

LucyD'Agostino McGowan

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contact

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website

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LucyStats

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LucyMcGowan

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languages

proficient Italian literary,
written, & oral skills

programming

dev: R, use: R, SAS,
Stata, Python, ArcGIS

Interests

ROC methodology, statistical methodology for diagnostic medicine, clinical trials, predictive modeling, large-scale inference, disparities research, community-based participatory research

Education

PhD Student in Biostatistics, GPA 3.95

Vanderbilt University

Fellow, Big Biomedical Data Science Training, 2016-2017

MS in Biostatistics, December 2013, GPA 3.88

Washington University School of Medicine

Thesis: *Quantitative Assessment of the Community Research Fellows Training Program*

BA with Distinction and Highest Honors

University of North Carolina at Chapel Hill

Religious Studies: GPA 3.92 Romance Languages: GPA 3.86

Thesis: *Engaging Catholic Youth Today: High School Youth Ministry in the United States*

Study Abroad Venice, Italy (*Wake Forest University*) Summer 2009

Rome, Italy (*The Pontifical University of Saint Thomas Aquinas*) Summer 2010

Teaching Experience

Vanderbilt University

Teaching Assistant

Regression Modelling Strategies

Spring 2017

Statistical Collaboration in Health Sciences

Fall 2015

Modern Regression Analysis

Spring 2015

Principles of Modern Biostatistics

Fall 2015

Washington University School of Medicine

Teaching Assistant

Introduction to Clinical Epidemiology

Fall 2013

Randomized Controlled Trials

Fall 2013

Introduction to SAS

Spring 2013

Research experience

2015-present

VANDERBILT UNIVERSITY

Nashville, TN

Graduate Research Assistant, Department of Biostatistics and Veteran Affairs

Perform statistical analyses and large-scale inference on a retrospective national cohort of 411,055 Veterans Health Administration patients. Experience with manipulating and analyzing large datasets, as well as integrating data from multiple sources, such as the National Death Index, Medicare, and Medicaid. Current focus is the association between diabetes medications and congestive heart failure

Research experience, continued

2015	CLEVELAND CLINIC <i>Summer Graduate Fellow, Department of Quantitative Health Sciences</i> Worked under Nancy Obuchowski on multi-reader multi-case ROC analyses. Conducted a examining the effect of location bias in two large MRMC ROC studies, comparing three ROC scoring methods. Compared one method that only uses the maximum confidence score and does not take location bias into account (maxROC), and two methods that take location bias into account: the region of interest ROC (ROI-ROC) and the free-response ROC (FROC).	Cleveland, OH
2012–2014	WASHINGTON UNIVERSITY SCHOOL OF MEDICINE <i>Statistical Data Analyst, Department of Surgery, Division of Public Health Sciences</i> Began as a research assistant and promoted to statistical data analyst position. Experience in planning and executing analytical projects. Lead survey data manager for Center for Outpatient Health Study focusing on health literacy. Performed statistical analyses including univariate, bivariate, multivariate, and mixed methods. Extensive SAS experience in analyzing large datasets including data step processing, data manipulation, macro creation, data mining, regression analyses, survival analyses, and two-time winner of SAS Student Ambassador award.	St. Louis, MO
2012-2014	GUTMANN RESEARCH LABORATORY <i>Research Assistant, Washington University School of Medicine, Department of Neurology</i> Performed microarray analysis using programs such as R and Partek to determine unique transcripts. Worked with researchers to prioritize transcripts for validation.	St. Louis, MO
Summer 2013	GRAHAM COLDITZ LABORATORY <i>Summer Intern, Washington University School of Medicine, Division of Public Health Sciences</i> Created custom labor curves based on women in labor's individual characteristics. Obtained model estimates and 95% confidence intervals for the custom labor curves using bootstrap resampling methods.	St. Louis, MO

