Bryan Blette

Curriculum Vitae, Last Updated: 11/22/23

2525 West End Avenue, 11118A
Nashville, TN 37203
📞 *+1 (615) 875 9415*
✉ *bryan.blette@vumc.org*
🌐 *bryanblette.com*
 bblette1

Education and Training

2015	**B.S. in Mathematics**, *University of Florida*
	Second major: Statistics Study Abroad, Florence University of the Arts, Italy, 2014
2018	**M.S. in Biostatistics**, *University of North Carolina at Chapel Hill*
	Advisors: Drs. Leah Frerichs and Annie Green-Howard
2021	**Ph.D. in Biostatistics**, *University of North Carolina at Chapel Hill*
	Dissertation: Causal Inference for Error-Prone Exposures
	Advisor: Dr. Michael Hudgens
2021-2023	**Postdoctoral Fellow**, *Center for Causal Inference*, University of Pennsylvania

Academic Appointments

2023-Present	**Assistant Professor**, *Department of Biostatistics*, Vanderbilt University Medical Center

Non-Academic Research Experience

2015	**Research Apprentice**, *National Space Biomedical Research Institute*, Johnson Space Center
	Advisor: Dr. Alan Feiveson, Co-advisor: Dr. Robert Ploutz-Snyder
2018	**Quantitative Analyst Intern**, Google
	Hosts: Drs. Amy Richardson and Yang Jiao

Professional Organizations

2017-present	**Member**, *International Biometric Society - Eastern North American Region (ENAR)*
2018-present	**Member**, *American Statistical Association (ASA)*
2023-present	**Member**, *Society for Causal Inference (SCI)*

Professional Activities

Intramural Activities

2016	**Panelist**, *Finding an Internship Panel*, Department of Biostatistics, UNC - Chapel Hill
2019	**Panelist**, *Choosing a Dissertation Advisor Panel*, Department of Biostatistics, UNC - Chapel Hill
2021–2023	**Co-organizer**, *Center for Causal Inference*, Seminar Series, University of Pennsylvania
2022–2023	**Co-organizer**, *2023 University of Pennsylvania Conference on Statistical Issues in Clinical Trials*
2023–present	**Faculty Biostatistician**, *Monday Biostatistics Consulting Clinic*, Vanderbilt University Medical Center
2023–present	**Reviewer**, *VICTR Pilot Resource Grants*, Vanderbilt University Medical Center

2023–present	**Non-voting Member**, *VICTR Scientific Review Committee*, Vanderbilt University Medical Center
2023–present	**Faculty Biostatistician**, *CTSA/VFRS Work-in-Progress Series*, Vanderbilt University Medical Center
2023–present	**Member**, *VUMC Biostatistics Curriculum Review Committee*, Vanderbilt University Medical Center

Extramural Activities

2019–present	**Referee**, *Annals of the American Thoracic Society, Biometrics, International Journal of Infectious Diseases, Maternal Health, Neonatology and Perinatology, The Pediatric Infectious Disease Journal, PLOS ONE, Statistics in Medicine*, Some reviews listed on https://www.webofscience.com/wos/author/record/1568666
2019–2022	**Committee Member**, *ENAR*, Council for Emerging and New Statisticians
2021–2023	**Conference Session Chair**, ENAR Contributed Papers: Handling of Missing Data; ENAR Contributed Papers: Adaptive design/adaptive randomization in clinical trials; ACIC Weighting Methodologies in Causal Inference
2023	**Reviewer**, *Selection Committee*, 2023 ASA Biometrics Section Paper Award Competition
2023–present	**Member**, *ACTStat 2024 Planning Committee*

Leadership

2018–2020	**Officer, Webmaster**, *Biostatistics Student Association*, UNC - Chapel Hill
2020–2022	**Steering Committee**, *Council for Emerging and New Statisticians*, ENAR
	○ Organized council events and activities for 2-year term
2021–2022	**Co-chair**, *Council for Emerging and New Statisticians*, ENAR
	○ Co-led CENS activities for the 2021-2022 term, including leading teams to run networking events and invited sessions at ENAR and JSM

Mentorship

2023–2024	**Nate Dowd**, *MS Committee*, Primary Advisor: Andrew Spieker
2023–present	**Lan Shi**, *PhD Oral Committee*, Primary Advisor: Dandan Liu
2023–present	**Safiya Sani**, *D43 Co-mentor*, Primary Mentor: Bryan Shepherd

