciences and Informatics Center</i>  Affiliate Faculty August 2022 – present  Postdoctoral Fellow October 2021 – August 2022</p> <p><b>École Polytechnique Fédérale de Lausanne</b>, Switzerland  <i>Department of Mathematics, Biostatistics Group</i>  Visiting Scholar August – September 2021</p>	
AFFILIATIONS	<p><b>MaineHealth Institute for Research</b>, Portland, ME  <i>Center for Interdisciplinary &amp; Population Health Research</i>  Visiting Scientist</p> <p><b>Harvard TH Chan School of Public Health</b>, Boston, MA  <i>Department of Epidemiology</i>  Adjunct Assistant Professor</p> <p><b>Emory University Rollins School of Public Health</b>, Atlanta, GA  <i>Department of Epidemiology</i>  Adjunct Assistant Professor</p>	
EDUCATION	<p><b>Harvard T.H. Chan School of Public Health</b>, Boston, MA  PhD, Population Health Sciences (Epidemiology) 2021  SM, Biostatistics 2021</p> <p><b>University of California, Berkeley</b>, Berkeley, CA  MS, Epidemiology 2016</p> <p><b>Brown University</b>, Providence, RI  AB, Comparative Literature and Community Health 2011</p>	
PRE-PRINTS	<p>[1] <b>Smith LH</b>, Cavanaugh R. <a href="#">Allofus: An R package to facilitate use of the All of Us Researcher Workbench</a>. 2024.</p> <p>[2] <b>Smith LH</b>, Wang W, Keefe-Oates B. <a href="#">Pregnancy episodes in All of Us: Harnessing multi-source data for pregnancy-related research</a>. 2024.</p> <p>[3] Sun S, Lomachinsky V, <b>Smith LH</b>, Newhouse JP, Westover MB, Blacker D, Schwamm L, Haneuse S, Moura LMVR. <a href="#">Benzodiazepine initiation and the risk of falls or fall-related injuries in older adults following acute ischemic stroke</a>. 2024.</p>	

- [4] \*Williams MP, Manjourides J, **Smith L**, Rainer CB, Hightow-Weidman LB, Haley DF. Digital intervention engagement mediates the relationship between intrapersonal measures and pre-exposure prophylaxis adherence: A secondary analysis of a randomized controlled trial of sexual orientation and gender minority youth on pre-exposure prophylaxis. 2024.

## PUBLICATIONS

- [1] \*Wu TT, Steiger G, **Smith L**, Devlin JW, Slooter AJC. Research letter: Clonidine is associated with faster first resolution of incident ICU delirium than antipsychotics. *Journal of Critical Care*. 2024; 79:154433. doi:10.1016/j.jcrc.2023.154433.
- [2] Bu F, Schuemie MJ, Nishimura A, **Smith LH**, Kostka K, Falconer T, McLeggon J-A, Ryan PB, Hripcsak G, Suchard MA. Bayesian safety surveillance with adaptive bias correction. *Statistics in Medicine*. 2023; 43(2):395–418. doi:10.1002/sim.9968.
- [3] Peterson J, Kahrs JC, Adrien N, Wood ME, Olshan AF, **Smith LH**, Howley MM, Ailes EC, Romitti PA, Herring AH, Parker SE, Shaw GM, Politis MD, The National Birth Defects Prevention Study. Deterministic bias analyses to investigate potential impacts of differential participation on certain associations in a United States population-based case-control study of birth defect risk factors. *Paediatric and Perinatal Epidemiology*. 2023; online ahead of print. doi:10.1111/ppe.13026.
- [4] \*Wu TT, **Smith LH**, Vernooij LM, Patel E, Devlin JW. Data missingness reporting and use of methods to address it in critical care cohort studies. *Critical Care Explorations*. 2023; 5(11):e1005. doi:10.1097/CCE.0000000000001005.
- [5] \*Wong CN, Wilczek MP, **Smith LH**, Bosse JD, Richard EL, Cavanaugh R, Manjourides J, Orkaby AR, Olivieri-Mui B. Frailty among sexual and gender minority older adults: The All of Us database. *The Journals of Gerontology: Series A*. 2023; 78(11):2111–2118. doi:10.1093/gerona/glad149.
- [6] Juhel BC, Brunelle CL, Bernstein MC, **Smith LH**, Jung AW, Ababneh HS, Hausman EK, Bucci LK, Bernstein T, Naoum GE, Taghian AG. Side effects of COVID-19 vaccinations in patients treated for breast cancer. *Clinical and Experimental Medicine*. 2023; 27:3671–3680. doi:10.1007/s10238-023-01050-z.
- [7] Stensrud MJ, **Smith L**. Identification of vaccine effects when exposure status is unknown. *Epidemiology*. 2023; 34(2):216–224. doi:10.1097/ede.0000000000001573.
- [8] Moura LMVR, Donahue MA, Yan Z, **Smith LH**, Hsu J, Newhouse JP, Schwamm LH, Haneuse S, Hernandez-Diaz S, Blacker D. Comparative effectiveness and safety of seizure prophylaxis among adults after acute ischemic stroke. *Stroke*. 2023; 54(2):527–536. doi:10.1161/strokeaha.122.039946.
- [9] Moura LMVR, Yan Z, Donahue MA, **Smith LH**, Schwamm LH, Hsu J, Newhouse JP, Haneuse S, Blacker D, Hernandez-Diaz S. No short-term mortality from benzodiazepine use post-acute ischemic stroke after accounting for bias. *Journal of Clinical Epidemiology*. 2023; 154:136–145. doi:10.1016/j.jclinepi.2022.12.013.
- [10] **Smith LH**, García-Albéniz X, Chan JM, Zhao S, Cowan JE, Broering JM, Cooperberg MR, Carroll PR, 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. *European Journal of Epidemiology*. 2022; 37(12):1205–1213. doi:10.1007/s10654-022-00929-7.

