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CONTACT

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APPOINTMENTS

Associate Professor 2020 –
Department of Epidemiology
Emory University

Assistant Professor 2015 – 2020
Department of Epidemiology
University of Pittsburgh

Associate Member 2014 – 2015
Department of Epidemiology, Biostatistics & Occupational Health
McGill University

Assistant Professor (Research) 2014 – 2015
Department of Obstetrics & Gynecology
McGill University

EDUCATION

Post-Doctoral Research Fellowship 2012 – 2013
Department of Epidemiology, Biostatistics, & Occupational Health
McGill University

Ph.D Epidemiology, Minor Biostatistics 2008 – 2012
Department of Epidemiology
University of North Carolina at Chapel Hill

M.Sc Community Health 2006 – 2008
Department of Social and Preventive Medicine
Université de Montréal

B.Sc (Hon) Exercise Physiology 2002 – 2006
Minor Multidisciplinary Science Studies
Department of Exercise Science
Concordia University

HONORS

Lilienfeld Postdoctoral Prize Paper, *Society for Epidemiologic Research*, Jun 2015.

Top 10 Reviewers of the Year, *American Journal of Epidemiology*, 2014, 2015

Post-Doctoral Training Award ($30,000 per annum) Fonds de Recherche en Santé du Québec, 2013-2015

UNC Graduate Dissertation Fellowship ($16,000), University of North Carolina at Chapel Hill, 2012-2013

Berton H. Kaplan Student Publication Award (Best Student Paper in 2012), University of North Carolina at Chapel Hill, 2012

Delta Omega Recognition of Service Award, University of North Carolina at Chapel Hill, 2012

Doctoral Training Award ($20,000 per annum), Fonds de Recherche en Santé du Québec, 2008-2011

Graduate Training Award ($15,000 per annum, Declined), Fonds de Recherche en Santé du Québec, 2007-2008

Graduate Training Award ($17,500 per annum), Canadian Institutes of Health Research, 2007

Undergraduate Summer Award ($4500), National Science and Engineering Research Council of Canada, 2006

Undergraduate Award for Outstanding Scientific Achievement, Canadian Society for Exercise Physiology, 2006

Undergraduate Summer Award ($4500, Declined), National Science and Engineering Research Council of Canada, 2005

Young Investigator Presentation Award, Mitochondrial Physiology Society, 2005

Publications

81. Rudolph JE, Lesko CR, **Naimi AI**. Causal Inference in the Face of Competing Events. *Curr Epidemiol Rep*. Accepted Jul 3 2020.

80. Cole SR, Edwards JK, **Naimi AI**, Munoz AM. Hidden Imputations and the Kaplan Meier Estimator. *Am J Epidemiol*. Accepted April 24 2020.

79. Rudolph JE, **Naimi AI**, Westreich DJ, Kennedy EH, Schisterman EF. Defining, Identifying, and Estimating Per Protocol Effects. *Epidemiology*. Accepted April 20 2020.

78. DeVilbiss EA, **Naimi AI**, Mumford SL, Perkins NJ, Sjaarda LA, Zolton JR, Silver RM, Schisterman EF. The natural history of early pregnancy vaginal bleeding and nausea patterns and relationships with clinical pregnancy loss. *AJOG*. Accepted April 1 2020.

77. **Naimi AI**, Whitcomb BW. Estimating Risk Ratios and Risk Differences using Regression. *Am J Epidemiol*. Accepted March 17 2020.

76. Whitcomb BW and **Naimi AI**. Things don't always go as expected: the example of non-differential misclassification of exposure – bias and error. *AJE*. Accepted Feb 4 2020.

75. **Naimi AI** and Whitcomb BW. Can confidence intervals be interpreted? *AJE*. Published online ahead of print, Jan 29 2020.

74. Bodnar LM, Cartus AR, Kirkpatrick SI, Himes KP, Kennedy EH, Simhan HN, Grobman WA, Duffy JY, Silver RM, Parry S, **Naimi AI**. Machine learning as a strategy to account for dietary synergy: an illustration based on dietary intake and adverse pregnancy outcomes. *AJCN*. Accepted, Jan 29 2020.

73. Mokhayeri Y, Hashemi-Nazari SS, Khodakarim S, Safiri S, Mansournia N, Mansournia MA, Kaufman JS, **Naimi AI**. Effects of Hypothetical Interventions on Ischemic Stroke Using Parametric G-Formula. *Stroke*. 2019;50:32863288.

72. Lin HHS, **Naimi AI**, Brooks MM, Richardson GA, Burke JG, Bromberger JT. Life-course impact of child maltreatment on midlife health-related quality of life in women: longitudinal mediation analysis for potential pathways. *Ann Epidemiol*. Published Online Ahead of Print, Jan 18 2020.

71. Yu YH*, Filion K, Bodnar LM, Brooks M, Platt RW, Himes K, **Naimi AI**. Visualization tool of variable selection in bias–variance tradeoff for inverse probability weights. *Ann Epidemiol*. Published Online Ahead of Print, Dec 13 2019.

70. Guo J, **Naimi AI**, Brooks M, Muldoon M, Orchard T, Costacou T. Mediation analysis for estimating cardioprotection of longitudinal RAS inhibition beyond lowering blood pressure and albuminuria in type 1 diabetes. *Ann Epidemiol*. Published Online Ahead of Print, Dec 4 2019.

69. Cartus AR, Bodnar LM, **Naimi AI**. The impact of undersampling on the predictive performance of logistic regression and machine learning algorithms: A simulation study. *Epidemiol*. Accepted Nov 29 2019.

68. Yu YH*, Bodnar LM, Brooks MM, Himes KP, **Naimi AI**. Association of Overweight and Obesity Development Between Pregnancies With Stillbirth and Infant Mortality in a Cohort of Multiparous Women. *Ob Gyn*. Accepted Nov 2019.