Awards

2016	Vanderbilt Big Biomedical Data Science Fellow
2016	First Place, Government Statistics Section Student Data Challenge, ASA Joint Statistical Meeting
2016	Second Place, Scientific and Public Affairs Advisory Committee Poster Competition, ASA Joint Statistical Meeting
2016	Southern Startup Internship Program in Data Science (DataStart) Recipient
2016	SAS Student Ambassador, SAS Global Forum 2016
2015	First Place, Government Statistics Section Student Data Challenge, ASA Joint Statistical Meeting
2015	Prezi Student Ambassador
2014	SAS Student Scholar, PharmaSUG
2014	SAS Student Ambassador, SAS Global Forum 2014
2013	Best Contributed Paper in the Statistics and Data Analysis Section at SAS Global Forum
2013	First Place, Student Research Competition, Applied Public Health Statistics, 141st APHA Annual Meeting
2013	Ellis R. Ott Scholarship: ASQ Statistics Division
2013	SAS Student Scholar, NESUG
2013	SAS Student Ambassador, SAS Global Forum 2013
2012	NIAF Jim Cantalupo Scholarship
2012	Gertrude M. Cox Scholarship for Women in Statistics Honorable Mention
2008-2012	UNC Public Service Scholar
2011	Dunlevie Honors Undergraduate Research Award

2011-2012 National Society of Leadership and Success
2010 Programma Ponte Scholarship
2010 Newman Scholar
2009-2012 UNC Dean's List

Invited Presentations

SAS Global Forum 2016

Oral Presentation

Lucy D'Agostino McGowan, Robert A. Greevy, Jr "Integrating SAS[®] and R to Perform Optimal Propensity Score Matching."

SAS Global Forum 2015

Oral Presentation

Lucy D'Agostino McGowan, Alice Toll "Using PROC SURVEYREG and PROC SURVEYLOGISTIC to Assess Potential Bias."

SAS Global Forum 2014

Oral Presentation

Lucy D'Agostino McGowan, Melody S. Goodman, Kimberly A. Kaphingst "Using SAS/STAT[®] Software to Validate a Health Literacy Prediction Model in a Primary Care Setting."

Contributed presentations

ENAR 2017

Oral Presentation

Lucy D'Agostino McGowan, Robert Alan Greevy, Jr, "Simplifying and Contextualizing Sensitivity to Unmeasured Confounding Tipping Point Analyses."

ASA Joint Statistical Meeting 2016

Oral Presentation

Ryan Jarrett, **Lucy D'Agostino McGowan**, "Assessing the Association Between Accident Injury Severity and NCAAP Car Safety Ratings."

ASA Joint Statistical Meeting 2016

Poster

Lucy D'Agostino McGowan, Robert A. Greevy, Jr, "Practical Guidance and Tools for Rule-Out Sensitivity to Unmeasured Confounding Analyses."

ASA Joint Statistical Meeting 2015

Oral Presentation and Poster

Lucy D'Agostino McGowan, Alice Toll, "Census Tract-Level Disparities: Examining Food Swamps and Food Deserts."

141st American Public Health Association Annual Meeting 2013

Poster

Lucy D'Agostino McGowan, Melody S. Goodman, "Developing County-Level Estimates of Racial Disparities in Obesity Using Multilevel Reweighted Regression."

141st American Public Health Association Annual Meeting 2013

Oral Presentation

Lucy D'Agostino McGowan, Melody S. Goodman, "Small Areal Estimation of Racial Disparities in Diabetes Using Multilevel Reweighted Regression."

SAS Analytics 2013

Poster

Lucy D'Agostino McGowan, Patrick J. McGowan, "Mining Through Resumes: Utilizing SAS to Increase Efficiency and Objectivity in the Hiring Process."

Northeast SAS Users Group 2013

Poster

Lucy D'Agostino McGowan "SAS[®] for Budgeting an Ideal Wedding"

Northeast SAS Users Group 2013

Oral Presentation

Lucy D'Agostino McGowan, Melody S. Goodman, "Using PROC GLIMMIX and PROC SGPLOT to Demonstrate County-level Racial Disparities in Obesity in North Carolina."

SAS Global Forum 2013

Oral Presentation

Lucy D'Agostino McGowan, Melody S. Goodman, "Multilevel Reweighted Regression Models to Estimate County-Level Racial Health Disparities Using PROC GLIMMIX."

