

ZACHARY O. BINNEY

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Website: www.NFLInjuryAnalytics.com

CAREER OBJECTIVES:

To teach epidemiology and quantitative literacy at multiple education levels and develop materials to aid this work for others; to conduct high-impact epidemiological research with a focus on quality over quantity and broad dissemination of results

RESEARCH INTERESTS:

Epidemiologic methods; predictive modeling; sports injuries; science communication; palliative and end-of-life care

EDUCATION

- A.B. in History, Philosophy and Social Studies of Science and Medicine** June 2008
University of Chicago, Chicago, IL
Thesis: "Are They Doing This Out of The Kindness of Their Hearts? Insurance Coverage of Hospice Care, 1982-2009"
- M.P.H. in Epidemiology** May 2013
Rollins School of Public Health, Emory University, Atlanta, GA
Thesis: "Impact of Inpatient Palliative Care Consultation on 30-day Hospital Readmissions and Near Misses" (Nominee, Charles C. Shepard Award)
- PhD in Epidemiology** May 2018
Rollins School of Public Health, Emory University, Atlanta, GA
George W. Woodruff Fellowship Award
Dissertation: "Epidemiology and Prediction of NFL Injuries"

TEACHING EXPERIENCE

- Oxford College of Emory University**
Assistant Professor
Introduction to Statistical Computing I & II (~25 students, undergraduates) Fall 2020-Present
Introduction to Scientific Methods (~25 students, undergraduates) Fall 2020-Present
- Georgia State University**
Instructor
Fundamentals of Epidemiology (~45-55 students, undergraduates) Fall 2018-Spring 2019
- Emory University, Rollins School of Public Health**
Instructor
Longitudinal Data Analysis (~50 students, MPH/PhD) Spring 2017-Spring 2019
Epidemiologic Methods II (~190 students, MPH/PhD) Spring 2018
Guest Lecturer
Evidence-Based Practice (~80 students, Doctor of Physical Therapy) Spring 2019-Spring 2020
Epidemiologic Modeling (~140 students, MPH/PhD) Fall 2016
- Emory University, Rollins School of Public Health**
Teaching Assistant/Associate (TA)
Epidemiologic Modeling (lab section, 25 MPH/PhD students, review materials) Fall 2016
Longitudinal Data Analysis (optional lab section, 12 MPH/PHD students, original materials) Spring 2016
Bias Analysis (optional lab section, 12 MPH/PhD students, original materials) Fall 2015
Applications of Epidemiologic Methods (lab section, 25 MPH/PhD students, review materials) Spring 2015
Epidemiologic Methods I (lab section, 25 MPH/PhD students, review materials) Fall 2014

Emory Palliative Care Center – Hospice and Palliative Medicine Fellows Conference	
Research Series Lecturer (~20 clinical staff, original materials)	
“How to Critically Read a Journal Article”	2012-2015
“Research Basics and Study Designs I”	2012-2015
“Research Basics and Study Designs II”	2012-2015
Emory Palliative Care Center – Journal Club (monthly)	
Statistical and Methods Consultant	2011-2016

TEACHING SAMPLES

Recorded Lectures

- Fundamentals of Epidemiology (main lecture): Introduction to Epidemiology, Georgia State University, sophomore undergraduates (Fall 2018)
<https://gsu.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=de75ebb0-136a-46e1-91e2-a94501143546>
- Longitudinal Data Analysis (main lecture): Linear Models for Correlated Data, Emory University, MPH and PhD students (Spring 2017)
<https://coursecast.sph.emory.edu/Panopto/Pages/Viewer.aspx?id=00eae40f-48e1-4d04-94a0-3fde1ae20a3d>
- Bias Analysis (lab session): Reliability, Validity, and Confounding, Emory University, MPH and PhD students, (Fall 2015)
<https://coursecast.sph.emory.edu/Panopto/Pages/Viewer.aspx?id=0a7aac3e-03ce-4ed0-8b27-633128b622e9>

