Social & Decision Analytics Division
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ERIC J. OH

Education

Ph.D., Biostatistics, University of Pennsylvania, 2020
Dissertation: *Statistical Approaches to Address Correlated Measurement Error in a Failure-Time Outcome and Covariates*
Advisor: Pamela Shaw, Ph.D.

M.S., Biostatistics, University of Pennsylvania, 2017
B.A., Mathematics and Economics, Swarthmore College, 2015

Experience

Social & Decision Analytics Division
University of Virginia Biocomplexity Institute
Research Assistant Professor June 2020 - Present

Philadelphia Neighborhood Incarceration Project
Statistical Consultant January 2019 - June 2020

University of Pennsylvania
Graduate Researcher August 2015 - June 2020

Manuscripts

Publications

Oh EJ, Shepherd BE, Lumley T, Shaw PA. Improved Generalized Raking Estimators to Address Dependent Covariate and Failure-Time Outcome Error. *Biometrical Journal*. https://doi.org/10.1002/bimj.202000187.

Oh EJ, Shepherd BE, Lumley T, Shaw PA. Raking and Regression Calibration: Methods to Address Bias from Correlated Covariate and Time-to-Event Error. *Statistics in Medicine*, 2020. https://doi.org/10.1002/sim.8793

Johnson JJ, Shaw PA, **Oh EJ**, et al. The carbon isotope ratios of nonessential amino acids identify sugar-sweetened beverage consumers in a 12-week clinical feeding study with varying SSB and meat exposures. *The American Journal of Clinical Nutrition*. https://doi.org/10.1093/ajcn/nqaa374.
Bhatla A, Michael MM, Adusumalli S, Hyman MC, **Oh EJ**, et al. COVID-19 and cardiac arrhythmias. *Heart Rhythm*, 2020.
https://doi.org/10.1016/j.hrthm.2020.06.016

Votruba SB, Shaw PA, **Oh EJ**, Venti CA, Bonfiglio S, Krakoff J, O'Brien, DM. Associations of Plasma, Red Blood Cell, and Hair Carbon and Nitrogen Isotope Ratios with Fish, Meat, and Sugar Sweetened Beverage Intake with a 12-week Inpatient Feeding Study. *The American Journal of Clinical Nutrition*, 2019. https://doi.org/10.1093/ajcn/nqz208

Johnson J, Votruba SB, Krakoff J, Shaw PA, **Oh EJ**, Wooller M, O'Brien DM. Amino Acid Carbon Stable Isotope Ratios Indicate Sugar Sweetened Beverage and Meat Exposure in a Clinical Feeding Study. (P18-125-19), *Current Developments in Nutrition*, Volume 3, Issue Supplement 1, June 2019, nzz039. https://doi.org/10.1093/cdn/nzz039.P18-125-19

Oh EJ, Shepherd BE, Lumley T, Shaw PA. Considerations for analysis of time to event outcomes measured with error: Bias and Correction with SIMEX. *Statistics in Medicine*, 2018; 37: 1276– 1289. https://doi.org/10.1002/sim.7554

Schapira MM, Imbert D, **Oh EJ**, Byhoff E, Shea JA. Public Engagement with Scientific Evidence in Health: A Qualitative Study among Primary-Care Patients in an Urban Population. *Public Understanding of Science*, 2016; 25(5), 612–626. https://doi.org/10.1177/0963662514560489

Papers in Preparation

Deo R*, **Oh EJ***, Soliman EZ, Cohen DL, Dobre M, Kansal M, Lash JP, Townsend RR, Fink JC, Rahman M, Sharma K, Feldman HI, Guo W, Yang W. Extracting Automatic Twelve Lead ECG Output and the Prediction of Cardiovascular Death: Findings from the Chronic Renal Insufficiency Cohort Study. *Submitted for publication.* * co-first author.

Oh EJ, Mikytuck A, Lancaster V, Goldstein J, Keller S. Design and Estimation for the Population Prevalence of Infectious Diseases. *Submitted for publication.* https://www.medrxiv.org/content/10.1101/2021.02.05.21251231v1.

Oh EJ, Johnson JJ, Wooller MJ, O'Brien DM, Shaw PA. Calibrating amino acid stable isotope ratio data based on linear modeling of multiple co-injected standards. *Submitted for publication.*

Linehan K, **Oh EJ**, Thurston J, Shipp SS. Using Machine Learning and Information Retrieval to Identify Federally Funded Research and Development Trends. *In preparation*

Projects

Counterfactual Recidivism Risk Assessments: Considers the use of recidivism risk assessments derived from machine learning algorithms as decision-support tools.

Philadelphia Neighborhood Incarceration: Investigation of incarceration across Philadelphia zip codes. Utilizes Bayesian spatial model to model spatially correlated trends.

Software

RRCME: R package that implements generalized raking and regression calibration methods to correct bias under correlated time-to-event and covariate error settings.

Presentations

Platform

"Machine Learning Based Identification of Emerging Research Topics Using Research & Development Administrative Data". Federal Committee on Statistical Methodology Research and Policy Conference, 2021, Virtual.

"Improving the Efficiency of Generalized Raking Estimators to Address Correlated Covariate and Failure-Time Outcome Error". *Contributed talk*. Annual meeting of the Eastern North American Region of the International Biometric Society, 2020, Virtual.

"Comparison of Sampling Designs for the Selection of a Validation Subset to Address Correlated Covariate and Failure-Time Outcome Error". *Contributed talk*. Joint Statistical Meetings, 2019, Denver, CO.

"Raking and Regression Calibration: Methods to Address Bias from Correlated Covariate and Time-to-Event Error". *Invited talk*. Annual meeting of the Eastern North American Region of the International Biometric Society, 2019, Philadelphia, PA.

"Raking and Regression Calibration: Methods to Address Bias from Correlated Covariate and Time-to-Event Error." *Speed talk*. Joint Statistical Meetings, 2018, Vancouver, BC.

"Considerations for Analysis of Time-to-Event Outcomes Measured with Error: Bias and Correction with SIMEX". *Contributed talk*. Annual meeting of the Eastern North American Region of the International Biometric Society, 2017, Washington, D.C.

"Considerations for Analysis of Time-to-Event Outcomes Measured with Error". *Contributed talk.* Joint Statistical Meetings, 2016, Chicago, IL.
Poster

"Raking and Regression Calibration: Methods to Address Bias from Correlated Covariate and Time-to-Event Error". Statistical Challenges and Opportunities in HIV/AIDS Research in the Era of Getting-to-Zero HIV Infections, 2019, Philadelphia, PA.

"Raking and Regression Calibration: Methods to Address Bias from Correlated Covariate and Time-to-Event Error". Joint Statistical Meetings, 2018, Vancouver, BC.

Teaching

Teaching assistant

Programming and Computation for Biomedical Data Science (2019). Department of Biostatistics, University of Pennsylvania.

Statistical Inference I (2016, 2017). Department of Biostatistics, University of Pennsylvania.

Mathematical Statistics II (2014). Department of Mathematics and Statistics, Swarthmore College.

Mathematical Statistics I (2013). Department of Mathematics and Statistics, Swarthmore College.

Scientific Memberships

Eastern North American Region of the International Biometric Society (2016)
American Statistical Association (2015)

Service

Journal Reviewer

The American Statistician
Biometrics