Activities

Vanderbilt University

2016-2017	R-Ladies Nashville, co-founder
2016-2017	Graduate Student Council, President
2016-2017	Biostatistics Graduate Student Association, Vice President
2015	Scholarship of Teaching and Learning, Scholar
2014-2015	Graduate Student Council, Vice President of Social Affairs (2015), Committee member (2014)
2014-2015	GRE Math Tutor
2013-2016	American Statistical Association, Member

Washington University School of Medicine in St. Louis

2013-2014	American Public Health Association, Member, Abstract Reviewer
2013-2014	Biostatistics and SAS tutor

University of North Carolina at Chapel Hill

2011-2012	Carolina Dining Services, Student Manager
2011-2012	Italian Club, President
2010-2011	Information Technology Services, Walk-in Computing Consultant
2010-2011	Newman Catholic Student Center, Director of Community Building
2010	Daily Tar Heel Cartoonist
2009-2012	Habitat for Humanity Volunteer
2008-2009	Residence Hall Association, Craige Community Governor
2008-2011	Inter-Faith Council Soup Kitchen Volunteer

Peer-reviewed publications

D'Agostino McGowan, Lucy, Bullen, J. A., & Obuchowski, N. A. (2016). Location Bias in ROC Studies. *Statistics in Biopharmaceutical Research*, 00–00.

Drake, B. F., Brown, K., **D'Agostino McGowan, Lucy**, Haslag-Minoff, J., & Kaphingst, K. (2016). Secondary consent to biospecimen use in a prostate cancer biorepository. *BMC Research Notes*, 9(1), 346.

Kaphingst, K. A., Stafford, J. D., **D'Agostino McGowan, Lucy**, Seo, J., Lachance, C. R., & Goodman, M. S. (2015). Effects of racial and ethnic group and health literacy on responses to genomic risk information in a medically underserved population. *Health Psychology*, 34(2), 101–110.

Chen, Y.-H., **D'Agostino McGowan, Lucy**, Cimino, P. J., Dahiya, S., Leonard, J. R., Lee, D. Y., & Gutmann, D. H. (2015). Mouse Low-Grade Gliomas Contain Cancer Stem Cells with Unique Molecular and Functional Properties. *Cell Reports*, 10(11), 1899–1912.

D'Agostino McGowan, Lucy, Stafford, J. D., Thompson, V. L., Johnson-Javois, B., & Goodman, M. S. (2015). Quantitative Evaluation of the Community Research Fellows Training Program. *Frontiers in Public Health*, 3(1), 11.

Fisher, M. J., Loguidice, M., Gutmann, D. H., Listernick, R., Ferner, R. E., Ullrich, N. J., ... Liu, G. T. (2014). Gender as a disease modifier in neurofibromatosis type 1 optic pathway glioma. *Annals of Neurology*, 75(5), 799–800.

Griffey, R. T., Kennedy, S. K., **D'Agostino McGowan, Lucy**, Goodman, M., & Kaphingst, K. A. (2014). Is low health

literacy associated with increased emergency department utilization and recidivism? *Academic Emergency Medicine : Official Journal of the Society for Academic Emergency Medicine*, 21(10), 1109–1115.

Diggs-Andrews, K. A., Brown, J. A., Gianino, S. M., **D'Agostino McGowan, Lucy**, Rubin, J. B., Wozniak, D. F., & Gutmann, D. H. (2014). Reply. *Annals of Neurology*, 75(5), 800–801.

Colditz, G. A., **D'Agostino McGowan, Lucy**, James, A. S., Bohlke, K., & Goodman, M. S. (2014). Screening for colorectal cancer: using data to set prevention priorities. *Cancer Causes & Control : CCC*, 25(1), 93–98.

D'Agostino McGowan, Lucy, Gennarelli, R., Lyons, S., & Goodman, M. (2013). Using Small-Area Analysis to Estimate County-Level Racial Disparities in Obesity Demonstrating the Necessity of Targeted Interventions. *International Journal of Environmental Research and Public Health*, 11(1), 418–428.