Teaching Activities

Spring 2015	**Teaching Assistant**, *Intro to Statistics*, STA 2023, University of Florida
	○ Managed the tutoring room for several hours each week, proctored exams, graded papers and exams, and taught multiple lab classes each week
	○ Strong teaching evaluations from students - contact me for scores
Fall 2017	**Teaching Assistant**, *Intro to Biostatistics*, BIOS 600, UNC - Chapel Hill
	Assisted professor in writing exams and quizzes, created formats for students to take quizzes online, graded exams, hosted review sessions for exams, and assisted students one-on-one throughout the semester (TAs not reviewed for this course)
Spring 2020	**Academic Enrichment Program Tutor**, *Intro to Biostatistics / Intro to Epidemiology*, BIOS 600 / EPID 600, UNC - Chapel Hill
	Acted as the official school of public health tutor for introductory courses in biostatistics and epidemiology
Fall 2021	**Instructor**, *Public Health Methods and Measures*, SPHG712, UNC - Chapel Hill
	○ Adjunct faculty instructor for introductory epidemiology course for MPH students (online)
	○ Strong teaching evaluations from students - contact me for scores

Fall 2022	**Guest Lecturer**, *Causal Inference in Biomedical Research*, BSTA7900, University of Pennsylvania
	Guest lecture on causal inference with interference
Spring 2022, Spring 2023	**Guest Lecturer**, *Advanced Topics in Epidemiologic Research*, EPID702, University of Pennsylvania
	Guest lecture on Bayesian thinking and analysis

Research Program

Ongoing

7/1/23-Present	**Vanderbilt CTSA Award**, *National Center for the Advancement of Translational Science*, 3UL1TR002243-07S1, Biostatistician, 25% effort
7/1/23-Present	**ARDS, Pneumonia, Sepsis Consortium**, *National Heart, Lung, and Blood Institute / National Institute of General Medical Sciences*, 1U01HL168478-01, Biostatistician, 25% effort
7/1/23-Present	**Recruitment Innovation Center**, *National Center for the Advancement of Translational Science*, 1U24TR004432-01, Biostatistician, 10% effort
7/1/23-Present	**Trial Innovation Center**, *National Center for the Advancement of Translational Science*, 1U24TR004437-01, Biostatistician, 15% effort
9/1/23-Present	**Viruses In Essential Workers (VIEW) Study**, *Centers for Disease Control and Prevention*, VUMC99463(75D30122C13379), Biostatistician, 23% effort

Completed

7/1/23-8/31/23	**Respiratory Virus Transmission Network (RVTN)**, *Centers for Disease Control and Prevention*, VUMC93226(75D30121C11656), Biostatistician, 23% effort

Publications

Peer-reviewed (* indicates co-first author)

1. Becker-Dreps, S., **Blette, B.**, Briceño, R., Alemán, J., Hudgens, M.G., Moreno, G., Ordoñez, A., Rocha, J., Weber, D.J. and Amaya, E. (2017). Changes in the incidence of pneumonia, bacterial meningitis, and infant mortality 5 years following introduction of the 13-valent pneumococcal conjugate vaccine in a" 3+ 0" schedule. *PloS One*, 12(8), p.e0183348.

2. **Blette, B.S**, Howard, A.G. and Frerichs, L.M. (2019). High school physical activity and nutrition policy: Summarizing changes over time using latent class analysis. *American Journal of Preventive Medicine*, 57(3), pp.e69-e76.

3. Neidich, S.D., Fong, Y., Li, S.S., Geraghty, D.E., Williamson, B.D., ..., **Blette, B.**, ..., Tomaras, G. (2019). Antibody Fc effector functions and IgG3 associate with decreased HIV-1 risk. *Journal of Clinical Investigation*, 129(11), pp.4838-4849.

4. Collins, M.H., Zepeda, O., **Blette, B.**, Jadi, R., Morales, M., Pérez, R., Liou, G.J.A., Montoya-Cruz, M., Harris, E., Becker-Dreps, S. and de Silva, A.M. (2020). Serologic surveillance of maternal Zika infection in a prospective cohort in Leon, Nicaragua during the peak of the Zika epidemic. *PloS One*, 15(4), p.e0230692.

5. Gilbert, P.B., **Blette, B.S.**, Shepherd, B.E. and Hudgens, M.G. (2020). Post-randomization biomarker effect modification analysis in an HIV vaccine clinical trial. *Journal of Causal Inference*, 8(1), pp.54-69.