WORK EXPERIENCE

- Oxford College of Emory University**, Oxford, GA August 2020-Present
Assistant Professor, Quantitative Theory and Methods (QTM)
- Teach courses on data science, analytics, statistics, programming, and epidemiology to freshmen and sophomore undergraduates in a small liberal arts college environment
- Binney Research, Analytics, and Sports Services, LLC**, Atlanta, GA June 2018-Present
Founder
- Consult on data science and analytics issues for sports, healthcare, media clients
 - Conduct quantitative epidemiologic analyses for pharmaceutical companies
 - Collaborate with major media companies to conduct and present high-impact research on television and digital platforms
- FootballOutsiders.com** September 2014-Present
Intern, Injuries; Injury Analyst; Guest Writer (September 2014-September 2017)
Staff Writer (September 2017-Present)
- Created novel, streamlined categorization scheme for 70,000+ football injuries
 - Led efforts to expand and strengthen injury data collection
 - Perform and disseminate studies on injury data for 25,000+ daily readers
- Epidemiology Research & Methods, LLC**, Atlanta, GA June 2018-June 2020
Epidemiologic Consultant
- Conduct quantitative market and epidemiologic analyses for pharmaceutical and lab companies
 - Prepare literature reviews for stakeholders to address key decision points in drug development, business planning
- Minnesota Twins Baseball Club**, Atlanta, GA (Remote) September 2017-January 2020
Injury Consultant
- Analyze MLB injury data for injury prediction and team performance monitoring

- Design internal studies to assess effectiveness of technological investments and programmatic changes related to player health and performance

Georgia State University, Atlanta, GA August 2018-May 2019
Part-Time Instructor

- Teach Fundamentals of Epidemiology course to ~50 sophomore-level undergraduate public health students twice per year

Emory University, Rollins School of Public Health, Atlanta, GA January 2017-May 2019
Adjunct Instructor

- Develop and teach Longitudinal Data Analysis course for ~50 advanced MPH and PhD epidemiology students each spring

Atlanta Hawks, Atlanta, GA October 2017-May 2018
Injury Consultant

- Advise NBA sports performance team on injury data collection and analysis efforts
- Collaborate to create dynamic tools to identify high-injury risk players

Georgia Tech Athletics, Atlanta, GA August 2017-May 2018
Freelance Injury Analyst

- Manage data from wearable technologies for Women's Volleyball
- Extract actionable insights for coaches and trainers from raw jump and movement data

Jacksonville Jaguars, Jacksonville, FL July 2013-February 2017
Freelance Statistical Analyst

- Manage and analyze large injury data set for NFL franchise
- Develop predictive injury tools to improve team health and performance

FiveThirtyEight.com, New York, NY February 2015-February 2016
Freelance Analyst and Writer

- Consult on professional football injury analyses
- Conduct analyses and write articles on head injuries and player performance

Emory Palliative Care Center, Atlanta, GA August 2011-December 2015
Research Analyst (August 2011-May 2013)

Associate Director of Research Programs and Innovation (May 2013-June 2014)

Senior Research Adviser (June 2014-December 2015)

- Collected and analyzed data for internal quality improvement and external research initiatives
- Prepared executive-level reports on complex business and resource allocation questions
- Instructed clinical staff in research and statistical topics
- Coordinated multiple grants on disparate topics simultaneously
- Hired and managed grant research staff to ensure timely and accurate data collection
- Presented study data in poster and oral format at regional and national conferences

The Advisory Board Company, Washington, DC July 2008-April 2011

Analyst, Healthcare Syndicated Research (July 2008-September 2009)

Senior Analyst, Healthcare Syndicated Research (October 2009-April 2011)

- Conducted long-term independent and team-based research efforts on broad array of oncology technologies and related healthcare issues
- Designed and executed intricate quantitative market and financial assessments for hospitals evaluating capital technology and infrastructure investments
- Established department-level standardized methodology for analyzing hospitals' surgical data
- Presented original research to hospitals and industry, as well as at clinical conferences
- Mentored new team members on project management and analysis protocols

Cable News Network (CNN), Atlanta, GA June 2004-January 2008

Freelance Health and Science Radio Editor, CNRRadio Network

- Created 30+ sound bites per day for distribution to our 2,000 worldwide affiliates
- Specialized in health and science, liaising with healthcare stakeholders to translate complex concepts into broadcast-style writing
- Managed multiple simultaneous projects continuously
- Facilitated communication between a wide range of stakeholders, including physicians, scientists, journalists and the public

AWARDS AND HONORS

Charles and Sue Hardman Scholarship (half-tuition plus assistantship) Rollins School of Public Health, Emory University, Atlanta, GA	2011-2013
George W. Woodruff Fellowship (fees + \$5,000/year added stipend) Laney Graduate School, Emory University, Atlanta, GA	2014-2018

SOCIETY MEMBERSHIPS

American Public Health Association	2012-2013
American Academy of Hospice and Palliative Medicine	2013-2015
Society for Epidemiologic Research	2014-2015
American Statistical Association	2017-Present

