

Brooke W. Bullington

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Education

University of North Carolina | Gillings School of Global Public Health Chapel Hill, NC
Epidemiology PhD Student | Social & Reproductive Epidemiology August 2020-Present

Bowdoin College Brunswick, ME
Bachelor of Arts | Majors: Mathematics, Sociology | Minor: Computer Science August 2013-May 2017

Fellowships, Honors & Awards

- **National Institute of Child Health and Development Reproductive, Perinatal and Pediatric Epidemiology Training Grant** (T32 HD52468)
 - NIH-funded training grant awarded to doctoral students at UNC with a focus on reproductive epidemiology
- **Predocutorial Population Science Traineeship at the Carolina Population Center**
 - Interdisciplinary fellowship awarded to doctoral students at UNC with a focus on population health
- **FHI360 Contraceptive Technology Innovation Exchange Youth Council**
 - Council of young people aged 18-28 that focuses on advocacy, outreach, and collaboration for clarifying and building momentum around ideas and growing the next generation of contraceptive researchers and developers.
- **Gillings Merit Scholar**
 - Scholarships competitively awarded to a select group of incoming graduate students to the UNC Gillings School of Global Public Health each year in order to bring students with exceptional promise and potential to the School.
- **Sarah and James Bowdoin Scholar**
 - Award are given to the top 20 percent of students at Bowdoin College, as calculated by grade point average.
- **Intercollegiate Women's Lacrosse Coaches Association Academic Honor Roll**
 - Awarded to student-athletes with a cumulative grade point average of 3.5 or higher.

Publications

Bullington BW, Aristide C, Abha Y, Kiwango H, Nzali A, Peter D, Downs JA, Reif LK. Men's and Women's Preferences for Family Planning Education in Rural, Highly Religious Tanzanian Communities: A Discrete Choice Experiment. *Sexual and Reproductive Health Matters*. 2020. DOI: 10.1080/26410397.2020.1850198.

Bullington BW, Lee MH, Mlingi J, Paul N, Aristide C, Fontana E, Littmann ER, Mukerebe C, Shigella P, Kashangaki P, Kalluvya SE, de Dood CJ, van Dam GJ, Corstjens PL, Fitzgerald DW, Pamer EG, Downs JA. Cervicovaginal Bacterial Communities in Reproductive-Aged Tanzanian Women with *Schistosoma mansoni*, *Schistosoma haematobium* or without Schistosome Infection. *ISME Journal*. 2021. DOI: 10.1038/s41396-020-00868-9.

Bullington BW, Klemperer K, Mages K, Chalem A, Mazigo HD, Chungalucha J, Kapiga S, Wright PF, Yazdanbakhsh MM, Downs JA. Effects of Schistosomes on Host Antiviral Immune Response and the Acquisition, Virulence, and Prevention of Viral Infections: A Systematic Review. *PLOS Pathogens*. 2021. DOI: 10.1371/journal.ppat.1009555.

McNairy ML, **Bullington BW**, Bloom-Feshbach K. Searching for Human Connectedness during COVID-19. *J Gen Intern Med*. 2020. DOI: 10.1007/s11606-020-06082-9.

Bloom-Feshbach K, **Bullington BW**, Berger R, Wahid N, Contractor J, Martin P, Evans AT, McNairy ML. Using Digital Technology to Humanize Patient Care during COVID-19: Special Report from the New York City Epicenter. *Academic Medicine*. 2020. DOI: 10.1097/ACM.0000000000003792.

Lee J, **Bullington BW**, Simon M, Crossman D, Evans A, McNairy ML. COVID-19 Infections among General Internal Medicine Faculty at a New York Teaching Hospital: A Descriptive Report. *J Gen Intern Med*. 2021. DOI: 10.1007/s11606-020-06431-8.

Aristide C, **Bullington BW**, Kuguru M, Mwakisole A, Wamoyi J, Downs JA. Health Providers' Perspectives on Family Planning Use among Women in Rural Tanzania: a Bird's Eye View. (In review)

Broderick K, Aristide C, **Bullington BW**, Downs JA, Sundararajan R. Stigma of Infidelity Associated with Condom Use Explains Low Rate of Condom Uptake in Eastern Africa: Qualitative Data from Uganda and Tanzania. (In review)

Kingery JR, **Bullington BW**, Lee MH, Desdarius BM, Makubi A, Kalluvya S, Reis K, Wanjanga B, Myalla C, Shigella P, Kapiga S, Downs JA, Peck RN. Schistosomiasis, Cardiovascular Disease, and Mortality in 1,000 HIV-Infected and Uninfected Tanzanian Adults: A Prospective Cohort Study. (In review)

Onyango OO, Tumlinson K, Chung S, **Bullington BW**, Gakki C, Senderowicz L. Evaluating Feasibility of the Community Score Card and subsequent contraceptive behavior in Kisumu, Kenya. (In preparation)

Bullington BW, Knittel AK, Edmonds A, Ramirez C, Adimora A. Premature Menopause among US women living with or at risk for HIV. (In preparation)

Diepstra K, **Bullington BW**, Jones CD, Pettifor A. SARS-CoV-2 seroprevalence and demographic and behavioral predictors of seropositivity among southern US college students. (In preparation)

Professional Experience

UNC School of Medicine and Department of Epidemiology

Chapel Hill, NC

Research Assistant

December 2020-Present

- Analyze data from The Women's Interagency HIV Study (WIHS) to explore the effects of substance use on menopausal symptoms and treatment experiences.

Gillings School of Global Public Health, HPTN 068

Chapel Hill, NC

Graduate Research Assistant

January 2021-May 2021

- Analyze pregnancy and reproductive health data from a randomized control trial of conditional cash transfer to reduce HIV infection among young women in South Africa.