6. Vielot, N. A., González, F., Reyes, Y., Zepeda, O., **Blette, B.**, Paniagua, M., ..., Bucardo, F. (2021). Risk factors and clinical profile of Sapovirus-associated acute gastroenteritis in early childhood: A Nicaraguan birth cohort study. *The Pediatric Infectious Disease Journal*, 40(3), 220-226.

7. Stringer, E. M., Martinez, E., **Blette, B.**, Toval Ruiz, C. E., Boivin, M., Zepeda, O., ..., Bucardo, F. (2021). Neurodevelopmental outcomes of children following in utero exposure to Zika in Nicaragua. *Clinical Infectious Diseases*, 72(5), e146-e153.

8. Bowman, N. M., Bucardo, F., Collins, M. H., Reyes, Y., Cuadra, E. C., **Blette, B.**, ..., Becker-Dreps, S. (2021). Clinical and epidemiological features of acute Zika virus infections in León, Nicaragua. *The American Journal of Tropical Medicine and Hygiene*, 105(4), 924-930.

9. Vielot, N., Becker-Dreps, S., **Blette, B.**, Gonzalez, F., Toval-Ruiz, C., Gutierrez, L., Vilchez, S., Diez-Valcarce, M., Vinje, J., Becker-Dreps, S., Bucardo, F. (2022). First episodes of norovirus and sapovirus gastroenteritis protect against subsequent episodes in a Nicaraguan birth cohort. *Epidemiology*, 33(5), 650-653.

10. Spelke, M. B., Paul, R., **Blette, B.**, Meltzer-Brody, S., Schiller, C. E., Ncheka, J. M., Kasaro, M. P., Price, J. T., Stringer, J. S., Stringer, E.M. (2022). Interpersonal therapy vs. antidepressant medication for treatment of postpartum depression and anxiety among women with HIV in Zambia: a randomized feasibility trial. *Journal of the International AIDS Society*, 25(7), p.e25959.

11. Harhay, M.O., **Blette, B.S.**, Granholm, A., Moler, F.W., Zampieri, F.G., Goligher, E.C., Gardner, M.M., Topjian, A.A. and Yehya, N. (2022). A Bayesian interpretation of a pediatric cardiac arrest trial (THAPCA-OH). *NEJM Evidence*, p.EVIDoa2200196.

12. **Blette, B.S.**, Granholm, A., Li, F., Shankar-Hari, M., Lange, T., Munch, M.W., Møller, M.H., Perner, A. and Harhay, M.O. (2023). Causal Bayesian machine learning to assess treatment effect heterogeneity by dexamethasone dose for patients with COVID-19 and severe hypoxemia. *Scientific Reports*, 13(1), p.6570.

13. Schweickert WD, Jablonski J, Bayes B, Chowdhury M, Whitman C, Tian J, **Blette B**, Tran T, Halpern SD. (2023) Structured Mobilization for Critically Ill Patients: A Pragmatic Cluster-randomized Trial. *Am J Respir Crit Care Med.* 2023 Jul 1;208(1):49-58. doi: 10.1164/rccm.202209-1763OC. PMID: 36996413.

14. Kahan, B.C., Li, F., **Blette, B.**, Jairath, V., Copas, A., & Harhay, M. (2023). Informative cluster size in cluster-randomised trials: A case study from the TRIGGER trial. *Clinical Trials*, 17407745231186094.

15. **Blette, B.S.**, Moutchia, J., Al-Naamani, N., Ventetuolo, C.E., Cheng, C., Appleby, D., Urbanowicz, R.J., Fritz, J., Mazurek, J.A., Li, F. and Kawut, S.M. (2023). Is low-risk status a surrogate outcome in pulmonary arterial hypertension? An analysis of three randomised trials. *The Lancet Respiratory Medicine*.

16. Huang, Y., Hejazi, N.S., **Blette, B.**, Carpp, L.N., Benkeser, D., Montefiori, D.C., McDermott, A.B., Fong, Y., Janes, H.E., Deng, W. and Zhou, H. (2023). Stochastic Interventional Vaccine Efficacy and Principal Surrogate Analyses of Antibody Markers as Correlates of Protection against Symptomatic COVID-19 in the COVE mRNA-1273 Trial. *Viruses*, 15(10), 2029.

17. Hart, J., Summer, A., Ogunduyile, L., Lapite, F., Hong, D., Whitman, C., **Blette, B.**, Harhay, M., Halpern, S. (2023). Accuracy of Expected Symptoms and Subsequent Quality of Life Measures Among Adults With COPD. *JAMA Netw Open.* 2023;6(11):e2344030.