GRANTS

<u>Role</u>	<u>Funding Source</u>	<u>Title</u>	<u>Award Type</u>	<u>Amount</u>	<u>Years</u>
Data Analyst	American Heart Association	Predicting Lower Extremity Amputation and Cardiovascular Disease Risk with Peripheral Arterial Disease	Mentored Clinical & Population Research Award	\$154,000	2015-2017
Data Manager	Federal – NIH	The Living Well Project: Early Palliative Care and MI for Persons with AIDS	R01	\$2,500,000	2013-2016
Evaluation Coordinator	Federal – HRSA	Nurse Education, Practice, Quality, and Retention - Interprofessional Collaborative Practice	Interprofessional Training Grant	\$500,000	2012-2015
Project Coordinator (includes hiring and managing grant staff)	Healthcare Chaplaincy, Inc.	Impact of Hospital-Based Chaplain Support on Decision-Making During Serious Illness	Pilot	\$250,000	2012-2014
Project Coordinator (includes hiring and managing grant staff)	American Cancer Society	A 'protocol + practice-change' intervention for cancer pain control in EDs	Pilot exploratory	\$800,000	2011-2012
Lead Investigator	Rollins School of Public Health Assistantship	The Effect of an Inpatient Palliative Care Team on 30-Day Readmissions	Assistantship	\$10,000	2011-2013

Collaborator	From ED to Inpatient Hospice Unit (IPU): Avoiding Hospital Admissions
Lead Investigator	Inpatient Hospice Unit Study – Emory (INHOUSE)

PUBLICATIONS

Published

- Binney Z.O.***, Nelson K.N., Chamberlain A.T. Excess Pneumonia Mortality During a Legionnaires' Disease Outbreak in Flint, Michigan. *Epidemiology*. 2020.
- Binney Z.O.** Letter to the Editor: "Incorrect Rate Ratio in "Thursday Night Football's impact on all-cause injuries in NFL players during 2012 – 2017"." *The Physician and Sportsmedicine*. 2019. ePub ahead of print, posted online October 17, 2019. doi.org/10.1080/00913847.2019.1682484.
- Binney Z.O.** and Bachynski K.E. Estimating the prevalence at death of CTE neuropathology among professional football players. *Neurology*. 2019. 92(1): 43-45.
- Binney Z.O.** Concerns About As-Treated Analysis and Continued Question About As-Treated Analysis. Rapid Responses to: Does soccer headgear reduce the incidence of sport-related concussion? A cluster, randomised controlled trial of adolescent athletes. *British Journal of Sports Medicine*. 2019.
- Binney Z.O.** Letter to the Editor: "Relationship Between Pitching a Complete Game and Spending Time on the Disabled List for Major League Baseball Pitchers." *Orthopedic Journal of Sports Medicine*. 2018. 6(10): doi: 10.1177/2325967118799695.
- Lee S., Arya S., Zahner G., Cohen B.E., Hiramoto J., Wolkowitz O., Khakharia A., **Binney Z.O.**, Grenon M.S. The association of comorbid depression with mortality and amputation in veterans with peripheral artery disease. *Journal of Vascular Surgery*. 2018. 68(2): 536-542.
- Arya S, Long C, Khakharia A, **Binney Z.O.**, Brewster L, Goodney P, Patzer R, Wilson PWF. Race and socioeconomic status independently affect risk of major amputation in peripheral artery disease. *JAHA: Journal of the American Heart Association*. 2018. 7(2): pii: e007425.
- Arya S., Khakharia A., **Binney Z.O.**, et al. Association of statin dose with amputation and survival in patients with peripheral artery disease. *Circulation*. 2018. 137(14): 1435-1446.
- Arya S., Khakharia A., **Binney Z.O.**, et al. High hemoglobin A1c associated with increased adverse limb events in peripheral arterial disease patients undergoing revascularization. *Journal of Vascular Surgery*. 2018. 67(1): 217-228.
- Merchant, F.M., **Binney Z.O.**, Patel A., Li J., Peddareddy L.P., El-Chami M.F., Leon A.R., Quest T.E. Prevalence, predictors, and outcomes of advance directives in implantable cardioverter-defibrillator recipients. *Heart Rhythm*. 2017. 14(6): 830-6.
- Grandhige A.P., **Binney Z.O.**, Quest T.E. Respiratory Therapists' Experiences and Attitudes Regarding Terminal Extubations and End-of-Life Care. *Journal of Palliative Medicine*. 2016. 61(7): 891-6.
- Butler J.B., **Binney Z.O.**, Kalogeropoulos A., Owen M., Clevenger C.K., Gunter D., Georgiopolou V., Quest T.E. Advance Directives among Hospitalized Heart Failure Patients. *JACC Heart Failure*. 2015. 3(2): 112-21.
- Idler, E.L., Hart M.C., **Binney, Z.O.**, Grant, G.H., Perkins, M.M., Quest, T.E. Practical Matters and Ultimate Concerns, "Doing" and "Being": A Diary Study of the Chaplain's Role in the Care of the Seriously Ill in an Urban Acute Care Hospital. *Journal for the Scientific Study of Religion*. 2015. 54(4):722-38.
- Binney, Z.O.**, Majesko, A.A., Feingold, P.L., Buchman, T.G., and Quest, T.E. Feasibility and Economic Impact of Dedicated Hospice Inpatient Units for Terminally Ill ICU Patients. *Critical Care Medicine*. 2014. 42(5): 1074-80.

