Glen McGee, PhD

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ORCID

Current Position

Assistant Professor 2020—
Department of Statistics and Actuarial Science
University of Waterloo

Education

PhD in Biostatistics 2014–2019
Harvard University, Cambridge, MA
Dissertation: Topics in Cluster-Correlated Data
Committee: Sebastien Haneuse, Brent Coull, Sharon-Lise Normand

MA in Biostatistics 2014–2016
Harvard University, Cambridge, MA
GPA: 3.97/4.00

BScH in Mathematics and Economics 2010–2014
Queens University, Kingston, ON
GPA: 4.19/4.30

Research & Consulting Experience

Postdoctoral Researcher 2019–2020
Statistical methods for multigenerational studies in epidemiology
Modelling high-dimensional mixtures of environmental pollutants
Non-random ascertainment of disease in electronic medical records

Doctoral Researcher 2015–2019
Informatively empty clusters in multigenerational studies
Motivated by non-mothers in third-generation ADHD research
Exposure misclassification when cluster size is informative
Motivated by recall bias in reporting multigenerational exposures
Outcome-dependent sampling designs for correlated data
Motivated by hospital profiling using Medicare claims data

Research Assistant 2016–2019
Correcting for measurement error in case-crossover designs

Statistical Consultant 2017–2018
Time series analysis of the effectiveness of pneumonia vaccine (Ecuador)
Analysis of malpractice claims against resident physicians (USA)

Biostatistics Student Consultant 2016–2019
Biostatistics Student Consulting Center, Harvard University, Boston, MA

Summer Research Assistant Summer 2013
Financial Studies Division, Bank of Canada, Ottawa, ON
Statistical modelling of non-bank payment database

Teaching

Instructor

University of Waterloo

Applied Linear Models (STAT 331) — Winter 2021

Harvard University (avg. student eval.)

Biostatistics Prep Course: Introductory Probability (4.9/5.0) — August 2018

Biostatistics Prep Course: Introductory Probability (4.9/5.0) — August 2017

Teaching Assistant

Harvard University (avg. student eval.)

Statistical Methods (4.7/5.0) — Fall 2018

Analysis of Multivariate and Longitudinal Data (4.0/5.0) — Spring 2017

Statistical Methods I (4.9/5.0) — Fall 2016

Regression and ANOVA in Experimental Research (4.7/5.0) — Fall 2015

Queens University (grading only)

Linear Algebra (NA) — Fall 2013

Introduction to Linear Algebra (NA) — Spring 2012

Advising Experience

Ruofan Bie (Biostatistics; MS student) — Summer 2019—

Co-advised project on small sample bias in GEE and marginalized multilevel models

Editorial

Statistical Reviewer for JAMA Network Open — 2019—

Ad-Hoc Referee:

Biometrics
Statistical Methods in Medical Research
Biostatistics
American Journal of Epidemiology
JAMA Network Open
Epidemiologic Methods
American Journal of Infection Control

Computing Experience

R (Expert)

Including: `Rcpp (C++); tidyverse; ggplot2; ShinyR; Plotly; R-Markdown`

Some experience: Python; Stata; SAS

Awards

Young Investigator Award (ASA Section on Statistics in Epidemiology) — 2020

Certificate of Distinction in Teaching (Department of Biostatistics) — 2019

ENAR Distinguished Student Paper Award — 2019

International Conference on Health Policy Statistics Travel Award — 2018

Harvard University Certificate of Distinction in Teaching (Derek Bok Center) — 2016

NSERC CGS-M Award (Declined in favor of Harvard funding) — 2014

Albert Harold Lightstone Scholarship — 2013

Nellie and Ralph Jeffery Award in Mathematics — 2012, 2013

James H Rattray Scholarship in Science — 2012

Queen's Appeal Undergraduate Scholarship — 2011

Annie Bentley Lillie Prize In First Year Calculus — 2011

Dean's Honour List with Distinction — 2010, 2011

Queen's University Excellence Scholarship — 2010

Professional Associations

ASA Member	2019–
SSC Member	2021–

Publications

* indicates co-first authorship.

