

# Savannah L. Miller

PHD STUDENT, EPIDEMIOLOGY & BIOSTATISTICS

University of Georgia College of Public Health

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## About

Graduate student pursuing a PhD in Epidemiology and Biostatistics, with a concentration in Data Analysis and Modeling. I have a keen interest in infectious diseases, focusing on the correlates of protection for viral vaccine development and evaluation. My background in healthcare has equipped me with a robust understanding of disease determinants, prevention strategies, treatment options, and health outcomes, providing valuable insights into the real-world implications of public health research and practice on individuals. I am passionate about leveraging my skills and knowledge to build a career dedicated to improving public health and benefiting communities.

## Education

### University of Georgia

PHD EPIDEMIOLOGY & BIOSTATISTICS (DATA ANALYSIS & MODELING EMPHASIS)

Athens, GA

2022-Present

### University of Georgia

MS EPIDEMIOLOGY & BIOSTATISTICS (EPIDEMIOLOGY EMPHASIS) | CERTIFICATE IN INFECTIOUS DISEASE EPIDEMIOLOGY

Athens, GA

2020-2022

### Columbus State University

BS, HEALTH SCIENCE

Columbus, GA

2018-2020

### Chattanooga College

DIPLOMA, PRACTICAL NURSING

Chattanooga, TN

2014-2015

## Relevant Experience

### University of Georgia, Department of Epidemiology & Biostatistics

Athens, GA

GRADUATE RESEARCH ASSISTANT

2022-Present

- Assist Dr. Andreas Handel in research for the Center for Influenza Vaccine Research for High-Risk Populations (CIVR-HRP) grant at the University of Georgia. Aid in research and data analysis on influenza vaccines, particularly data related to improved seasonal and universal influenza vaccine development.
- Perform secondary data analysis research on influenza antibodies as correlates of protection and apply protection probability curves to vaccine immunogenicity data to assess and compare vaccine efficacy.
- Compile recorded influenza seasonal vaccine and circulating strains to obtain yearly antigenic distance and assess impact of that distance on vaccine effectiveness.
- Perform secondary data analysis research on norovirus antibodies as correlates of protection to support vaccine research and development.
- Use bayesian modeling approaches to answer complex research questions with human clinical trial data.
- Coordinate weekly Infectious Disease Interest Group meetings, to include finding and scheduling speakers, moderating meetings, and communicate with members and potential members about upcoming meetings and ways to get involved.

### Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities

Atlanta, GA

EPIDEMIOLOGY SWEP VOLUNTEER, PUBLIC HEALTH DATA MANAGEMENT AND ANALYSIS ORISE FELLOW

2022-Present

- Support the MAT-LINK (MATernal and Infant NetWoRK to Understand Outcomes Associated with Medication for Opioid Use Disorder during Pregnancy) team as SWEP (Student Worksite Experience Program) volunteer July 2022-July 2023, October 2023-June 2024, and ORISE Fellow July-September 2023, June-September 2024.
- Conduct data cleaning, analysis, and management using statistical software (e.g. R, SAS, etc.), and interpretation.
- Assist team with data quality assurance checks and other reviews of data. Conduct literature reviews related to opioid use disorder, pregnancy, infectious diseases, and other topics.
- Develop instructional material on use of R and RMarkdown for reports and publications.
- Support the development of statistical briefs, standard operating procedures, and publically available code for outcome identification using ICD-9 and ICD-10 codes.
- Perform primary and secondary analyses for conference presentation and manuscript development.

### University of Georgia, Department of Epidemiology & Biostatistics

Athens, GA

GRADUATE DEPARTMENTAL ASSISTANT

2021-2022

- Assist in administrative departmental tasks, faculty retreats/meeting planning, and department event planning. Create and maintain spreadsheets on department classes, students, etc. Develop presentation materials and assist in orientation. Generate documents with information on degree programs, Graduate School processes, etc.
- Conduct research with Dr. Jose Cordero, planning and implementing a systematic review of environmental exposures and preterm birth.

## Georgetown Behavioral Health Institute

Georgetown, TX

LICENSED VOCATIONAL NURSE

2016-2016

- LVN working on adolescent male and female units, military unit. Conducted medication administration, milieu management, conflict resolution, patient chart management. Responsible for verbal de-escalation of agitated patients, medical complication and event management. Aided in coordination of care between all health care providers.