67. Robinson WW, Renson A, **Naimi AI**. Teaching yourself about structural racism will improve your machine learning. *Biostatistics*. Published Online Ahead of Print, Nov 19 2019.

66. Guo J, Brooks MM, Muldoon MF, **Naimi AI**, Orchard TJ, Costacou T. Optimal Blood Pressure Thresholds for Minimal Coronary Artery Diabetes Risk in Type 1 Diabetes. *Diabetes Care*. 2019 Sep;42(9):1692-1699.

65. Agrawala A, Sjaarda LA, Omosigho UR, Perkins NJ, Silver RM, Mumford SL, Connell MT, **Naimi AI**, Halvorson LM, Schisterman EF. Effect of preconception low dose aspirin on pregnancy and live birth according to socioeconomic status: a secondary analysis of a randomized clinical trial. *PLoS One*. 2019 Apr 18;14(4):e0200533.

64. Yu YH*, Bodnar LM, Brooks MM, Himes KP, **Naimi AI**. Re: The causal association between obesity and stillbirth: strengths and limitations of the consecutive pregnancies approach. *Am J Epidemiol*. 2019 188(7); 13431344.

63. Yu YH*, Bodnar LM, Brooks MM, Himes KP, **Naimi AI**. Nonparametric estimation of the association of incident prepregnancy obesity with stillbirth and infant mortality in a population-based cohort. *Am J Epidemiol*. 2019 188(7);13281336.

62. **Naimi AI**. Commentary: Obtaining Actionable Inferences from Epidemiologic Actions. *Epidemiol*. 2019 Mar;30(2):243-245.

61. Mansournia MA, **Naimi AI**, Greenland S. The Implications of Using Lagged and Baseline Exposure Terms in Longitudinal Causal and Regression Models. *Am J Epidemiol*. 2019 Apr 1;188(4):753-759.

60. Lin HHS, **Naimi AI**, Brooks MM, Richardson GA, Burke JG, Bromberger JT. Childhood maltreatment as a social determinant of midlife health-related quality of life in women: Do psychosocial factors explain this association? *Quality of Life Research* 2018; 27(12):3243-3254. PMID: 30121897.

59. **Naimi AI** and Balzer L. Stacked Generalization: An Introduction to Super Learning. *Eur J Epidemiol*. 2018. 33(5):459-464.

58. Riverin BD, Strumpf EC, **Naimi AI**, Li P. Optimal Timing of Physician Visits after Hospital Discharge to Reduce Readmission. *Health Serv Res*. 2018;53(6):4682-4703..

57. Richardson DB, Kinlaw AC, Keil AP, **Naimi AI**, Kaufman JS, Cole SR. Inverse-probability weights for the analysis of polytomous outcomes. *Am J Epidemiol*. 187(5):1125-1127

56. Zhang X, Tilling K, Martin RM, Oken E, **Naimi AI**, Young JG, Aris IM, Yang S, Kramer MS. Analysis of "Sensitive" Periods of Fetal and Child Growth. *IJE*. 2019; 48(1):116123.

55. Nobles C, Mendola P, **Naimi AI**, Yeung E, Kim K, Park H, Silver R, Perkins N, Sjaarda L, Schisterman E. Preconception blood pressure levels and reproductive outcomes in a prospective cohort study of women attempting pregnancy. *Hypertension*. 71(5):904-910.

54. Lemon LS, **Naimi AI**, Caritis SN, Platt RW, Venkataramanan R, Bodnar LM. The role of preterm birth in the association between opioid maintenance therapy and neonatal abstinence syndrome. *PP&E*. 32(2):213-222.

53. **Naimi AI**, Larkin JC, Platt RW. Machine Learning for Fetal Growth Prediction. *Epidemiol*. 29(2):290-298.

52. Conzuelo G and **Naimi AI**. The impact of computing inter-pregnancy intervals without accounting for intervening pregnancy events. *PP&E*. 32(2):141-148.

51. Larkin JC and **Naimi AI**. Effect of population-specific birthweight curves on disparities in perinatal mortality in small-for-gestational age pregnancies. *Amer J Perinatol*. 35(7):695-702.

50. Aibibula W, Cox J, Hamelin AM, Moodie EEM, **Naimi AI**, McLinden T, Klein MB, Brassard P; Canadian Co-infection Cohort Investigators. Impact of Food Insecurity on Depressive Symptoms Amount HIV-HCV Co-infected People. *AIDS Behav*. 2017; 21(12): 3464-3472. PMID: 29076031.

49. **Naimi AI**. On wagging tales about causal inference. *Int J Epidemiol*. 2017. 46(4): 1340-1342. PMID: 28575465.

48. **Naimi AI**. Commentary: Integrating Complex Systems Thinking into Epidemiologic Research. *Epidemiol*. 2016; 27(6): 843-7. PMID: 27488060.

47. Riverin BD, Li P, **Naimi AI**, Diop M, Provost S, Strumpf E. Team-based innovations in primary care delivery in Quebec and timely physician follow-up after hospital discharge: a population-based cohort study. CMAJ Open. 2017; 5(1): E28-E35. PMID: 28401115.

46. Riverin BD, Li P, **Naimi AI**, Strumpf E. Team-based versus traditional primary care models and short-term outcomes after hospital discharge. CMAJ. 2017; 189(16): E585-E593. PMID: 28438951.

45. Lemon LS, **Naimi AI**, Abrams B, Kaufman JS, Bodnar LM. Prepregnancy obesity and the racial disparity in infant mortality. Obesity (Silver Spring). 2016; 24(12): 2578-2584. PMID: 27891829.

44. **Naimi AI**, Cole SR, Kennedy EH. An introduction to g methods. *Int J Epidemiol*. 2017; 46(2): 756-762. PMID: 28039382.

