

Lucy D'Agostino McGowan

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contact

2525 West End
Ste. 11000
Nashville, TN
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Link to PubMed
[linkedin://ldmcgowan](#)

languages

proficient Italian literary,
written, & oral skills

programming

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
Fellow, Big Biomedical Data Science Training, 2016-2017
Vanderbilt University

MS in Biostatistics, December 2013, GPA 3.88
Washington University School of Medicine in St. Louis
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

Fall 2015 Teaching Assistant, Statistical Collaboration in Health Sciences
Spring 2015 Teaching Assistant, Modern Regression Analysis
Fall 2014 Teaching Assistant, Principles of Modern Biostatistics

SAS

2015-present Statistical Contract Instructor

Washington University School of Medicine

Summer 2013 Teaching Assistant, Introduction to SAS
Fall 2013 Teaching Assistant, Introduction to Clinical Epidemiology
Fall 2013 Teaching Assistant, Randomized Controlled Trials

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 MRMOC 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
2014–2015	VANDERBILT UNIVERSITY <i>Independent Study/Directed Research under Professor Robert Greevy</i> Research focuses on propensity score analyses, specifically examining the operating characteristics as well as the potential of pre-analysis optimal covariate trimming.	Nashville, TN
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

- 2016 **Oral Presentation** SAS Global Forum 2016
Lucy D'Agostino McGowan, Robert A. Greevy, Jr "Integrating SAS® and R to Perform Optimal Propensity Score Matching"
- 2015 **Oral Presentation** SAS Global Forum 2015
Lucy D'Agostino McGowan, Alice Toll "Using PROC SURVEYREG and PROC SURVEYLOGISTIC to Assess Potential Bias."
- 2014 **Oral Presentation** SAS Global Forum 2014
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

- 2016 **Oral Presentation** ASA Joint Statistical Meeting 2016
Ryan Jarrett, Lucy D'Agostino McGowan, "Assessing the Association Between Accident Injury Severity and NCAP Car Safety Ratings"
- 2016 **Poster** ASA Joint Statistical Meeting 2016
Lucy D'Agostino McGowan, Robert A. Greevy, Jr, "Practical Guidance and Tools for Rule-Out Sensitivity to Unmeasured Confounding Analyses "
- 2015 **Oral Presentation and Poster** ASA Joint Statistical Meeting 2015
Lucy D'Agostino McGowan, Alice Toll, "Census Tract-Level Disparities: Examining Food Swamps and Food Deserts"
- 2013 **Poster** 141st American Public Health Association Annual Meeting 2013
Lucy D'Agostino McGowan, Melody S. Goodman, "Developing County-Level Estimates of Racial Disparities in Obesity Using Multilevel Reweighted Regression"
- 2013 **Oral Presentation** 141st American Public Health Association Annual Meeting 2013
Lucy D'Agostino McGowan, Melody S. Goodman, "Small Areal Estimation of Racial Disparities in Diabetes Using Multilevel Reweighted Regression"
- 2013 **Poster** SAS Analytics 2013
Lucy D'Agostino McGowan, Patrick J. McGowan, "Mining Through Resumes: Utilizing SAS to Increase Efficiency and Objectivity in the Hiring Process"
- 2013 **Poster** Northeast SAS Users Group 2013
Lucy D'Agostino McGowan "SAS ® for Budgeting an Ideal Wedding"
- 2013 **Oral Presentation** Northeast SAS Users Group 2013
Lucy D'Agostino McGowan, Melody S. Goodman, "Using PROC GLIMMIX and PROC SGPLOT to Demonstrate County-level Racial Disparities in Obesity in North Carolina"
- 2013 **Oral Presentation** SAS Global Forum 2013
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 Graduate Student Council, President
- 2016 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

1. Drake, B.F., Brown, K., **D'Agostino McGowan, L.**, Haslag-Minoff, J., Kaphingst, K. (2016). Secondary consent to biospecimen use in a prostate cancer biorepository. *BMC Res Notes*, 18;9(1):346.
2. **D'Agostino McGowan, L.**, Bullen, J.A., & Obuchowski, N. A. (2016). Location Bias in ROC Studies. *Statistics in Biopharmaceutical Research*. <http://doi.org/10.1080/19466315.2016.1173583>
3. **D'Agostino McGowan, L.**, Stafford, J.D., Thompson, V.L., Johnson-Javois, B., & Goodman, M.S. (2015). Quantitative Evaluation of the Community Research Fellows Training Program. *Front Public Health*. 3,179.
4. Chen, Y. H., **D'Agostino McGowan, L.**, 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.
5. Kaphingst, K. A., Stafford, J. D., **D'Agostino McGowan, L.**, 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.
6. Griffey, R. T., Kennedy, S. K., **McGowan, L.**, Goodman, M., & Kaphingst, K. A. (2014). Is Low Health Literacy Associated With Increased Emergency Department Utilization and Recidivism?. *Academic emergency medicine*, 21(10), 1109-1115.
7. Diggs-Andrews, K. A., Brown, J. A., Gianino, S. M., **D'Agostino McGowan, L.**, Rubin, J. B., Wozniak, D. F., & Gutmann, D. H. (2014). Reply. *Annals of neurology*, 75(5), 800-801.
8. Fisher, M. J., Loguidice, M., Gutmann, D. H., Listernick, R., Ferner, R. E., Ullrich, N. J., ...**D'Agostino McGowan, L.** & Liu, G. T. (2014). Gender as a disease modifier in neurofibromatosis type 1 optic pathway glioma. *Annals of neurology*, 75(5), 799-800.
9. Colditz, G. A., **D'Agostino McGowan, L.**, James, A. S., Bohlke, K., & Goodman, M. S. (2014). Screening for colorectal cancer: Using data to set prevention priorities. *Cancer Causes & Control*, 25(1), 93-98.
10. **D'Agostino-McGowan, L.**, Gennarelli, R. L., Lyons, S. A., & Goodman, M. S. (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.