## Encompass Home Health Pediatrics

Temple, TX

LICENSED VOCATIONAL NURSE

2016-2016

- Provided pediatric patient care for those needing 24-hour care or on hospice. Responsible for nutrition, hygiene, infection control, medication administration, respiratory status maintenance. Provided support to families of patients and socialization to patients throughout shifts.

## Research

### From Immune Response to Public Health: Estimating Influenza Vaccine Protection Across Scales

University of Georgia

PHD DISSERTATION PROJECT; ADVISOR DR. ANDREAS HANDEL

2023-Present

### Examining antibodies as correlates of protection against norovirus clinical outcomes

University of Georgia

MS THESIS PROJECT; ADVISOR - DR. ANDREAS HANDEL

2021-Present

## Presentations

### Assessing correlates of protection against norovirus infection and disease

Society for Epidemiologic Research  
Annual Meeting

UNIVERSITY OF GEORGIA

2025

- Poster presentation (accepted)

### Match, mismatch, or something in between? Modeling the effect of antigenic distance on vaccine effectiveness

CEIRR Annual Network Meeting

UNIVERSITY OF GEORGIA

2025

- Poster presentation (accepted)

### Using a defined titer-protection model to estimate vaccine efficacy and difference in vaccine efficacy in age- and dose-based groups

OPTIONS XII for the Control of  
Influenza

UNIVERSITY OF GEORGIA

2024

- Poster presentation

### Using a defined titer-protection model to estimate vaccine efficacy (VE) and difference in vaccine efficacy (DVE) in age- and dose-based groups

CIVR-HRP Annual Meeting

UNIVERSITY OF GEORGIA

2024

- Oral presentation

### Comparing standard- and high-dose Fluzone vaccine efficacy across seasons and strains

MIDAS Annual Meeting

UNIVERSITY OF GEORGIA

2023

- Lightning talk and poster presentations

### Comparing standard- and high-dose Fluzone vaccine efficacy across seasons and strains

CIVICs Annual Meeting

UNIVERSITY OF GEORGIA

2023

- Oral presentation

### HIV Tests and Diagnoses During Pregnancy Among People with Opioid Use Disorder

IDSOG Annual Meeting

ORISE (CDC)

2023

- Poster presentation

### Challenge Study Ethics

University of Georgia

INFECTIOUS DISEASE INTEREST GROUP

2022

- Oral presentation and discussion

## Publications

- Note: Name change from Savannah M. Hammerton to Savannah L. Miller occurred in 2025.

**Hammerton, S. M.**, Billings, W. Z., Hemme, H., Ross, T. M., Shen, Y., & Handel, A. (2024). Estimating Standard-Dose and High-Dose Fluzone Vaccine Efficacies for Influenza A Based on Hemagglutination Inhibition Titers. The Journal of Infectious Diseases, jiae615. <https://doi.org/10.1093/infdis/jiae615>

Billings, W. Z., Ge, Y., Knight, J. H., Hemme, H., **Hammerton, S. M.**, Skarlupka, A. L., Cao, W., Shen, Y., Bahl, J., Thomas, P. G., Ross, T. M., & Handel, A. (2025). High-Dose Inactivated Influenza Vaccine Inconsistently Improves Heterologous Antibody Responses in an Older Human Cohort. The Journal of Infectious Diseases, jiaf003. <https://doi.org/10.1093/infdis/jiaf003>

## Teaching and Mentorship

### Research Mentorship

University of Georgia

UNDERGRADUATE MENTORSHIP

2025-Present

- Mentoring of undergraduate student in public health data analysis and career development. Actively involving student in development of research questions, data sets, and model.

### RMarkdown Introduction and Tutorial

Division of Birth Defects and Infant Disorders

CDC

2023-NA

- Oral presentation and tutorial and the benefits of RMarkdown in reproducible research and tutorial on basic uses in preparing publications, presentations, and reports.