43. Oakes JM, **Naimi AI**. Mediation, interaction, interference for social epidemiology *Int J Epidemiol*. 2016; 45(6): 1912-1914. PMID: 27864409.

42. **Naimi AI**. Book Review–Explanation in Causal Inference: Methods for Mediation and Interaction, by Tyler J VanderWeele. *Eur J Epidemiol*. 2016. [Epub ahead of print]. PMID: 27518302.

41. Riverin BD, Li P, **Naimi AI**, Strumpf E. Team-based versus traditional primary care models and short-term outcomes after hospital discharge. *CMAJ*. 2017; 189(16): E585-E593. PMID: 28438951.

40. Auger N, **Naimi AI**, Fraser WD, Healy-Profitos J, Luo ZC, Nuyt AM, Kaufman JS. Three alternative methods to resolve paradoxical associations of exposures before term. *Eur J Epidemiol*. 2016; 31(10): 1011-1019. PMID: 27325162.

39. al-Mamari N, **Naimi AI**, Tulandi T. Predictors of Medical Resident Burnout in Canadian Obstetrics & Gynecology Training Programs. *Gynecological Surgery*. 2016: Volume 13, Issue 4, pp 323327.

38. Kramer MS, Zhang X, Bin Aris I, Dahhou M, **Naimi AI**, Yang S, Martin RM, Oken E, Platt RW. Methodologic challenges in studying the causal determinants of child growth. *Int J Epidemiol*. 2016; 45(6): 2030-2037. PMID: 27297676.

37. Auger N, Costopoulos A, **Naimi AI**, Bellingeri F, Vecchiato L, Fraser WD. Comparison of stillbirth rates by cause among Haitians and non-Haitians in Canada. *Int J Gynaecol Obstet*. 2016; 134(3): 315-9. PMID: 27262940.

36. **Naimi AI**. The Counterfactual Implications of Fundamental Cause Theory. *Curr Epidemiol Rep*. 2016; 3(1): 92-97.

35. Auger N, Luo ZC, Nuyt AM, Kaufman JS, **Naimi AI**, Platt RW, Fraser WD. Secular Trends in Preeclampsia Incidence and Outcomes in a Large Canada Database: A Longitudinal Study Over 24 years. *Can J Cardiol*. 2016; 32(8): 987. e15-23. PMID: 26947535.

34. **Naimi AI**, Auger N. Cumulative risk of stillbirth in the presence of competing events. *BJOG*. 2016; 123(7): 1071-4. PMID 26923933.

33. **Naimi AI**, Schnitzer ME, Moodie EE, Bodnar LM. Mediation Analysis for Health Disparities Research. *Am J Epidemiol*. 2016; 184(4): 315-24. PMID: 27489089.

32. **Naimi AI**. Mini-Commentary: Studying interpregnancy interval effects using observational data: Some cautionary remarks. *BJOG*. 2016; 123(8): 1319. PMID: 26567522.

31. Auger N, Leduc L, **Naimi AI**, Fraser WD. Delivery at term: Impact of university education by week of gestation. *J Obstet Gynaecol Can*. 2016; 38(2): 118-24. PMID: 27032735.

30. Adibi JJ, Lee MK, **Naimi AI**, Barrett E, Nguyen RH, Sathyanarayana S, Zhao Y, Thiet MP, Redmon JB, Swan SH. Human chorionic gonadotropin partially mediates phthalate association with male and female anogenital distance. *J Clin Endocrinol Metab*. 2015; 100(9): E1216-24. PMID: 26200238.

29. Shrier I, Steele RJ, Zhao M, **Naimi AI**, Verhagen E, Stovitz SD, Rauh MJ, Hewett TE. A multistate framework for the analysis of subsequent injury in sport (M-FASIS): Implications for research questions, study design and classifications schemes. *Scand J Med Sci Sports*. 2016; 26(2): 128-39. PMID: 26040301.

28. **Naimi AI**. Invited Commentary: Boundless Science: Putting Natural Direct and Indirect Effects in a Clearer Empirical Context. *Am J Epidemiol*. 2015; 182(2):109-14. PMID: 25944884.

27. **Naimi AI**, Tchetgen Tchetgen EJ. Invited Commentary: Estimating Population Impact in the Presence of Competing Events. *Am J Epidemiol*. 2015; 181(8):571-4. PMID: 25816819.

26. **Naimi AI**, Kaufman JS. Invited Review: Counterfactual Theory in Social Epidemiology: Reconciling Analysis and Action for the Social Determinants of Health. *Curr Epidemol Rep*. 2015; 2(1):52-60.

25. **Naimi AI**, Auger N. Population-Wide Folic Acid Fortification and Preterm Birth: Testing the Folate Depletion Hypothesis. *Am J Public Health*. 2015; 105(4):793-5. PMID: 25713974.

24. Basso O, **Naimi AI**. Invited Commentary: From Estimation to Translation: Interpreting Mediation Analysis Results in Perinatal Epidemiology. *Epidemiol*. 2015; 26(1):27-9. PMID: 25437316.

23. **Naimi AI**, Moodie EE, Auger N, Kaufman JS. Semiparametric Adjusted Exposure-Response Curves. *Epidemiol*. 2014; 25(6):919-22. PMID: 25137220.

22. **Naimi AI**, Moodie EE, Auger N, Kaufman JS. Stochastic mediation contrasts in epidemiologic research: Interpregnancy interval and the educational disparity in preterm delivery. *Am J Epidemiol*. 2014; 180(4): 436-45. PMID: 25038216.

21. Keil A, Edwards J, Richardson DB, **Naimi AI**, Cole SR. The Parametric g-Formula for Time-to-event Data: Intuition and a Worked Example. *Epidemiol*. 2014; 25(6): 889-897. PMID: 25140837.

