

# Carly Lupton Brantner

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## EDUCATION

**Johns Hopkins Bloomberg School of Public Health, Baltimore, MD**      **August 2020 – present**  
Doctor of Philosophy, Biostatistics

**Johns Hopkins University, Baltimore, MD**      **Graduated May 2020**  
Master of Science, Applied Mathematics and Statistics  
Bachelor of Science, Applied Mathematics and Statistics  
Dual Major: Psychological and Brain Sciences  
GPA: 3.97

## EXPERIENCE

**Research Assistant, Dr. Elizabeth Stuart at Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, Spring 2019 – present**

- Adapted machine learning methods of assessing effect moderation to a setting with multiple studies and compared methods through simulations
- Examined electronic health records from the Johns Hopkins Hospital system to assess the differences between telehealth and in-person health care utilization for patients with depression
- Investigated regional mental distress levels during COVID-19 pandemic
- Analyzed differences between COVID-19 schooling policies across data sources

**Graduate Trainee, Epidemiology and Biostatistics of Aging Training Grant at Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, Fall 2020 – present**

- Performed latent class analysis and auxiliary regression modeling on family caregivers to identify subtypes of caregivers based on intensity of care and emotional strain
- Attended weekly research in progress meetings to learn about research being done on aging

**Teaching Assistant, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, Fall 2021 – present**

- Taught lab sessions for Causal Inference in Medicine and Public Health (professor: Dr. Elizabeth Stuart) and Statistical Methods in Public Health (professors: Dr. Marie Diener-West and Dr. Karen Bandeen-Roche)

**CIPhER Intern in Education Research and Assessment, Center for Innovative Pharmacy Education and Research (CIPhER) at UNC Eshelman School of Pharmacy, Chapel Hill, North Carolina, Summer 2019**

- Performed sentiment analysis on preceptor evaluations to identify students struggling in the program
- Gathered results from a systematic review of Interprofessional Education literature

**Course Assistant, Center for Leadership Education at Johns Hopkins University, Baltimore, Maryland, Fall 2018 – Spring 2020**

- Facilitated discussions in Leading Teams class on leadership styles, conflict management, and trust building in teams
- Led class periods focused on emotional intelligence
- Organized biannual leadership conference

**Student/Researcher**, *Summer Institute in Biostatistics (SIBS) at North Carolina State University, Raleigh, North Carolina, Summer 2018*

- Analyzed medical data using R and SAS and presented results
- Attended lectures by biostatisticians and toured biostatistics companies in Research Triangle
- Performed logistic regression, survival analysis, and other techniques on sample data

**Tutor**, *Center for Student Success at Johns Hopkins University, Baltimore, Maryland, Spring 2018*

- Tutored Johns Hopkins student-athletes in Linear Algebra and Discrete Mathematics

**Lab Assistant**, *Attention and Perception Lab at Johns Hopkins University, Baltimore, Maryland, Fall 2017*

- Tested subjects' response times based on effects of cuing and distractors

**Applied Statistics Intern**, *Office of Strategic Planning and Assessment, UNC Eshelman School of Pharmacy, Chapel Hill, North Carolina, Summer 2017*

- Performed Social Network Analysis of faculty research collaborations
- Text mined pharmacy job descriptions to find top qualifications for future pharmacists

## **LEADERSHIP EXPERIENCE**

**Co-President**, *Biostatistics Student Organization, Johns Hopkins University, 2022 – present*

- Organized department-wide student events
- Served as liaison between faculty leadership and students
- Oversaw department student committees and led student organization meetings

**Biostatistics Department Representative**, *Mental Health Graduate Network, Johns Hopkins University, 2021 – present*

- Presented techniques for addressing mental health struggles in graduate students

**Mentoring Committee and Curriculum Committee Member**, *Biostatistics Student Organization, Johns Hopkins University, 2020 – present*

- Guided student mentors on active listening and communication skills to better work with incoming PhD students
- Served as mentor to incoming PhD students
- Advocated for PhD curriculum adjustments based on student feedback