Gillings School of Global Public Health, ReCCAP and HeelCheck studies

Chapel Hill, NC

Graduate Research Assistant

August 2020-December 2020

- Contributed to survey design, data collection, and project management for two COVID-19 research studies on campus at UNC focusing on faculty/staff and undergraduate students.
- Analyzed data to examine behaviors associated with COVID-19 infection and mental health outcomes during the pandemic.

The Center for Global Health at Weill Cornell Medicine

New York, NY and Mwanza, Tanzania

Research Fellow

September 2018-July 2020

- Developed, implemented, and analyzed a discrete choice experiment (DCE) to understand men's and women's preferences for family planning educational services in rural Tanzania. This included

synthesizing focus group data to develop appropriate attributes for a DCE survey, using NGene software to create a D-efficient design, training a Tanzanian interviewer team, assisting with problem solving in the field, analyzing data in Stata using mixed effects logit modeling, and writing the final manuscript. The results of this project are published in *Sexual and Reproductive Health Matters* and will inform the development of a family planning educational intervention implemented among men and women in rural Tanzania.

- Analyzed qualitative interview data using NVIVO from 30 family planning providers in the Mwanza region of Tanzania and assisted in the preparation of a manuscript highlighting the theme of secrecy throughout family planning provision.
- Assisted in the preparation of a manuscript exploring stigma associated with condom use for HIV prevention and family planning based on qualitative interviews in Tanzania and Uganda.
- Examined the relationship between schistosome infection and chronic diseases (pulmonary hypertension, chronic kidney disease (CKD), hypertension, diabetes, and diastolic dysfunction) through a longitudinal cross-sectional study in Mwanza, Tanzania. This work included facilitating circulating anodic antigen testing for schistosome infection and ensuring patients received treatment if infected, facilitating ACR testing to identify CKD, analyzing data in Stata, and preparation of a manuscript.
- Conducted laboratory work and analysis to understand the mechanisms of inflammation and HIV susceptibility in women with schistosomiasis through the vaginal microbiome. Laboratory work involved extracting and purifying DNA from 403 vaginal swabs collected in rural Tanzania for 16S shotgun sequencing. Additional work included analysis of genomic data in R and writing the final manuscript. Results of this study are published in *The ISME Journal*.
- Conducted a systematic review to further understand the relationship between schistosome infection and viral diseases. This included systematically narrowing down 3,800 papers to 110 to be included in the final manuscript using Covidence, extracting data from final 110 papers, outlining and organizing papers into a cohesive review, and manuscript writing.
- Led a digital technology initiative in the Department of Internal Medicine at New York Presbyterian Hospital during the peak of the COVID-19 pandemic in New York City. This involved developing and implementing a system for the distribution of devices throughout the hospital to promote human connection and improve doctor-patient interaction.
- Worked with front-line physicians during the COVID-19 pandemic to develop and prepare perspectives and short reports, now published in *General Internal Medicine* and *Academic Medicine*.

Action Research and Training for Health (ARTH)

Rajasthan, India

Student Intern

August-October 2015

- During public health-centered study abroad in India, worked alongside community healthcare workers in survey design and qualitative data collection of 30 in-depth interviews about reproductive autonomy and son preference. Major findings indicated that preference for sons was primarily related to property ownership, desire to pass down the family name, and parents' need for support and care in old age. Findings were synthesized and presented to organization leaders for inclusion in a new health education curriculum.

Mighty Networks

Palo Alto, CA

Product Manager

September 2017-August 2018

- Served as a liaison between the engineering, business, marketing, and design teams to develop products from initial idea to final implementation. Projects included complete product redesign, online courses, and Zapier Integration.
- Identified deficiencies in product design and business trajectory through customer feedback and marketing data analysis.

Bowdoin Women's Resource Center.

Brunswick, ME

Student Director

2014-2017

- Planned, organized, and developed curriculum for talks and events for women on campus with the goal of building awareness around issues of gender and providing support to students. Programming included multiple reproductive health educational seminars, multiple body image events including a panel and a luncheon, a women's empowerment photoshoot, and campus discussions relating to race and intersectionality.
- Assisted in the merging of the Women's Resource Center and the Center for Sexuality and Gender Diversity by helping redefine the Center's goals and mission statement and creating a more integrated approach to serving women and queer students on campus.

Bowdoin Quantitative Reasoning Center

Brunswick, ME

Teaching Assistant, Tutor and Grader

2014-2017

- Led study groups and graded assignments for Differential Calculus, Integral Calculus, Advanced Integral Calculus, Ordinary Differential Equations, and Introduction to Computer Science.

Maine Democratic Campaign

Portland, ME

Campaign Fellow

2016

- Recruited, coordinated, and organized volunteers and planned volunteer events to identify voters to gain support for our candidate and identify likely voters. Worked intensively during the two weeks prior to election day to organize the dissemination of information and ensured all election day activities went smoothly.

Posters

- Men's and Women's Preferences for Family Planning Education in Rural, Highly Religious Tanzanian Communities: A Discrete Choice Experiment
 - Population Association of America April 2020 (Cancelled)
- Partnership Dynamics and Dual Method Use among Adolescent Girls and Young Women in South Africa: A Longitudinal Analysis of HIV Prevention Trials Network 068 Data
 - International AIDS Society July 2021

Languages & Skills

- **Statistical Programming:** Advanced Proficiency in SAS, Java, C, C++; Basic Proficiency in R, Python, Stata
- **Languages:** Fluent in English, limited proficiency in Spanish

Reviewer

- *Journal of General Internal Medicine*
- *Sexual and Reproductive Health Matters*