20. **Naimi AI**, Kaufman JS, MacLehose RF. Mediation Misgivings: Ambiguous Clinical and Public Health Interpretations of Natural Direct and Indirect Effects. *Int J Epidemiol*. 2014; 43(5):1656-61. PMID: 24860122.

19. **Naimi AI**, Westreich DJ. Book Review–Big Data: A Revolution that will Transform How we Live, Work, and Think. By Viktor Mayer-Schönberger and Kenneth Cukier. *Am J Epidemiol*. 2014; 179(9):1143-1144. PMID: 24714727.

18. Auger N, Vecchiato L, **Naimi AI**, Costopoulos A, Fraser WD. Stillbirth Rates among Haitians in Canada. *Pediatric & Perinatal Epidemiol*. 2014; 28(4):333-337. PMID: 24803349.

17. Auger N, Gilbert NL, **Naimi AI**, Kaufman JS. Fetuses-at-risk, to Avoid Paradoxical Associations at Early Gestational Ages: Extension to Preterm Infant Mortality. *Int J Epidemiol*. 2014; 43(4):1154-1162. PMID: 24513685.

16. Auger N, **Naimi AI**, Smargiassi A, Lo E, Kosatsky T. Extreme heat and risk of early delivery among preterm and term pregnancies. *Epidemiol*. 2014; 25:344-350. PMID: 24595396.

15. **Naimi AI**, Cole SR, Hudgens MG, Richardson DB. Estimating the effect of cumulative occupational asbestos exposure on time to lung cancer mortality: using structural nested failure time models to account for the healthy worker survivor effect. *Epidemiol*. 2014; 25:246-254. PMID: 24487207.

14. **Naimi AI**, Moodie EE, Auger N, Kaufman JS. Constructing Inverse Probability Weights for Continuous Exposures: A Comparison of Methods. *Epidemiol*. 2014; 25:292-299. PMID: 24487212.

13. **Naimi AI**, Richardson DB, Cole SR. Causal Inference in Occupational Epidemiology: Accounting for the Healthy Worker Effect by Using Structural Nested Models. *Am J Epidemiol*. 2013; 178(12):1681-1686. PMID: 24077092.

12. **Naimi AI**, Cole SR, Hudgens MG, Brookhart MA, Richardson DB. Assessing the component associations of the healthy worker survivor bias: occupational asbestos exposure and lung cancer mortality. *Ann Epidemiol*. 2013; 23(6): 334-341. PMID: 23683709.

11. Cole SR, Richardson DB, Chu H, **Naimi AI**. Analysis of occupational asbestos exposure and lung cancer mortality using the G formula. *Am J Epidemiol*. 2013; 177(9): 989-996. PMID: 23558355.

10. Horney J, **Naimi AI**, Lyles W, Simon M, Salvesan D, Berke P. Assessing the relationship between hazard mitigation plan quality and rural status in a cohort of 59 counties from 3 states in the Southern United States. *Challenges*. 2012; 3(2):183-193.

9. **Naimi AI**, Cole SR, Westreich DJ, Richardson DB. Reply Re: A comparison of methods to estimate the hazard ratio with time varying confounding and nonpositivity. *Epidemiol*. 2012; 23(1): 179

8. Herring AH, **Naimi AI**. Invited Commentary: The Ecological Design. *Br J Obstet Gynaecol*. 2012;119(13): 1638-1639.

7. **Naimi AI**, Keil A. Letter: Marginal structural models and the healthy worker survivor effect. *BMC Public Health*. 2011; 11:571.

6. **Naimi AI**, Cole SR, Westreich DJ, Richardson DB. A comparison of methods to estimate the hazard ratio under conditions of time-varying confounding and nonpositivity. *Epidemiol*. 2011; 22(5): 718-723. PMID: 21747286.

5. **Naimi AI**, Kaufman JS, Howe CJ, Robinson WB. Letter: Mediation Considerations: serum potassium and the racial disparity in diabetes risk. *Am J Clin Nutr*. 2011; 94(2):614-6. PMID: 21775571.

4. **Naimi AI**, Bourbeau J, Perrault H, Baril J, Wright-Paradis C, Rossi A, Taivassalo T, Sheel AW, Rabøl R, Dela F, Boushel R. Altered mitochondrial regulation in quadriceps muscles of patients with COPD. *Clin Physiol Funct Imaging*. 2011; 31(2):124-131. PMID: 21091605.

3. **Naimi AI** Book Review: Public Health and the Risk Factor: A History of an Uneven Medical Revolution, by William G Rothstein. *Am J Epidemiol*. 2009; 169(6): 781-782.

2. **Naimi AI**, Paquet C, Gauvin L, Daniel M. Associations between area-level unemployment, body mass index, and risk factors for cardiovascular disease in an urban area. *Int J Environ Res Publ Health*. 2009; 6(12): 3082-3096. PMID: 20049247.

1. Shrier I, Zukor D, Boivin JF, Collet JP, Tanzer M, Feldman D, **Naimi AI**, Rossignol M, Prince F. The feasibility of a randomized trial using a progressive exercise program in patients with severe hip osteoarthritis. *J Musculoskelet Pain*. 2008; 16(4): 313-321.

Under Review

Mansournia M, **Naimi AI**, Campbell MJ, Collins G, Nazemipour M. Demystifying robust standard errors. *Am J Epidemiol*. Submitted March 2020.

Rudolph JE, Fox MP, **Naimi AI**. Simulation as a tool for teaching and learning epidemiologic methods. *Am J Epidemiol*. Revised and Resubmitted March 2020.

Naimi AI, Rudolph JE, Kennedy EH, Cartus A, Kirkpatrick SI, Haas DM, Simhan H, Bodnar LM. Incremental propensity score estimation for time-fixed exposures. *Am J Epidemiol*. Submitted March 2020.