- [11] **Smith LH**, Dollinger CY, VanderWeele TJ, Wyszynski DF, Hernández-Díaz S. Timing and severity of COVID-19 during pregnancy and risk of preterm birth in the International Registry of Coronavirus Exposure in Pregnancy. *BMC Pregnancy and Childbirth*. 2022; 22(1):775. doi:10.1186/s12884-022-05101-3.
- [12] 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*. 2022; 114(5):906–914. doi:10.1002/bdr2.2070.
- [13] Ramjee D, **Smith LH**, Doanvo A, Charpignon M-L, McNulty-Nebel A, 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 author*.
- [14] Mathur MB, **Smith LH**, Yoshida K, Ding P, VanderWeele TJ. E-values for effect heterogeneity and approximations for causal interaction. *International Journal of Epidemiology*. 2022; 51(4):1268–1275. doi:10.1093/ije/dyac073.
- [15] Westhoff WJ, **Smith LH**, Wyszynski DF, Hernandez-Diaz 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.
- [16] Modest AM, **Smith LH**, Toth TL, Collier AY, Hacker MR. Multifoetal gestations mediate the effect of in vitro fertilisation (IVF) on ischaemic 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.
- [17] 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*. 2022; 14(3):208–222. doi:10.1007/s12552-021-09352-1.
- [18] Hernández-Díaz S, **Smith LH**, Dollinger C, Schisterman EF, Bellocco R, Wyszynski DF. International Registry of Coronavirus in Pregnancy (IRCEP): Cohort description and methodological considerations. *American Journal of Epidemiology*. 2022; 191(6):967–979. doi:10.1093/aje/kwac046.
- [19] Petito LC, **Smith LH**. Important questions deserve rigorous analysis: A cautionary note about selection bias. *Journal of the American Heart Association*. 2021; 11(6):e023234. doi:10.1161/jaha.121.023234.
- [20] **Smith LH**, Schwartz GL. Mediating to opportunity: The challenges of translating mediation estimands into policy recommendations. *Epidemiology*. 2021; 32(3):347–350. doi:10.1097/ede.0000000000001335.
- [21] **Smith LH**, Mathur MB, VanderWeele TJ. Multiple-bias sensitivity analysis using bounds. *Epidemiology*. 2021; 32(5):625–34. doi:10.1097/ede.0000000000001380.
- [22] Farland LV, Correia KF, 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; 35(6):1262–1266. doi:10.1093/humrep/deaa064.
- [23] **Smith LH**, VanderWeele TJ. Simple sensitivity analysis for control selection bias. *Epidemiology*. 2020; 31(5):e44–e45. doi:10.1097/ede.0000000000001207.
- [24] **Smith LH**. Selection mechanisms and their consequences: Understanding and addressing selection bias. *Current Epidemiology Reports*. 2020; 7(4):179–189. doi:10.1007/s40471-020-00241-6.

[25] **Smith LH**, VanderWeele TJ. Bounding bias due to selection. *Epidemiology*. 2019; 30(4):509–516. doi:10.1097/ede.0000000000001032.

