Brian Richardson

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Education

University of North Carolina at Chapel Hill — Chapel Hill, NC
Ph.D. in Biostatistics — Jan 2022–Present

University of North Carolina at Chapel Hill — Chapel Hill, NC
B.S.P.H. in Biostatistics, B.A. in Mathematics, Highest Distinction, GPA: 3.97/4.00 — Aug 2018–Dec 2021

Research Experience

University of North Carolina at Chapel Hill — Chapel Hill, NC
Graduate Research Assistant, Department of Biostatistics, Interference Lab — Aug 2024–Present
Mentor: Michael Hudgens, Ph.D.

University of North Carolina at Chapel Hill — Chapel Hill, NC
Graduate Research Assistant, Department of Biostatistics, Garcia Lab — May 2022–Aug 2024
Mentor: Tanya Garcia, Ph.D.

University of North Carolina at Chapel Hill — Chapel Hill, NC
Graduate Research Assistant, Department of Biostatistics, Center for AIDS Research — Jan 2022–May 2024
Mentor: Michael Hudgens, Ph.D.

National Cancer Institute, National Institutes of Health — Bethesda, MD
Research Intern, Biostatistics Branch, Division of Cancer Epidemiology and Genetics — Summer 2021
Mentor: Jianxin Shi, Ph.D.

- Research project: "Testing the interaction between polygenic risk score and an environmental factor using summary statistics of genome-wide association studies"

University of North Carolina at Chapel Hill — Chapel Hill, NC
Research Assistant, Department of Psychiatry — Jul 2017–Jul 2020
Principal Investigator: Susan Girdler, Ph.D.

Teaching Experience

- **Instructor** at University of North Carolina at Chapel Hill — Fall 2024, Fall 2025
  Topics in Real Analysis (BIOS 672)
- **Instructor** at University of North Carolina at Chapel Hill — Spring 2025
  Principles of Statistical Inference (BIOS 600)
- **Teaching Assistant** at University of North Carolina at Chapel Hill — Fall 2023
  Introduction to Biostatistics (BIOS 500H)
- **Teaching Assistant** at University of North Carolina at Chapel Hill — Spring 2023
  Design of Public Health Studies (BIOS 668)
- **Tutor** at University of North Carolina at Chapel Hill — Fall 2022
  Calculus of Functions of One Variable I (MATH 231)
  Masters Level Probability and Statistical Inference I (BIOS 660)
- **Tutor** at Chapel Hill High School — Aug 2020–May 2022
  Algebra, Geometry, Pre-Calculus, AP Calculus BC

Publications

*: Co-first authorship

[1] **B.D. Richardson***, B. Blette*, P. Gilbert, and M. Hudgens, "Addressing confounding and continuous exposure measurement error using corrected score functions", en, *Biometrics*, vol. 81, no. 2, Apr. 2025, Publisher: Oxford University Press (OUP), ISSN: 0006-341X, 1541-0420.

[2] B. Chi, F. Saidi, L. Graybill, T. Phanga, K. Mollan, K. Amico, K. Freeborn, N. Rosenberg, L. Hill, T. Hamoonga, **B.D. Richardson**, T. Kalua, S. Phiri, and W. Mutale, "A patient-centered, combination intervention to support adherence to HIV pre-exposure prophylaxis during pregnancy and breastfeeding: A randomized pilot study in Malawi", *JAIDS Journal of Acquired Immune Deficiency Syndromes*, vol. 95, pp. 42–51, 2024.

[3] L. A. Graybill, B. H. Chi, T. E. Hamoonga, M. Kasaro, J. N. Hodges, **B.D. Richardson**, J. S. Bissram, F. Saidi, K. R. Mollan, K. Freeborn, N. E. Rosenberg, K. A. Powers, and W. Mutale, "Predictors of maternal HIV acquisition during pregnancy and lactation in sub-Saharan Africa: A systematic review and narrative synthesis", en, *PLOS ONE*, vol. 19, no. 12, G. T. Feyissa, Ed., e0314747, Dec. 2024, ISSN: 1932-6203.