Rudolph JE, **Naimi AI**, Moodie EM, Schisterman EF. G Computation versus Inverse Probability Weighting for Estimating Causal Effects in Complex Longitudinal Survival Data. *Epidemiology*. Revised and resubmitted March 2020.

Rudolph JE, **Naimi AI**. Defining and Estimating Causal Effects in the Presence of Competing Risks. *Current Epidemiology Reports*. Submitted March 2020.

Rudolph JE, **Naimi AI**, Whitcomb BW, Tchetgen Tchetgen EJ. Competing Risks and Causation: Interpreting Estimates from Subdistribution versus Cause-Specific Methods. *Am J Epidemiol*. Submitted March 2020.

Naimi AI, Zhong Y, Rudolph JE. Bootstrap methods for confidence interval estimation with parametric and machine-learning based estimators. *Epidemiology*. Revised and Resubmitted March 2020.

Naimi AI, Chouldechova A, Bodnar LM, Larkin JC. Good Practices in Predictive Analytics. *Int J Epidemiol*. Submitted March 2020.

Naimi AI, Perkins NJ, Mumford SL, Sjaarda LA, Platt RW, Silver RM, Schisterman EF. The per protocol effect of preconception-initiated low-dose aspirin on conception, pregnancy loss, and live birth. *Ann Int Med*. Submitted Jan 2020.

Naimi AI, Mishler A, Kennedy EH. Challenges in Obtaining Valid Causal Effect Estimates with Machine Learning Algorithms. *Am J Epidemiol*. Submitted April 2020.

Kim K, Kennedy EH, **Naimi AI**. Incremental Intervention Effects in Studies with Many Timepoints, Repeated Outcomes, and Dropout. *Biometrika*. Submitted July 2019.

Luo Z, **Naimi AI**, Schisterman E. So many causal estimands, which one is right for you? *Clinical Trials*. Submitted May 2019.

Conference Presentations

Naimi AI. Valid Causal Effect Estimates with Machine Learning Algorithms. Danish Epidemiologic Society Meeting. Nyborg, Denmark. April 2020 (Postponed to September 2020).

Naimi AI. Training Fair Algorithms: Considerations for Prediction and Causal Inference. Society for Epidemiologic Research. Boston, MA. June 2020.

Naimi AI. Valid Causal Effect Estimates with Machine Learning Algorithms. Society for Epidemiologic Research. Minneapolis, MN. June 2019.

Naimi AI. Nonparametric Methods and the Challenges of Model Misspecification. Society for Epidemiologic Research. Minneapolis, MN. June 2019.

Naimi AI. The Logic of Causal Inference. Society for Epidemiologic Research. Baltimore, MD. June 2018.

Naimi AI. Construct Validity and Causal Inference: On the Measurement of Social Causes. Society for Epidemiologic Research. Baltimore, MD. June 2018.

Naimi AI. Machine Learning in Epidemiologic Science. Symposia Session. Society for Epidemiologic Research. Baltimore, MD. June 2018.

Naimi AI. Machine Learning for Risk Stratification of Rare Outcomes: Examples from Reproductive/Perinatal Epidemiology. *American College of Epidemiology Conference*. New Orleans, LA. Sept 2017.

Naimi AI, Larkin JC, Platt RW. Machine Learning for Fetal Growth Prediction. Society for Epidemiologic Research. Seattle, WA. June 2017.

Naimi AI. G-computation for compliance adjustment in randomized trials. Symposium Speaker, "Causal Inference in Randomized Trials." *Atlantic Causal Inference Conference*. Chapel Hill, NC. May 2017.

Naimi AI. Effect Decomposition with Structural Nested Models: A Practical Multiply-Robust Approach. Lightning Session Talk. *Atlantic Causal Inference Conference*. New York, NY. May 2016.

Naimi AI. Causal inference with Race/Ethnicity: Analysis and Interpretation. Symposium Speaker, "Methodological challenges when assessing racial/ethnical disparities in environmental epidemiology." *International Society for Environmental Epidemiology*. São Paulo, Brazil. Sept 2015.

Naimi AI, Schnitzer ME, Moodie EEM, Bodnar LM. Mediation Analysis for Health Disparities Research. Concurrent Contributed Session Presentation. *Society for Epidemiologic Research*. Denver, CO. Jun 2015.

Naimi AI. Informative cluster size in reproductive epidemiology. Symposium Speaker, "Simplifications that don't work: When ignoring competing and recurrent events leads down the wrong causal path." *Society for Epidemiologic Research*. Denver, CO. Jun 2015.

Naimi AI. G-Estimation in Epidemiology: Challenges & Opportunities. Symposium Discussant, "G-methods in practice: an example from occupational epidemiology." *Society for Epidemiologic Research*. Denver, CO. Jun 2015.

Naimi AI. Systems Science in Epidemiology: Substance and Semantics. Symposium Speaker, "Complexity and causal inference: Rigor and Realism in Epidemiology." *Society for Epidemiologic Research*. Denver, CO. Jun 2015.

Naimi AI, Moodie EEM, Auger N, Kaufman JS. Stochastic Mediation Contrasts Epidemiologic Research: Interpregnancy Interval and the Educational Disparity in Preterm Birth. *Society for Epidemiologic Research*. Seattle, WA. Jun 2014.

Naimi AI, MacLehose RF, Kaufman JS. Mediation Misgivings: Ambiguous Clinical and Public Health Interpretations of Natural Direct and Indirect Effects. *Society for Epidemiologic Research*. Seattle, WA. Jun 2014.

Naimi AI, Auger N. Short Interpregnancy Interval, Timing of Gestation, and the Folate Depletion Hypothesis. *Society for Epidemiologic Research*. Seattle, WA. Jun 2014.