**Team Captain**, *Varsity Women's Soccer, Johns Hopkins University, 2019*

- Ran spring practices and coordinated team lifts and bonding activities
- Communicated with coaches and teammates and ensured team unity
- Set and achieved team goals of winning conference tournament and reaching NCAA Elite 8
- Participated in varsity women's soccer from Fall 2016 – present

**Assistant New Member Director**, *Phi Mu Gamma Tau Chapter, Johns Hopkins University, 2019*

- Planned bonding activities to introduce new members to each other and rest of sorority
- Coordinated pairing of big-little matches

**Captains Cohort Member**, *Blue Jays LEAD, Johns Hopkins University, Spring 2019 – 2020*

- Participated in discussions on leading teams, managing conflict, and improving team chemistry
- Discussed past experiences and current challenges as a leader with fellow captains of other Johns Hopkins varsity sports teams

## **HONORS AND AWARDS**

**Epidemiology and Biostatistics of Aging Training Grant Recipient**, Johns Hopkins University, 2020-present

**Dean's List**, Johns Hopkins University, 2016-2020

**Phi Beta Kappa**, Johns Hopkins University, 2020

**Applied Mathematics and Statistics Achievement Award**, Johns Hopkins University, 2020

**Applied Mathematics and Statistics Prize for Outstanding Master's Research**, Johns Hopkins University, 2020

**Applied Mathematics and Statistics Mathematical Modeling Competition Prize**, Johns Hopkins University, 2020

**Naddor Prize**, Johns Hopkins University Department of Applied Mathematics and Statistics, 2019

**Centennial Conference Women's Soccer Scholar-Athlete of the Year**, Johns Hopkins Women's Soccer, 2019

**CoSIDA Third Team Academic All-American**, Johns Hopkins Women's Soccer, 2019

**CoSIDA Academic All-District Team**, Johns Hopkins Women's Soccer, 2019

**Chi Alpha Sigma**, Scholar Athlete Honor Society, Johns Hopkins University, 2019

**Centennial Conference Women's Soccer All-Conference Honorable Mention Team**, Johns Hopkins Women's Soccer, 2019

## **PUBLICATIONS**

### *In Progress*

**Brantner, C. L.**, Chang, T., Nguyen, T. Q., Hong, H., Di Stefano, L., & Stuart, E. A. (2022). Strategies for integrating multiple datasets to examine treatment effect heterogeneity. Under review.

**Brantner, C. L.**, Nguyen, T. Q., Teng, T., Zhao, C., Hong, H., & Stuart, E. A. Comparing machine learning methods for estimating heterogeneous treatment effects by combining data from multiple randomized controlled trials. In progress.

### *Published*

**\*I recently got married and changed my last name, and the below papers/presentations are under my former name (Carly Lupton-Smith).**

**Lupton-Smith, C.**, Badillo-Goicoechea, E., Collins, M., Lessler, J., Grabowski, M. K., & Stuart, E. A. (2022). Consistency between household and county measures of onsite schooling during the COVID-19 pandemic. *Journal of Research on Educational Effectiveness*. doi:10.1080/19345747.2022.2131660

McLaughlin, J. E., Lyons, K., **Lupton-Smith, C.**, & Fuller, K. (2022). An introduction to text analytics for educators. *Currents in Pharmacy Teaching and Learning*. doi:10.1016/j.cptl.2022.09.005

**Lupton-Smith, C.**, Badillo-Goicoechea, E., Chang, T., Maniates, H., Riehm, K. E., Schmid, I., & Stuart, E. A. (2022). Factors associated with county-level mental health during the COVID-19 pandemic. *Journal of Community Psychology*, 50(5), 2431-2442. doi:10.1002/jcop.22785

Riehm, K. E., Badillo-Goicoechea, E., Wang, F. M., Kim, E., Aldridge, L. R., **Lupton-Smith, C.**, Presskreischer, R., Chang, T., LaRocca, S., Kreuter, F., & Stuart, E. A. (2022). Association of Non-Pharmaceutical Interventions with Anxiety and Depressive Symptoms during the COVID-19 Pandemic: A Multi-National Study of 43 Countries. *International Journal of Public Health*, 67, 1604430. doi:10.3389/ijph.2022.1604430