[4] S. Lee*, **B.D. Richardson***, Y. Ma, K. Marder, and T. Garcia, *Robust and efficient estimation in the presence of a randomly censored covariate*, Version Number: 2, 2024.

[5] S. C. Lotspeich, M. C. Ashner, J. E. Vazquez, **B.D. Richardson**, K. F. Grosser, B. E. Bodek, and T. P. Garcia, "Making sense of censored covariates: Statistical methods for studies of Huntington's disease", en, *Annual Review of Statistics and Its Application*, vol. 11, no. 1, pp. 255–277, Apr. 2024, ISSN: 2326-8298, 2326-831X.

[6] S. Lotspeich*, **B.D. Richardson***, P. Baldoni, K. Enders, and M. Hudgens, "Quantifying the HIV reservoir with dilution assays and deep viral sequencing", *Biometrics*, 2024.

[7] J. J. Peterson, C. A. Lewis, S. D. Burgos, A. Manickam, Y. Xu, A. A. Rowley, G. Clutton, **B.D Richardson**, F. Zou, J. M. Simon, D. M. Margolis, N. Goonetilleke, and E. P. Browne, "A histone deacetylase network regulates epigenetic reprogramming and viral silencing in HIV-infected cells", en, *Cell Chemical Biology*, vol. 30, no. 12, 1617–1633.e9, Dec. 2023, ISSN: 24519456.

[8] J. Shi, ..., **B.D. Richardson**, ..., and Q. Lan, "Genome-wide association study of lung adenocarcinoma in east asia and comparison with a European population", *Nature Communications*, vol. 14, p. 3043, 2023.

Service

- **MAPS Director** at University of North Carolina at Chapel Hill — May 2023–Present
  Director of Mentorship and Advice for Prospective Students (MAPS) program
- **MAPS Mentor** at University of North Carolina at Chapel Hill — Aug 2022–Present
  Mentor for prospective students with MAPS program
- **Session Chair** "Statistical Challenges with Linked and Coarsened Data in Public Health Research" — Mar 2024
  ENAR Spring Meeting, Baltimore, MD

Presentations

- **"Addressing Confounding and Continuous Exposure Measurement Error Using Corrected Score Functions"** — Aug 2025
  Invited talk, JSM, Nashville, TN
- **"When the Life Sciences Give You Lemons: Making the Most of Coarsened Data in Public Health Research"** — Feb 2025

Invited Talk, UNC Department of Biostatistics, Chapel Hill, NC

- **"Addressing Confounding and Continuous Exposure Measurement Error Using Corrected Score Functions"** Jan 2025
  Seminar, UNC Causal Inference Research Lab, Chapel Hill, NC
- **"Robust and efficient estimation in the presence of a randomly censored covariate"** Nov 2024
  Invited talk, UNC Biostatistics 75th Anniversary, Chapel Hill, NC
- **"Quantifying the HIV Reservoir With Dilution Assays and Deep Viral Sequencing"** Oct 2024
  Invited talk, UNC BIOS Student Seminar, Chapel Hill, NC
- **"Robust and efficient estimation in the presence of a randomly censored covariate"** Aug 2024
  Contributed talk, JSM, Portland, OR
- **"Quantifying the HIV Reservoir With Dilution Assays and Deep Viral Sequencing"** Apr 2024
  Invited talk, UNC BIOS/STOR Joint Student Seminar, Chapel Hill, NC
- **"Doubly robust estimation under a randomly censored covariate"** Mar 2024
  Contributed talk, ENAR Spring Meeting, Baltimore, MD
- **"Quantifying the HIV Reservoir With Dilution Assays and Deep Viral Sequencing"** Mar 2023
  Contributed talk, ENAR Spring Meeting, Nashville, TN
- **"Crash Course: Biostatistics and Epidemiology"** May 2022
  Invited lecture, ENABLE HiDAV Boot Camp, University of North Carolina at Chapel Hill

Skills

- **Statistical Computing:** R, SAS, SQL
- **Languages:** English (native), Spanish (proficient)

Scholarships and Awards

- T32 Predoctoral Traineeship, National Institute of Environmental Health Sciences 2022–2025