McGee, G., Weisskopf, M. G., Kioumourtzoglou, M. A., Coull, B. A., and Haneuse, S. (2019). "Informatively empty clusters with application to multigenerational studies". *Biostatistics.* DOI:10.1093/biostatistics/kxz005

McGee, G., Schildcrout, J., Normand, S.-L. and Haneuse, S. (2020). "Outcome-Dependent Sampling in Cluster-Correlated Data Settings with Application to Hospital Profiling." *Journal of the Royal Statistical Society: Series A.* DOI:10.1111/rssa.12503

Coull, B., Lee, S., **McGee, G.**, Manjourides, J., Mittleman, M., and Wellenius, G. (2019). "Corrections for Measurement Error Due to Delayed Onset of Illness for Case-Crossover Designs." *Biometrics.* DOI:10.1111/biom.13173

Glover, M., **McGee, G.**, Wilkinson, D., Singh, S., Bolick, A., Betensky, R., Harvey, H. B., Weinstein, D., and Schaffer, A. (2020). "Characteristics of Paid Malpractice Claims Among Resident Physicians from 2001-2015." *Academic Medicine.* DOI:10.1097/ACM.0000000000003039

McGee, G., Perkins, N. J., Mumford, S. L., Kioumourtzoglou, M. A., Weisskopf, M. G., Schildcrout, J. S., Coull, B., Schisterman, E., and Haneuse, S. (2020). "Methodological Issues in Population-Based Studies of Multigenerational Associations." *American Journal of Epidemiology.* DOI:10.1093/aje/kwaa125

McGee, G., Kioumourtzoglou, M.-A., Weisskopf, M., Haneuse, S., and Coull, B. (2020). "On the Interplay Between Exposure Misclassification and Informative Cluster Size in Multigenerational Studies." *Journal of the Royal Statistical Society: Series C.* DOI:10.1111/rssc.12430

Allen, W. E.*, Altae-Tran, H.*, Briggs, J.*, Jin, X.*, **McGee, G.***, Andy Shi*, Raghavan, R., Kamariza, M., Nova, N. . . . Zhang, F., and Lin, X. (2020). Population-scale Longitudinal Mapping of COVID-19 Symptoms, Behavior, and Testing Identifies Contributors to Continued Disease Spread in the United States. *Nature Human Behaviour.* DOI:10.1038/s41562-020-00944-2

Sotomayor, R. J., Toscano, C. M., Choez, X. S., Ortíz, M. V., Condo, J. R., Ghisays, G., Haneuse, S., Weinberger, D. M., **McGee, G.**, & de Oliveira, L. H. (2020). "Impact of pneumococcal conjugate vaccine on pneumonia hospitalization and mortality in children and elderly in Ecuador: Time series analyses." Vaccine, 38(45), 7033-7039. DOI:10.1016/j.vaccine.2020.09.032

Manuscripts In Preparation

Bie, R., Haneuse, S., Huey, N., Schildcrout, J. and **McGee, G.** "Fitting Marginal Models in Small Samples: A Simulation Study of Marginalized Multilevel Models and Generalized Estimating Equations." *Submitted*

Quante, M. D., **McGee, G. W.**, Yu, X., Ash, T., Luo, M., Kaplan, E. R., Rueschman, M., Haneuse, S., Davison, K., Redline, S., Taveras, E. M. "Multilevel Determinants of Infant Sleep Duration and Continuitu." *In preparation.*

McGee, G. W., Wilson, A., Webster, T., Coull, B. "Bayesian Multiple Index Models for Environmental Mixtures." *Submitted.* arXiv preprint arXiv:2101.05352

McGee, G. W., Haneuse, S., Coull, B., Weisskopf, M., Rotem, R. "On the Nature of Informative Presence Bias in Analyses of Electronic Health Records." *Submitted.*

Presentations

2020 Invited Seminar, International Conference on Computational and Methodological Statistics (CMStatistics 2020), London, UK. (Virtually). "On the Interplay Between Exposure Misclassification and Informative Cluster Size."

2020 Invited Seminar, Student Seminar Series, Department of Statistics and Actuarial Science, University of Waterloo, ON. (Virtually). "Bayesian Multiple Index Models for Multi-Pollutant Mixtures."