- Lessler, J., Grabowski, M. K., Grantz, K. H., Badillo-Goicoechea, E., Metcalf, C. J. E., **Lupton-Smith, C.**, Azman, A. S., Stuart, E. A. (2021). Household COVID-19 risk and in-person schooling. *Science*, 372(6546), 1092-1097. doi:10.1126/science.abh2939
- Lupton-Smith, C.**, Stuart, E., McGinty, B., Dalcin, A., Jerome, G. J., Wang, N. Y., & Daumit, G. (2021). Determining predictors of weight loss in a behavioral intervention: A case study in the use of Lasso regression. *Frontiers in Psychiatry*, 12, 707707. doi:10.3389/fpsyt.2021.707707
- Olsen, A., **Lupton-Smith, C.**, Rodgers, P., & McLaughlin, J. E. (2021). Characterizing research about interprofessional education within pharmacy. *American Journal of Pharmaceutical Education*, 85(8), 8541. doi:10.5688/ajpe8541.
- Wolcott, M. D., **Lupton-Smith, C.**, Cox, W. C., & McLaughlin, J. E. (2019). A 5-minute Situational Judgment Test to assess empathy in first-year student pharmacists. *American Journal of Pharmaceutical Education*, 83(6), Article 6960. doi:10.5688/ajpe6960
- McLaughlin, J. E., **Lupton-Smith, C.**, & Wolcott, M. D. (2018). Text mining as a method for examining the alignment between educational outcomes and the workforce needs. *Education in the Health Professions*, 1(2), 55-60. doi:10.4103/EHP.EHP\_25\_18

## **PRESENTATIONS**

- Brantner, C. L.** December 18, 2022. Combining Datasets to Estimate Heterogeneous Treatment Effects. International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2022).
- Podcast:* School Reopening Analysis. Data Skeptic. May 30, 2022.  
<https://dataskeptic.com/blog/episodes/2022/school-reopening-analysis>.
- Lupton-Smith, C.** January 24, 2022. Family Caregiving Subtypes and Well-Being in the Caregiving Transitions Study: A Latent Class Analysis. Research in Progress presentation for Epidemiology and Biostatistics of Aging Training Group.
- Lupton-Smith, C.** October 8, 2021. Factors Associated with County-Level Mental Health During the COVID-19 Pandemic. Invited presentation for Hopkins Biostatistics Virtual Prospective Student Event.
- Lupton-Smith, C.**, Badillo Goicoechea, E., Chang, T., & Stuart, E. A. October 7, 2021. Factors Associated with County-Level Mental Health During the COVID-19 Pandemic. Women in Statistics and Data Science Conference.

## **POSTERS**

- Bentley, J., **Lupton-Smith, C.**, & Roth, D. (2021). Family caregiving subtypes in the Caregiving Transitions Study: A latent class analysis. *Gerontological Society of America*.
- Chang, T., **Lupton-Smith, C.**, Badillo Goicoechea, E., & Stuart, E. A. (2021). Examining county-level mental health using Facebook COVID-19 Symptom Survey data. *American Psychopathological Association*.

McLaughlin, J. E., **Lupton-Smith, C.**, Bell, E. L., Hubal, R., Persky, A. (2020). Automated analysis of course evaluation comments: The use of sentiment analysis to characterize classroom teaching. *American Association of Colleges of Pharmacy*. **\*Recipient of AACP SAS Best Poster Award**

## **SKILLS**

**Programming:** R, SAS, MPlus, Python, MATLAB, Stata, SPSS, SQL, Git

**Other:** Machine learning, data integration, multiple imputation, nonparametric statistics, propensity score estimation, variable selection, regression, latent class analysis, electronic health records, text mining, sentiment analysis, social network analysis, Bayesian statistics