### Challenge Study Ethics

University of Georgia

INFECTIOUS DISEASE INTEREST GROUP

2022-NA

- Oral presentation and discussion

## Honors and Awards

### Graduate Research Assistantship, Tuition Waiver and Stipend

University of Georgia

CENTER FOR INFLUENZA VACCINE RESEARCH FOR HIGH RISK POPULATIONS (CIVR-HRP)

2022-Present

### College of Public Health Travel Grant

University of Georgia

SOCIETY FOR EPIDEMIOLOGIC RESEARCH ANNUAL MEETING

2024-NA

- \$750 to travel, attend, and present at the SER 2025 annual meeting in Boston, MA

### Graduate School Travel Grant

University of Georgia

OPTIONS XII FOR THE CONTROL OF INFLUENZA

2024-NA

- \$700 to travel, attend, and present at the OPTIONS XII meeting in Brisbane, Australia

### Scholarship, Travel Stipend

University of Washington

SUMMER INSTITUTE IN STATISTICS AND MODELING IN INFECTIOUS DISEASES (SISMID)

2023-NA

- \$1,000 to tavel and attend SISMID at the University of Washington

## Certifications and Professional Training

### Assurances of Confidentiality

CENTERS FOR DISEASE CONTROL AND PREVENTION

2022

### Social and Behavioral Research

CITI PROGRAM

2021

### Essentials of Public Health Research

CITI PROGRAM

2019

### Research Involving Human Subjects

CITI PROGRAM

2019

## Service

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### Department of Epidemiology & Biostatistics Linear Regression Seminar

University of Georgia

TEACHING ASSISTANT

October 2023

- Aided in planning and teaching of three one-hour seminars covering the basics of linear regression aimed at assisting first-year PhD students in meeting departmental biostatistics standards.

### Department of Epidemiology & Biostatistics Case-Control Studies Class

University of Georgia

LIGHTNING TALK JUDGE

April 2023

- Judged final project lightning talks of case-control studies for required graduate course on case-control study design, implementation, and analysis along with course instructor and one other additional judge. Presentations were judged based on poster design, content, accurate discussion of study, sufficient question answers, and presentation timeliness and quality.

### College of Public Health Curriculum Committee

University of Georgia

STUDENT REPRESENTATIVE

2022-2023

- Review, inform changes, and vote on new College of Public Health degrees, certificates, and classes.

### Graduate Scholars of Epidemiology & Biostatistics (GSEB)

University of Georgia

SECRETARY

2021-2022

- Managed fundraising events and community food pantry. Planned and recorded regular executive board and general body meetings. Developed and led events open to department and college students. Maintained communication with department members to assess student needs and announce organization events. Maintained records for future executive board members.

## Organizations

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### Society of Epidemiologic Research (SER)

US network

2024-Present

### Models of Infectious Disease Agent Study (MIDAS)

Global network

2022-Present

### Graduate Scholars of Epidemiology & Biostatistics (GSEB)

University of Georgia

2021-Present

### Center for the Ecology of Infectious Diseases (CEID), University of Georgia

University of Georgia

2021-Present

### Eta Sigma Gamma (ESG) | Health Science Honor Society

University of Columbus

2019-2020

## Skills

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### Data Analysis

PRIMARY CODING LANGUAGE: R | ADDITIONAL EXPERIENCE IN: SAS, STATA, SPSS

### Literature Searches and Management

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### Laboratory Biosafety Level 2 Practices

EXPERIENCE IN SAFE MICROBIOLOGY LABORATORY PRACTICES WHEN WORKING WITH HUMAN PATHOGENS

### Infectious Disease Modeling

UNDERSTANDING OF INFECTIOUS DISEASE MODELING CONCEPTS, AND EXPERIENCE IN FITTING INFECTIOUS DISEASE MODELS

### Organization

SKILLED IN MANAGING MULTIPLE TASKS AND PROJECTS, MAINTAINING HIGH QUALITY OF WORK

### Communication

EXPERIENCE IN CLINICAL, RESEARCH, AND PRIVATE GROUPS REQUIRING LARGE AMOUNTS OF COLLABORATION

### Health Education

HAVE PROVIDED HEALTH EDUCATION IN BOTH CLINICAL AND NON-CLINICAL SETTINGS

### Leadership/Management

EXPERIENCE IN MANAGEMENT, LEADERSHIP OF MULTIPLE EMPLOYEES