Under Review

18. **Blette, B.**, Halpern, S., Li, F., Harhay, M. Assessing treatment effect heterogeneity in the presence of missing effect modifier data in cluster-randomized trials (under revision, *Statistical Methods in Medical Research*)

19. Max, R., Toval-Ruiz, C., Becker-Dreps, S., Gajewski, A., Martinez, E., Cross, K., **Blette, B.**, ..., Bucardo, F. A prospective cohort study of neurodevelopment in preschool children exposed and unexposed to Zika virus in utero (under revision, *The Lancet Global Health*)

20. **Blette, B.**, Gilbert, P., Hudgens, M. Addressing confounding and continuous exposure measurement error using conditional score functions (submitted)

21. Kasaro, M., **Blette, B.**, Paul, R., Meltzer-Brody, S., Mwanze, J., Spelke, M.B., Stringer, J., Stringer, E. Factors associated with severity of Edinburgh Postnatal Depression Screen (EPDS) and optimal cutoff of EPDS for diagnosing depression and anxiety among postpartum HIV positive women in Lusaka, Zambia (submitted)

22. Spelke, M.B., Okumu, E., Perry, N., **Blette, B.**, Paul, R., Schiller, C., Ncheka, J.M., Kasaro, M., Price, J., Meltzer-Brody, S., Stringer, J., Stringer, E. Acceptability of a randomized trial of anti-depressant medication or interpersonal therapy for treatment of perinatal depression in HIV infected women (submitted)

23. Kahan, B., **Blette, B.**, Harhay, M., Halpern, S., Jairath V., Copas, A., Li, F. Demystifying estimands in cluster-randomised trials (submitted)

In Preparation (selected)

24. **Blette, B.**, Gilbert, P., Hudgens, M. Causal joint modeling of longitudinal and survival data: An IPW approach

25. **Blette, B.**, Hudgens, M. A causal joint modeling procedure to assess joint treatment and biomarker effects in an HIV clinical trial

26. **Blette, B.**, Harhay, M., Li, F., Kahan, B. Using estimands to guide design and analysis of pragmatic trials

Presentations

Invited Talks and Seminars

1. **Blette, B.**, Gilbert, P., Hudgens, M. Causal joint modeling of longitudinal and survival data: An IPW approach. *Center for Causal Inference (CCI) Seminar Series.* April 2022

2. **Blette, B.** Association vs. causation in medical research. *Penn Palliative and Advanced Illness Research (PAIR) Center Seminar Series.* May 2022

3. **Blette, B.**, Gilbert, P., Hudgens, M. Causal joint modeling of longitudinal and survival data: An IPW approach. *International Biometric Society: Kenya Region Seminar Series.* November 2022

4. **Blette, B.**, Gilbert, P., Hudgens, M. Combining causal and joint modeling methods to address practical issues in HIV clinical trials. *Northwestern University Division of Biostatistics Seminar.* January 2023

5. **Blette, B.**, Gilbert, P., Hudgens, M. Combining Causal and Joint Modeling Methods to Address Policy-Relevant Questions using HIV Vaccine Trial Data. *RAND Statistics Group Seminar.* January 2023

6. **Blette, B.**, Gilbert, P., Hudgens, M. Combining causal and joint modeling methods to address practical issues in HIV clinical trials. *Vanderbilt Department of Biostatistics Seminar.* January 2023

7. **Blette, B.**, Gilbert, P., Hudgens, M. Combining causal and joint modeling methods to address practical issues in HIV clinical trials. *Ohio State University Division of Biomedical Informatics Seminar.* February 2023

8. **Blette, B.**, Gilbert, P., Hudgens, M. Combining causal and joint modeling methods to address practical issues in HIV clinical trials. *University of Pennsylvania Division of Biostatistics Seminar.* February 2023

9. **Blette, B.**, Moutchia, J., Al-Naamani, N., Ventetuolo, C., Cheng, C., Appleby, D., Urbanowicz, R., Fritz, J., Mazurek, J., Li, F., Kawut, S., Harhay, M. Is low-risk status a surrogate outcome in pulmonary arterial hypertension? An analysis of three randomised trials. *Pulmonary Vascular Research Institute Community Seminar*. July 2023

10. **Blette, B.**, Kahan. B, Harhay, M., Li. F. Evaluating informative cluster size in cluster-randomized trials. *CMStatistics*. Upcoming in December 2023