Naimi AI, Moodie EEM, Auger N, Kaufman JS. Stochastic Mediation Contrasts in Population Health Research: Interpregnancy Interval and the Educational Disparity in Preterm Birth. *Atlantic Causal Inference Conference*. Providence, RI. May 2014.

Naimi AI, Cole SR, Moodie EEM. Exploring the finite-sample properties of inverse probability weighted and G estimation of a structural nested failure time model under positivity violations. *ASA Joint Statistical Meetings*. Montreal, QC. Aug 2013; Abstract # 308635.

Naimi AI, Moodie EEM, Auger N, Kaufman JS. Semiparametric Weighted Exposure-Response Curves for the Effect of Maternal Education on the Risk of Small for Gestational Age Birth. *Society for Pediatric and Perinatal Epidemiologic Research*. Boston, MA. Jun 2013.

Naimi AI, Moodie EEM, Kaufman JS. Illustrating Bootstrap Methods for Epidemiologic Research. *Society for Epidemiologic Research*. Boston, MA. Jun 2013.

Naimi AI, Cole SR, Richardson DB. Estimating the Association between Asbestos and Lung Cancer Mortality using Structural Nested Models. *Am J Epidemiol*. Jun 2012; 175(Suppl 11): p S41.

Naimi AI, Cole SR, Richardson DB. An assessment of necessary conditions for the healthy worker survivor effect. *Am J Epidemiol*. Jun 2011; 173(Suppl 11): p S231.

Naimi AI, Cole SR, Richardson DB. A comparison of methods to estimate the hazard ratio under conditions of time-varying confounding and nonpositivity: the healthy worker effect. *Am J Epidemiol*. Jun 2010; 171(Suppl 11): p S145.

Naimi AI, Daniel M, Paquet C, Gauvin L. Associations between area-level unemployment, body mass index, and risk factors for cardiovascular disease in an urban setting. *Circulation*. 2009; (119): e305.

Naimi AI, Wright-Paradis C, Rossi A, Taivassalo T, Deschenes J, Baril J, Robillard J, Comtois A, Bourbeau J, Perrault H. Evidence for Limited Complex II Respiration in Skeletal Muscle of Patients with Chronic Obstructive Pulmonary Disease. *Applied Physiology, Nutrition, and Metabolism*. Sept 2006; 31(Suppl 1): pp. S1-S91(1)

Naimi AI, Garedew A, Troppmair J, Boushel R, Gnaiger E. Mitochondrial respiratory capacity in vivo: the coupled reference state and a reinterpretation of the uncoupling control ratio. *Applied Physiology, Nutrition, and Metabolism*. Sept 2006;31(Suppl 1): pp. S1-S91(1)

Naimi AI, Garedew A, Troppmair J, Boushel R, Gnaiger E. Limitation of aerobic metabolism by the phosphorylation system and mitochondrial respiratory capacity of fibroblasts in vivo. *Mitochondrial Physiology Network*. 2005; 10(9): pp. 55-56.

Academic Talks

Challenges in Obtaining Valid Causal Effect Estimates with Machine Learning Algorithms. Department of Epidemiology and Biostatistics Seminar, CUNY. April 20, 2020.

The per protocol effect of preconception-initiated low-dose aspirin on conception, pregnancy loss, and live birth. Department of Epidemiology Seminar, Rollins School of Public Health, Emory University. April 17 2020.

Challenges in Obtaining Valid Causal Effect Estimates with Machine Learning Algorithms. Annual Meeting, Danish Epidemiological Society. *Re-scheduled due to COVID-19*.

Valid Causal Effect Estimates with Machine Learning Algorithms. Causal Inference Group, Johns Hopkins University. Feb 28 2020.

The per protocol effect of preconception-initiated low-dose aspirin on conception, pregnancy loss, and live birth. Graduate School of Public Health and Health Policy Grand Rounds, CUNY. Feb 19 2020.

Valid Causal Effect Estimates with Machine Learning Algorithms. UNC Causal Inference Research Group. April 5 2019.

G computation to estimate the per protocol effect in randomized trials. University of Pittsburgh, Department of Biostatistics Seminar. April 11 2019.

Machine Learning: Considerations for Prediction and Causality. University of California at San Diego. April 24 2019.

Randomized Trials and Tribulations: Quantifying Exposure Effects Through Time. Biostatistics Coffee and Collaboration Hour. University of Pittsburgh. Jan 2019.

Mediation Analysis for Health Disparities Research. Public Health Dynamics Laboratory. University of Pittsburgh. Nov 2017.

Mediation Analysis for Health Disparities Research. *Eunice Kennedy Shriver National Institute of Child Health and Human Development*. Epidemiology Branch. July 2017.

Singly- versus Doubly-Robust Causal Mediation Analysis: An Application to Racial Disparities in Infant Mortality. Department of Statistics. Carnegie Mellon University. October 2016.

Mediation Analysis for Health Disparities Research. Department of Epidemiology Seminar Series. University of Pittsburgh. October 2016.

Mediation and Pathway Analysis. International Society of Environmental Epidemiology (ISEE) Student and New Research Network Webinar. April 2016.

Causal Mediation in Epidemiology. SERdigital Spring Web Conference. March 2016.

When (and Why) Design Trumps Analysis in Reproductive Epidemiology. Reproductive Pediatric and Perinatal Seminar Series, University of Pittsburgh. October 2015.

Why Design Trumps Analysis: Studying Interpregnancy Interval in Reproductive Epidemiology. Perinatal and Reproductive Epidemiology Seminar Series, McGill University. April 2015.

Causal Inference and Complex Systems Science: Towards Rigor and Realism in Epidemiologic Research. Department of Epidemiology, Biostatistics, and Occupational Health, McGill University. Mar 2015.