[26] **Smith LH**, VanderWeele TJ. Mediation E-values: Approximate sensitivity analysis for unmeasured mediator-outcome confounding. *Epidemiology*. 2019; 30(6):835–837. doi:10.1097/ede.0000000000001064.

[27] 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):235–243. doi:10.1007/s10389-017-0857-5.

[28] 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.

\* indicates mentee first author

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
FUNDING	Co-Investigator on subaward (PI: Simmonds)	
	Prime sponsor HRSA (PI: Mills; MaineHealth)	
	<i>Rural Maternity and Obstetrics Management Strategies (RMOMS): Workforce Needs Assessment of Rural Labor and Delivery Units in Maine</i>	
	September 2023 – December 2023; \$73,434	
INVITED TALKS	“Introduction to causal inference.” MaineHealth Institute for Research. June 26 & July 17, 2023. (Portland, ME)	
	“Closing remarks.” Annual Symposium on Risks and Opportunities of AI in Pharmaceutical Medicine (AIPM). June 5, 2023. (Portland, ME)	
	“Intro to {targets}.” Maine R User Group. May 31, 2023. (Portland, ME)	
	“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 Confer-	

ence 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 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, Karolinksa 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

“Evaluating missingness assumptions for items in a frailty index.” Society for Epidemiologic Research (SER). June 14, 2023 (Portland, OR). *Oral Abstract Session*.

“Reproducible epidemiology in R.” Society for Epidemiologic Research (SER). June 13, 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  
ONLY)

**Smith LH**, Bu F, Nishimura A, Kostka K, McLeggon J, Ryan PB, Hripcsak G, Madigan D, Suchard MA. Bayesian Evidence Synthesis with Bias Correction. Observational Health Data Sciences and Informatics (OHDSI) Global Symposium. East Brunswick, NJ, October 20, 2023. *Finalist: Best Community Contribution*.

**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*.

**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.

**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

Cavanaugh R, **Smith LH**. *alofus*: R package to streamline use of the All of Us Researcher Workbench. *R Package on CRAN*.

**Smith LH**. Simple sensitivity analysis for selection bias. *Online tool available at [selection-bias.louisahsmith.com](http://selection-bias.louisahsmith.com)*.

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*.

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

TEACHING:  
PRIMARY  
INSTRUCTOR

**Northeastern University**, Boston, MA

**PHTH 6800: Causal Inference in Public Health Research** Spring 2023, 2024  
3 Credits

**Emory University Rollins School of Public Health**, Atlanta, GA

**EPI590R: R Bootcamp** Summer 2023  
1 Credit

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

**ID 543: Introduction to R** Summer 2023  
1.25 Credits

TEACHING:  
STUDENT  
INSTRUCTOR

**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  
*Instructor*: Andrea Rotnitzky

**Introduction to R** 2019 – 2020  
Instructor and course developer

**Introduction to Epidemiology** 2019 – 2020  
Co-instructor  
*Co-instructor*: David Cote

**PHS 2000: Quantitative Research Methods** 2017 – 2019  
Teaching fellow  
*Instructors*: 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  
*Instructor*: Lisa Barcellos and Mahasin Mujahid

**PH 250A: Epidemiologic Methods** 2015

Graduate student instructor  
*Instructor:* Sandra McCoy

**Guest lectures**

PHS 2000B: Quantitative Research Methods, Harvard T.H. Chan School of Public Health.

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

Member, Society for Epidemiologic Research (SER)

Member, Society for Pediatric and Perinatal Epidemiologic Research (SPER)

Planning Committee, Annual Symposium on Risks and Opportunities of AI in Pharmaceutical Medicine (AIPM)

Ad-hoc reviewer: *American Journal of Epidemiology, Biometrika, BMJ Open, Epidemiologic Methods, Epidemiologic Reviews, Epidemiology, International Journal of Epidemiology, JAMA Network Open, JAMA Psychiatry, Journal of Causal Inference, Journal of Epidemiology, Patient Preference and Adherence, Paediatric and Perinatal Epidemiology, Scientific Reports, Sociological Methods and Research*

OTHER

**Little Wound School**, Kyle, SD

PROFESSIONAL  
 EXPERIENCE

Elementary school teacher

2011 – 2014

3rd grade teacher of 10-20 students

Taught reading, writing, math, science, social studies

Lesson planning, curriculum mapping, analysis of student progress