Samantha A. Malatesta

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Education

2024 PhD Biostatistics – Boston University; Boston, MA
Thesis: Statistical methods for understanding tuberculosis epidemiology among key populations
Advisor: Laura F. White, PhD

2019 BS Statistics – North Carolina State University; Raleigh, NC; Summa Cum Laude

Research Positions

2025 – Present Visiting Postdoctoral Scholar
Bacterial Genomics Group, Genomic Center for Infectious Diseases
Broad Institute of MIT and Harvard, Cambridge, MA

2024 – Present Postdoctoral Fellow
Boston University Clinical HIV/AIDS Research Training Program
Ruth L. Kirschstein NRSA Institutional Research Training Grant
Section of Infectious Diseases, Boston Medical Center, Boston, MA

2020 – 2024 Graduate Research Assistant
Section of Infectious Diseases, Boston Medical Center, Boston, MA

2019 – 2020 Predoctoral Trainee
Interdisciplinary Training Program for Biostatisticians
Ruth L. Kirschstein NRSA Institutional Research Training Grant
Department of Biostatistics, Boston University School of Public Health, Boston, MA

Computing Skills

- Modeling & Data Analysis: R (advanced), Python (basic), SAS (proficient)
- High-Performance Computing & Reproducibility: Git/GitHub, Docker, Google Cloud Platform
- Other Tools: LaTeX, markdown, data visualization (ggplot2)

Publications (ORCID 0000-0003-0849-2348)
* denotes equal contribution

1. Niemand N*, Rooney JA*, **Malatesta S**, Rawoot N, Bouton TB, Ragan EJ, Carney T, White LF, Farhat M, Horsburgh CR, Myers B, Warren RM, Jacobson KR. Contamination rates in serially sampled sputum specimens obtained during tuberculosis treatment to capture culture conversion. *Microbiology Spectrum*. 2025;0(0):e00969-25. doi:10.1128/spectrum.00969-25

2. Tzelios C, **Malatesta S**, Carney T, White LF, Weber SE, Theron D, Myers B, Parry CDH, Warren RM, Horsburgh CR, Jacobson KR*, Farhat M*.Patient determinants and effects on adherence of adverse drug reactions to tuberculosis treatment: a prospective cohort analysis. *Clinical Infectious Diseases*. 2025:ciae642. doi:10.1093/cid/ciae642

3. **Malatesta S**, Jacobson KR, Carney T, Kolaczyk ED, Gile KJ, White LF. Inferring bivariate association with continuous data from a respondent-driven sample. *Journal of the Royal Statistical Society Series C: Applied Statistics*. 2025;74(2):429-446. doi:10.1093/jrsssc/qlae061

4. Overbeck V, **Malatesta S**, Carney T, Myers B, Parry CDH, Horsburgh CR, Theron D, White LF, Warren RM, Jacobson KR, Bouton TC. Understanding the impact of pandemics on long-term medication adherence: directly observed therapy in a tuberculosis treatment cohort pre- and post-COVID-19 lockdowns. *BMC Infect Dis*. 2024;24(1):1154. doi:10.1186/s12879-024-09994-7

5. Wijk M, Gausi K, **Malatesta S**, Weber SE, Court R, Myers B, Carney T, Parry CDH, Horsburgh CR, White LF, Wiesner L, Warren RM, Uren C, McIlleron H, Kloprogge F, Denti P, Jacobson KR. The impact of alcohol and illicit substance use on the pharmacokinetics of first-line TB drugs. *Journal of Antimicrobial Chemotherapy*. 2024;79(8):2022-2030. doi:10.1093/jac/dkae206

6. Myers B, Carney T, Rooney J, **Malatesta S**, Ragan EJ, White LF, Natcheva H, Bouton TC, Weber SE, Farhat M, McIlleron H, Theron D, Parry CDH, Horsburgh CR, Warren RM, Jacobson KR. Smoked drug use in patients with TB is associated with higher bacterial burden. *Int J Tuberc Lung Dis*. 2023;27(6):444-450. doi:10.5588/ijtld.22.0650