Birth Spacing. Grand Rounds, Department of Obstetrics and Gynecology, McGill University. Feb 2015.

Social Epidemiology and the Population's Health: Exploring Racial Disparities in Preterm Birth. General Lecture Series, Department of Exercise Science, Concordia University. Feb 2015.

Hypothetical interventions to reduce racial disparities in preterm birth: A stochastic mediation approach. Department of Epidemiology, University of Pittsburgh. Nov 2014.

Hypothetical interventions to reduce racial disparities in preterm birth: A stochastic mediation approach. Social Statistics Seminar, McGill University. Oct 2014.

Estimating Controlled Direct Effects. Causal Inference Research Group, University of North Carolina at Chapel Hill. Sept 2014.

Hypothetical Interventions to Reduce Racial Disparities in Preterm Birth. Department of Epidemiology, University of North Carolina at Chapel Hill. Sept 2014.

Stochastic Mediation Contrasts in Epidemiologic Research. Centre for Clinical Epidemiology, Jewish General Hospital–Lady Davis Research Institute. April 2014.

Causal Inference and Competing Risks. Department of Epidemiology, Biostatistics, and Occupational Health. McGill University. Mar 2014.

Stochastic Mediation Contrasts in Social Epidemiology: Interpregnancy Interval and the Educational Disparity in Preterm Birth. Department of Epidemiology. University of Michigan. Feb 2014.

Quantile Regression Methods in Perinatal Epidemiology. Department of Epidemiology, Biostatistics, and Occupational Health, McGill University. Dec 2013.

The mediating role of inter-pregnancy interval in the relation between maternal education and preterm birth. MIREC Study Group, Centre hospitalier universitaire Sainte-Justine. Nov 2013.

G-estimation of the Controlled Direct Effect Under Incomplete Mediator Interventions. Department of Epidemiology, Biostatistics, and Occupational Health, McGill University. Nov 2013.

Single World Intervention Graphs for Epidemiologic Research. Causal Reading Group, McGill University. Sept 2013.

Marginal Structural Models for Exposure-Response Relations: Modeling the Effect of Maternal Education on the Risk of Preterm Birth. Institut national de santé publique du Québec. May 2013.

G-Estimation of Structural Nested Failure Time Models. Biostatistics Reading Group. McGill University. Jan 2013.

Using Novel Methods to Estimate the Effect of Occupational Asbestos Exposure on Lung Cancer Mortality. Respiratory Epidemiology and Clinical Research Unit, Montreal Chest Institute, McGill University Health Centre. Nov 2012.

Structural Nested Failure Time Models: Asbestos, Lung Cancer Mortality, and the Healthy Worker Survivor Effect. Department of Epidemiology and Biostatistics, Harvard Medical School. Apr 2012.

Structural Nested Models and the Healthy Worker Survivor Effect: Revisiting the Asbestos and Lung Cancer Mortality Association. Department of Epidemiology, UNC Chapel Hill. Mar 2012.

Causal Inference Under Conditions of Time-Varying Confounding and Nonpositivity: Asbestos, Lung-Cancer Mortality, and the Healthy Worker Survivor Effect. Causal Reading Group, McGill University. Oct 2011.

Causal Inference Under Conditions of Time-Varying Confounding and Nonpositivity: Asbestos, Lung-Cancer Mortality, and the Healthy Worker Survivor Effect. Centre de Recherche du Centre Hospitalier de l'Universite de Montreal. Oct 2011.

Pending Grants

Informing national guidelines on diet patterns that promote healthy pregnancy outcomes (co-PIs: **Naimi AI** and Bodnar LM). NIH R01HD098130. 40% effort. Submitted (scored, 6th percentile).

The Per Protocol Effect of Zinc and Folic Acid on Semen Quality and Birth Outcomes (Total Direct Costs $ 2,734,202; PI: **Naimi AI**). NIH R01. 50% effort. In Preparation.

Machine Learning Methods for Heterogeneity Detection in Generalized Causal Inference Problems ($ 100,000; PI: **Naimi AI**). AWS Machine Learning Research Award. In Preparation.

Project PreMe: A predictive analytics framework for preterm birth (Total Direct Costs $ 2,218,504; PI: **Naimi AI**). NIH R01HD100424-01. 40% effort. Submitted.

Identifying opportunities to reduce the burden of severe maternal morbidity among obese women (PI: Bodnar LM). NIH R01HD097105. 20% effort. Submitted.

Funded Grants

Estimating the Effect of Low-Dose Aspirin on Fetal Loss in a Trial with Non-Compliance ($1,198,281; PI: **Naimi AI**). NIH R01 1R01HD093602-01. 60% Effort. 2018-2022.

Patient and System-Level Determinants of Oral Anticoagulation Use in Atrial Fibrillation (PI: Hernandez I). NHLBI 1K01HL142847-01. 0% effort. Project Period: 07/15/2018-06/30/2023.

Effects of NSAIDS and Non-NSAID Analgesics on Osteoarthritis Outcomes (PI: Jafarzadeh, R). NIA R03 AG060272. 0% effort. Project Period: 1-SEP-2018 - 31-MAY-2020.

Impact of paternal age on the health of gametes: risk of potential adverse outcomes ($1,494,120; PI: Robaire B) Canadian Institutes of Health Research, Team Grant, 2015-2020

Past Grants

Modeling Partial Non-Compliance in Clinical Trials. ($25,000; PI: Naimi, AI). NIH Clinical Translational Science Institute. Project Period: 2017.