In Press

Pre-Prints

Binney Z.O., Hammond K.E., Klein M., Goodman M.C., Janssens A.C.J.W. NFL Injuries Before and After the 2011 Collective Bargaining Agreement (CBA). Submitted May 3, 2018.
<https://arxiv.org/abs/1805.01271>

Smoliga J.M., **Binney Z.O.** What factors influence concussion risk in American football? Bayesian analysis of 8 seasons of National Football League data. Submitted January 31, 2022.
<https://www.medrxiv.org/content/10.1101/2022.01.29.22270096v1>

In Development

Binney Z.O., Smoliga J.S. Bad Altitude: Categorizing Elevation Produces Spurious Association With Concussions in the National Football League (NFL). Under review at *Journal of Orthopedic and Sports Physical Therapy*.

Binney, Z.O., Mansournia M.A. Methods Matter: (Mostly) Avoid Categorizing Continuous Data – A Practical Guide. In preparation for *British Journal of Sports Medicine*.

Glazer A., Seth T., **Binney Z.O.** wAGL and WAIL: Calculating Weighted Injury Burdens in Sports. In preparation for *Journal of Sports Analytics*.

Shanmugam A.**; **Binney Z.O.**, Voyles C.B., Bouldin E., Raol N.P. “A Retrospective Evaluation on the Effect of Pediatric OSA Treatment Success on Clinical Measures of Hypertension and Obesity in Comorbid Patients.”

Binney Z.O., Bushnell J., Ding K**. Injury Rates by Artificial Turf Type in the NFL.

Binney Z.O., Yurko R.J. Multilevel Models to Measure Player, Team, and Stadium Effects on NFL Injury Risk.

Binney Z.O., Matthews G. Injury Regression to the Mean in the NFL.

Reviewer

BMC Nephrology (2016-2020, 4 reviews of 3 papers); *Epidemiology* (2016-21, 5 reviews of 4 papers); *Open Access Journal of Sports Medicine* (2020, 1 review; 2021, 1 review); *British Journal of Sports Medicine* (2019, 2 post-publication “Rapid Response” reviews of 1 paper)

*Shared first authorship

**Former Oxford student

INVITED TALKS

New England Symposium on Statistics in Sports. “Sports Analytics Courses for the Next Generation of Analysts and Researchers.” October 22, 2021. Invited panel moderator.

Southeastern Regional Conference on Statistics (SRCOS). “Nerds, Jocks, and Reese’s Cups: Applications of Statistics in Sports.” October 5, 2021. Invited lecture.

Marist College Center for Sports Communication. “COVID-19 and Responsible Return to Sports.” Poughkeepsie, NY (Online). July 30, 2020. Panel discussion.

Linda Hall Library of Science, Technology, and Engineering. “Science Headlines” program (topic: return to sports under COVID-19). Kansas City, MO (Online). August 4, 2020. Q&A.

Muhlenberg College. “COVID-19, Sports, and Public Health.” Allentown, PA (Online). September 4, 2020. Q&A.

Emory University Emeritus College *Mind Matters* Series. “Sports and COVID-19: A Multidisciplinary Journey.” Atlanta, GA (Online). December 7, 2020. Lecture and Q&A.

University of Georgia. “Legionnaires’ Disease in Flint: An Outside Epidemiologist’s Experience.” Athens, GA (Online). March 8, 2021. Q&A.