2020 Invited Oral Presentation, Health Data Science Lab, University of Waterloo, ON. (Virtually). "Bayesian Multiple Index Models for Multi-Pollutant Mixtures."

2020 New Investigator Lightning Talk, NIEHS PRIME Program Grantee Meeting, NIEHS, Durham, NC (Virtually). "Bayesian Single and Multiple Index Models for Multi-Pollutant Mixtures."

2020 Contributed Oral Presentation, Joint Statistical Meetings, Philadelphia, PA (Virtually). "On the Interplay Between Exposure Misclassification and Informative Cluster Size."

2020 Contributed Oral Presentation, ENAR Spring Meeting, Nashville, TN (Virtually). "On the Interplay Between Exposure Misclassification and Informative Cluster Size."

2020 Invited Seminar, Department of Biostatistics, University of Toronto, Toronto, ON. "Methodological Problems in Multigenerational Epidemiology."

2020 Invited Seminar, Department of Statistics and Actuarial Science, University of Waterloo, ON. "Methodological Problems in Multigenerational Epidemiology."

2019 Invited Seminar, International Conference on Computational and Methodological Statistics (CMStatistics 2019), London, UK. "Outcome-Dependent Sampling with Application to Hospital Profiling."

2019 Invited Seminar, Department of Biostatistics, Vanderbilt University Medical Center, Nashville, TN. "Methodological Problems in Multigenerational Epidemiology."

2019 Oral presentation, Nurses Health Study Meeting, Brigham and Women's Hospital, Boston, MA. "On the Interplay Between Exposure Misclassification and Informative Cluster Size."

2019 Contributed Oral Presentation, ENAR Spring Meeting, Philadelphia, PA. "Informatively Empty Clusters with Application to Transgenerational Studies."

2019 Quantitative Issues in Cancer Research Working Seminar, Department of Biostatistics, Harvard University, Boston, MA. "Methodological Considerations for Studies of Multigenerational and Transgenerational Effects."

2019 Invited Seminar, Department of Mathematics and Statistics, York University, Toronto, ON. "Informatively Empty Clusters and Multigenerational Studies."

2018 Oral presentation, Nurses Health Study Meeting, Brigham and Women's Hospital, Boston, MA. "Informatively Empty Clusters with Application to Transgenerational Studies."

2018 Contributed oral presentation, Joint Statistical Meetings, Vancouver, BC. "On the Impact of Empty Clusters."

2018 Working Group on Outcome-Dependent Sampling, National Institute of Child Health and Human Development (NIH), Bethesda, MD. "Statistical Considerations for Transgenerational Studies."

2018 Poster presentation, Harvard/MIT ACE Science Advisory Committee Meeting, Boston, MA. "Corrections for Measurement Error Due to Delayed Onset of Illness for Case-Crossover Designs."

2018 Contributed oral presentation, International Conference on Health Policy Statistics, Charleston, SC. "Outcome-Dependent Sampling in Cluster-Correlated Data Settings with Application to Hospital Profiling."

2017 Contributed oral presentation, Eastern North American Region Spring Meeting, Washington, DC. "Outcome-Dependent Sampling in Cluster-Correlated Data Settings with Application to Hospital Profiling."

2016 Invited seminar, Environmental Statistics Seminar Series, Harvard University. "Corrections for Measurement Error Due to Delayed Onset of Illness in Case-Crossover Designs."

2016 Working Group on Outcome-Dependent Sampling, National Institute of Child Health and Human Development (NIH), Bethesda, MD. "Mixed Effects Models Under Outcome Dependent Sampling."

2015 P01/Environmental Statistics Retreat, Wellesley College Club, MA. "Mixed Effects Models Under Outcome Dependent Sampling."

2015 Summer Research Presentation, Department of Biostatistics, Harvard University, Cambridge, MA. "Generalized Linear Mixed Models Under Outcome Dependent Sampling."

2013 Oral presentation, Financial Stability Department, Bank of Canada."The Role of Non-Banks in the Payment Industry: Adoption and Use."