Causal Modeling of Recurrent Injury Data ($ 362,499; PI: Steele R) Canadian Institutes of Health Research — NSERC Partnered, Collaborative Health Research Projects, 2014-2017

Maternal hypertension and infant health: Burden of disease and mediating role of preterm birth ($122,758; PI: Auger N) Canadian Institutes of Health Research, Operating Grant, 2014-2016

Editorial Service

Associate Editor for the Methods Corner, *Am J Epidemiol*, 2019-

Associate Editor, *Am J Epidemiol*, 2016 –

Editorial Board Member, *Epidemiol*, 2015 –

Peer Review

Am J Epidemiol (frequent reviewer)
Ann Epidemiol
Biometrics
Biom J
BioSocieties
Biostatistics
Birth Defects Res B Dev Reprod Toxicol
BJOG
BMJ
Cancer Causes Control
Environmental Health Perspectives
Epidemiology (frequent reviewer)
Epidemiologic Methods
Eur J Epidemiol
Health Serv Res
Int J Epidemiol (frequent reviewer)
J Epidemiol Community Health
Obesity
Occup Environ Med
Paediatr Perinat Epidemiol
PLoS One
Stat Med
SSM Population Health

Service

Ad hoc grant reviewer. National Institutes of Health. Special Emphasis Panel, Predoctoral Training in Advanced Data Analytics for Behavioral and Social Science.

Applied Epidemiology Exam Subcommittee: Chair, Department of Epidemiology, University of Pittsburgh, 2019–

Applied Epidemiology Exam Subcommittee: Member, Department of Epidemiology, University of Pittsburgh, 2018–

Education Committee Member: Society for Epidemiologic Research, 2018–

Scientific *ad hoc* Reviewer: Patient Centered Outcomes Research Institute, 2017

Department of Epidemiology, Doctoral qualifying exam committee member, University of Pittsburgh, 2017–

McGill University, Department of Obstetrics and Gynecology, Grand Rounds Journal Club Co-ordinator: Feb 2015–Aug 2015

McGill Causal Research Group: Faculty Co-Ordinator: Jan 2015–Mar 2015

Applied Causal Inference Student Group: Faculty Panelist (McGill): Feb 2014–Present

Workshop on Defending a Dissertation Proposal (UNC Chapel Hill): Jan 2012

UNC Causal Inference Research Group: Fall 2011–Spring 2012

Causal Inference Book Club (UNC Chapel Hill): Summer 2011

Journal Club on Epidemiologic Methods (UNC Chapel Hill): Summer 2011

Workshop & Seminar Series on Agent-Based Modeling (UNC Chapel Hill): Mar 2011

Methodologic Challenges in Social Epidemiology (UNC Chapel Hill): Fall 2010–2011

Social Epidemiology Journal Club (UNC Chapel Hill): Fall 2010–2011

Teaching

Graduate Instructor or Co-Instructor
2018-19: Epidemiologic Methods 2 (EPI2187, University of Pittsburgh). Three credits (Instructor).
2014-15: Introduction to Epidemiologic Science (OBGYN 900, McGill). Three credits.
2013-15: Causal Inference (EPID610, McGill). Three credits (with Robert Platt).
2009: Social Epidemiology Seminar (EPID889, UNC). Two credits (with James C. Thomas).

Guest Lecturer
2015-2017: Epidemiologic Methods 2 (EPI2187, University of Pittsburgh). 2-4 lectures.
2016: Reproductive Epidemiology (EPID2720, University of Pittsburgh). One lecture.
2015: Fertility Fellows Seminar (OBGYN 993, McGill). Six lectures.
2015: Causal Inference (EPID610, McGill). Six lectures.
2015: Principles of study design (EPIB 669, McGill). One lecture.
2012: Social Epidemiology: Concepts and Measures. (EPID 827, UNC). One lecture.
2011: Epidemiologic Analysis of Binary Data (EPID 718, UNC). One lecture.
2011: Theory and Quantitative Methods in Epidemiology (EPID 715, UNC). One lecture.

Teaching Assistant
2011: Theory and Quantitative Methods in Epidemiology (EPID 715, UNC). Four credits.

Short Courses & Workshops
2019: An Introduction G Methods. Advanced Methods Workshop. Society for Epidemiologic Research.

2018: An Introduction G Methods. Advanced Methods Workshop. Society for Epidemiologic Research.

2017: An Introduction to the Parametric G formula. Advanced Methods Workshop. Society for Epidemiologic Research.

2016: Fitting Structural Nested Models to Epidemiologic Data. Advanced Methods Workshop. Society for Pediatric and Perinatal Epidemiologic Research.

Advising

Masters Thesis Director (University of Pittsburgh)
Loren J Schleiden (2015-2017)
Gabriel Conzuelo (2015-2017)

Masters Thesis Committee Member (University of Pittsburgh)
Shannon Haldeman (Eric Roberts, Chair: 2020-)

Doctoral Committee Chair (University of Pittsburgh)
Ya Hui Yu (2015-2018)
Gabriel Conzuelo (2018-)
Yongqi Zhong (2019-)

Doctoral Dissertation Committee Member (University of Pittsburgh)
Hsing-Hua Sylvia Lin (Joyce Bromberger, Chair: 2015-2017)
Jingchua Guo (Trevor Orchard, Chair: 2017-2019)
Abigail Cartus (Lisa Bodnar, Chair: 2018-)
Abigail Cartus (Lisa Bodnar, Chair: 2018-)

Doctoral Dissertation Committee Member (McGill)
Abebula Wusiman (Paul Brassard, Chair: 2013-2017)
Bruno Riverin (Patricia Li, Chair: 2014-2017)
Akhil Purakkal (Belinda Nicolau, Chair: 2014-2017)

Memberships

Society for Epidemiological Research (2008 - Present)
Society for Pediatric and Perinatal Epidemiologic Research (2012 - Present)
American Public Health Association (2008 - Present)
American Statistical Association (2012 - Present)
International Society for Environmental Epidemiology (2015 - Present)