11. **Blette, B.**, Kahan. B, Harhay, M., Li. F. Evaluating informative cluster size in cluster-randomized trials. *ENAR Spring Meeting*. Upcoming in March 2024

12. **Blette, B. (Session Organizer)**, Desai, M., Elkin, P., Lindsell, C. Generative AI as a Tool for Advancing Translational Science: Opportunities and Potential Pitfalls. *ACTS Translational Science 2024*. Upcoming in April 2024

Contributed Talks

1. **Blette, B.**, Ploutz-Snyder, R., Feiveson, A. Data analysis challenges in the space life sciences. *Space Life Sciences Summer Institute Research Conference*. August 2015

2. **Blette, B.**, Richardson, A., Jiao, Y. Modeling considerations in data-driven attribution. *Google Internship Presentation*. September 2018

3. **Blette, B.**, Gilbert, P., Shepherd, B., Hudgens, M. Post-randomization biomarker effect modification in an HIV vaccine clinical trial. *ENAR Spring Meeting*. March 2019

4. **Blette, B.**, Gilbert, P., Hudgens, M. Structural joint modeling of longitudinal and survival Data. *UNC Student Seminar*. 2019

5. **Blette, B.** Preparing for the next Zika epidemic: Clinical, epidemiological, and statistical Challenges. *UNC Prospective Students Day*. 2020

6. **Blette, B.**, Gilbert, P., Hudgens, M. Structural joint modeling of longitudinal and survival data. *ENAR Spring Meeting*. March 2020

7. **Blette, B.**, Gilbert, P., Hudgens, M. Addressing concurrent confounding and measurement error using conditional score functions. *ENAR Spring Meeting*. March 2021

8. **Blette, B.**, Hudgens, M. Causal joint modeling of longitudinal and survival data using the parametric g-formula. *ENAR Spring Meeting*. March 2022

9. **Blette, B.**, Gilbert, P., Hudgens, M. Addressing confounding and continuous exposure measurement error using conditional score functions. *Joint Statistical Meetings*. August 2022 (Biometrics Section Paper Award presentation)

10. **Blette, B.**, Halpern, S., Li, F., Harhay, M. Assessing treatment effect heterogeneity in the presence of missing effect modifier data in cluster-randomized trials. *8th Annual Conference on Current Developments in Cluster Randomized Trials and Stepped Wedge Designs*. November 2022

11. **Blette, B.**, Halpern, S., Li, F., Harhay, M. Assessing treatment effect heterogeneity in the presence of missing effect modifier data in cluster-randomized trials. *ENAR Spring Meeting*. March 2023

12. **Blette, B.**, Moutchia, J., Al-Naamani, N., Ventetuolo, C., Cheng, C., Appleby, D., Urbanowicz, R., Fritz, J., Mazurek, J., Li, F., Kawut, S., Harhay, M. Multivariable risk scores as potential surrogate outcomes in pulmonary arterial hypertension trials. *American Thoracic Society International Conference*. May 2023

Posters

1. **Blette, B.**, Howard, A.G., Frerichs, L. Latent class analysis for classification of latent policy environments: A case study. *Joint Statistical Meetings*. August 2019

2. **Blette, B.**, Halpern, S., Li, F., Harhay, M. Assessing treatment effect heterogeneity in the presence of missing effect modifier data in cluster-randomized trials. *Penn DBEI and CCEB Research Day*. April 2022

3. **Blette, B.**, Kahan. B, Harhay, M., Li. F. Assessing informative cluster size in cluster-randomized trials. *American Causal Inference Conference*. May 2023

Honors and Awards

2022 ASA Biometrics Section Paper Award (awarded to 5 students or recent graduates out of 121 applicants)

2020 ASA Biopharmaceutical Section Scholarship Award

2020 AcademyHealth HSRProj Research Competition - Finalist, with Natalie Smith and Katherine Miller

2018,2019 UNC Conference Travel Award

2017 National Defense Science and Engineering Graduate Fellowship - Alternate Selection (fundable score but not selected)

2016 UW SISMID Travel Award

2015 Mohberg Scholarship (awarded to one first-year Biostatistics Ph.D. student)

2015 Anderson Scholar (one of the top graduating students from UF Liberal Arts and Sciences)

2014 Elected to Phi Beta Kappa and Phi Kappa Phi

2012 University of Florida Presidential Scholar, National Merit Scholar