

# LucyD'Agostino McGowan

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## contact

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## website

www.lucymcgowan.com

## twitter

LucyStats

## github

LucyMcGowan

## orcid

0000-0001-7297-9359

## languages

proficient Italian literary,  
written, & oral skills

## programming

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

## Interests

## Education

## Research Experience

## Awards

## Outreach

## 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  
Thesis: *Quantitative Assessment of the Community Research Fellows Training Program*  
Washington University School of Medicine

**BA** with Distinction and Highest Honors  
Religious Studies: GPA 3.92 Romance Languages: GPA 3.86  
Thesis: *Engaging Catholic Youth Today: High School Youth Ministry in the United States*  
University of North Carolina at Chapel Hill

**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  
Statistical Collaboration in Health Sciences  
Modern Regression Analysis  
Principles of Modern Biostatistics  
Spring 2017  
Fall 2015  
Spring 2015  
Fall 2015

### Washington University School of Medicine

*Teaching Assistant*  
Introduction to Clinical Epidemiology  
Randomized Controlled Trials  
Introduction to SAS  
Fall 2013  
Fall 2013  
Spring 2013

## Research experience

2015-present	<b>VANDERBILT UNIVERSITY</b> <i>Graduate Research Assistant, Department of Biostatistics and Veteran Affairs</i> 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	Nashville, TN
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## Research experience, continued

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2015	<b>CLEVELAND CLINIC</b> <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
2012–2014	<b>WASHINGTON UNIVERSITY SCHOOL OF MEDICINE</b> <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	<b>GUTMANN RESEARCH LABORATORY</b> <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	<b>GRAHAM COLDITZ LABORATORY</b> <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

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## 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 NCAP 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*

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., Listerick, 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.