ACADEMIC CONFERENCE PRESENTATIONS

Gangaram S.**, **Binney Z.O.** Racism in Officiating in the Women's Flat Track Derby Association. Virtual poster presentation at 2021 Georgia Undergraduate Research Conference. Online.

Gangaram S.**, **Binney Z.O.** Racism in Officiating in the Women's Flat Track Derby Association. Virtual poster presentation at 2021 University of Connecticut Sports Analytics Symposium. Online.

Binney Z.O., Matthews G.J. NFL Injury Regression to the Mean and Its Causal Effect on Team Performance. Oral presentation at 2020 *Joint Statistical Meetings*. Online.

Binney Z.O., Yurko R.J. Multilevel Models to Measure Player, Team, and Stadium Effects on NFL Injury Risk. Oral presentation at 2018 *Cascadia Symposium on Statistics in Sports*. Vancouver, BC, Canada.

Binney Z.O., Hammond K.E., Klein M., Goodman M.C., Janssens A.C.J.W. Assessing the Impact of Practice Restrictions on Injury Rates in the National Football League (NFL). Combined oral + poster presentation at 2018 *Joint Statistical Meetings*. Vancouver, BC, Canada.

Binney Z.O., Janssens A.C.J.W., Klein M., Goodman M.C., Hammond K.E. Using Survival Analysis to Estimate Injury Resolution Times and Positional Variation in the NFL. Poster presentation at 2017 *New England Symposium on Statistics in Sports*. Cambridge, MA.

Lee S, Khakharia A., **Binney Z.O.**, Zahner G., Grenon M.S., Arya S. Depression Increases Amputation and Mortality Risk in Patients with Peripheral Arterial Disease. Oral quickshot presentation at 2017 Academic Surgical Congress. Las Vegas, NV.

Arya S, Long C, Khakharia A, **Binney Z.O.**, Brewster L, Goodney P, Patzer R, Wilson PWF. Race and socioeconomic status have independent effects on amputation in peripheral arterial disease (PAD) patients. Poster presentation at 2016 *American Heart Association Scientific Sessions*. New Orleans, LA.

Arya S., **Binney Z.O.**, Khakharia A., et al. High Dose Perioperative Statins Are Associated With A Lower Risk Of Postoperative And Long-Term Amputation In Patients Undergoing Revascularization For Peripheral Arterial Disease (PAD). Oral presentation at 2016 *Vascular Annual Meeting*. Washington, DC.

Arya S., Khakharia A., **Binney Z.O.**, et al. Statins have a dose-dependent effect on amputation and survival in peripheral arterial disease (PAD) patients. Oral presentation at 2016 *Vascular Research Initiatives Conference*. Nashville, TN.

Arya S., **Binney Z.O.**, Khakharia A., et al. Peripheral Arterial Disease (PAD) Variability In Diagnosis: The Veterans Affairs (VA) Population Experience. Oral presentation at 2016 *Association of VA Surgeons Annual Meeting*. Virginia Beach, VA.

O'Neill M.J., **Binney Z.O.**, Quest, T.E. Mandatory versus Optional Fields for Capturing JCAHO Palliative Care Quality Metrics in an Electronic Medical Record. Poster presentation at 2016 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Chicago, IL.

Smith E.L., **Binney Z.O.**, Quest, T.E. Impact of Neuropathic Pain Treatments on Opioid Use and Pain Level in Gastrointestinal and Genitourinary Malignancy. Poster presentation at 2016 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Chicago, IL.

Grandhige A.P., **Binney Z.O.**, Moulia D.L., Quest, T.E. Impact of Early Intervention Using Palliative Care Triggers. Oral presentation at 2016 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Chicago, IL.

- Moulia D.L., **Binney Z.O.**, Janssens A.C.J.W. Derivation and Validation of a Risk Model for Emergency Department Palliative Care Needs Assessment using the Screen for Palliative and End of Life Care Needs in the Emergency Department (SPEED). Oral presentation at 2015 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Philadelphia, PA.
- Quest T.E., **Binney Z.O.**, Perkins M.M., Grant G.H., Arvin K.A., Idler E.L. Hospital-Based Chaplain Activities with Seriously Ill Patients and Adherence to Clinical Practice Guidelines for Spiritual Care in Palliative Care. Oral presentation at 2015 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Philadelphia, PA.
- Idler E.L., **Binney Z.O.**, Perkins M.M., Grant G.H., Arvin K.A., Quest T.E. Practical Matters and Ultimate Concerns, Doing and Being: A Diary Study of the Chaplains Role in the Care of the Seriously Ill in an Urban Acute Care Hospital. Poster presentation at 2015 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Philadelphia, PA.
- Grant G.H., Perkins M.M., **Binney Z.O.**, Arvin K.A., Idler E.L., Quest T.E. Chaplains' Role in End-of-Life Decision-Making: Perspectives of African American Patients and Their Family Members. Poster presentation at 2015 *American Academy of Hospice and Palliative Medicine Annual Meeting*. Philadelphia, PA.
- Wrammert K., Harrell G., O'Neill M.J., Grandhige A.P., **Binney Z.O.** Reduced Symptom Burden After Visiting an Outpatient Supportive Oncology Clinic. Poster presentations at 2014 *American Society of Clinical Oncology Palliative Care in Oncology Symposium*, Boston, MA and 2015 *American Academy of Hospice and Palliative Medicine Annual Meeting*, Philadelphia, PA.
- Binney Z.O.**, Garrido, M.M., Quest, T.E. (2014). Impact of Inpatient Palliative Care Consultation on 30-day Hospital Readmissions and Near Misses. Oral presentation at 2014 *American Academy of Hospice and Palliative Medicine Annual Meeting*, San Diego, CA.
- Grossman, S., **Binney, Z.O.**, Wrammert, K.C., Quest, T.E. (2014). Symptom Burden and Complementary Medicine Assessment in an Outpatient Supportive Oncology Clinic. Poster presentation at 2014 *American Academy of Hospice and Palliative Medicine Annual Meeting*, San Diego, CA.
- Quest, T.E., **Binney, Z.O.**, Desandre, P.L. (2014). A Rapid 5-Question Screen to Assess Palliative Needs Among Cancer Patients in the ED. Poster presentation at 2014 *American Academy of Hospice and Palliative Medicine Annual Meeting*, San Diego, CA.
- Grandhige, A.P., Timmer, M., O'Neill, M.J., Leipold, C.N., **Binney, Z.O.** (2014). Respiratory Therapists' Experiences and Attitudes Regarding Terminal Extubations and End-of-Life Care. Poster presentation at 2014 *American Academy of Hospice and Palliative Medicine Annual Meeting*, San Diego, CA.
- Quest, T.E., Perkins, M.M., Grant, G.H., **Binney, Z.O.**, Arvin, K.A., Idler, E.L. (2014). Patient-Centered Outcomes of Hospital Based Chaplain Visits: Structured Time Diaries. Poster presentation at 2014 *American Academy of Hospice and Palliative Medicine Annual Meeting*, San Diego, CA.
- Desandre, P.L., **Binney, Z.O.**, and Quest, T.E. (2012). From ED to inpatient hospice unit (IPU): Avoiding hospital admissions. Oral presentation at 2012 *Center to Advance Palliative Care National Seminar*. Miami, FL.
- Binney, Z.O.**, Desandre, P.L., and Quest, T.E. (2012). In-hospital hospice units: A novel approach to care in the final days. Poster presentation at 2012 *American Public Health Association Annual Meeting*. San Francisco, CA.
- Binney, Z.O.**, Desandre, P.L., Osgood, K.A., and Quest, T.E. (2012). In-hospital hospice units: Impact on ED admissions. Oral presentation at 2012 *Society for Academic Emergency Medicine*

Southeastern Regional Meeting. Jacksonville, FL.

SKILLS AND CERTIFICATIONS

Language: Fluent in German; proficient in reading and writing Russian

Computer: Fluent in R, SAS, Microsoft Office; proficient in SQL, Access

Other: IRB CITI, HIPAA

REFERENCES

1. Cecile Janssens, Ph.D. – Research Professor, Department of Epidemiology, Rollins School of Public Health, Emory University
Relationship: Dissertation Chair
Email: cecile.janssens@emory.edu
Office phone: 404-727-6307
2. David G. Kleinbaum, Ph.D. – Professor Emeritus, Department of Epidemiology, Rollins School of Public Health, Emory University
Relationship: TA for Epidemiologic Modeling; TA and Co-Lecturer for Longitudinal Data Analysis
Email: dkleinb@emory.edu
Cell phone: 404-922-1641
3. Kim R. Ramsey-White, PhD, MPH – Clinical Assistant Professor and Undergraduate Program Director, School of Public Health, Georgia State University
Relationship: Supervisor for public health courses taught at Georgia State University
Email: kwhite@gsu.edu
Office phone: 678-773-3735