7. **Malatesta S**, Weir IR, Weber SE, Bouton TC, Carney T, Theron D, Myers B, Horsburgh CR, Warren RM, Jacobson KR, White LF. Methods for handling missing data in serially sampled sputum specimens for mycobacterial culture conversion calculation. *BMC Med Res Methodol*. 2022;22(1):297. doi:10.1186/s12874-022-01782-8

8. Myers B, Carney T, Rooney J, **Malatesta S**, White LF, Parry CDH, Bouton TC, Ragan EJ, Horsburgh CR, Warren RM, Jacobson KR. Alcohol and Tobacco Use in a Tuberculosis Treatment Cohort during South Africa's COVID-19 Sales Bans: A Case Series. *International Journal of Environmental Research and Public Health*. 2021;18(10):5449. doi:10.3390/ijerph18105449

Manuscripts in progress

1. **Malatesta S**, Carney T, Niemand N, Theron D, Ratangee F, Meade C, Overbeck V, Weber SE, Horsburgh CR, White LF, Warren RM, Jacobson KR. Tuberculosis Disease Prevalence Among People Who Smoke Illicit Drugs: A Respondent-Driven Sampling Study in the Western Cape, South Africa. *https://dx.doi.org/10.2139/ssrn.5010346. Journal of Infectious Diseases.* In revision.

2. **Malatesta S**, Jacobson KR, Horsburgh CR, Carney T, Farhat M, Gile KJ, Kolaczyk ED, White LF. An Integrated Data-Driven Model for Clinical Phenotyping of Tuberculosis Disease Severity. Under review.

3. **Malatesta S**, Horsburgh CR, White LF. The role of reinfection in sustaining tuberculosis transmission. In preparation.

Selected Conference Presentations

Oral

1. **Malatesta, S**, Niemand N, Kulkarni S, Marin M, Mann B, Ghatti S, Horsburgh CR, Carney T, Warren RM, Farhat M, White LF, Jacobson KR. Smoked drug use drives tuberculosis transmission dynamics in a rural community in the Western Cape, South Africa. *The Union World Conference on Lung Health*. Copenhagen, Denmark. November 2025. *Upcoming.*

2. **Malatesta S,** Jacobson KR, White LF. Leveraging Active Case Finding Data to Identify Persons with TB Who Delay Seeking Care. *ENAR 2024 Spring Meeting*. Baltimore, Maryland. March 2024.

3. **Malatesta S**, Carney T, Niemand N, Theron D, Ratangee F, Meade C, Overbeck V, Weber SE, Horsburgh CR, White LF, Warren RM, Jacobson KR. TB disease burden among people who smoke illicit drugs: a respondent-driven sample, Western Cape, South Africa. *The Union World Conference on Lung Health*. Paris, France. November 2023.

4. **Malatesta S**, Carney T, Overbeck V, Theron D, Bouton TC, Niemand N, Weber SE, Horsburgh CR, White LF, Warren RM, Jacobson KR. Benefits of diagnosing subclinical TB disease among people who smoke drugs. *The Union World Conference on Lung Health*. Paris, France. November 2023.

5. **Malatesta S**, Rooney J, Bouton T, Carney T, Myers B, Horsburgh CR, Warren RM, Jacobson KR, White LF. Handling Missing Data in Serially Sampled Sputum Specimens for Mycobacterial Culture Conversion Calculation. *The Union World Conference on Lung Health.* Virtual conference. October 2021.

Poster

1. **Malatesta S**, Carney T, Theron D, Buys C, Weber SE, Farhat M, Horsburgh CR, Parry CDH, White LF, Warren RM, Myers B, Jacobson KR. Alcohol's effect on tuberculosis treatment response: a cohort study in the Western Cape, South Africa. *The Union World Conference on Lung Health*. Paris, France. November 2023.

2. **Malatesta S**, Jacobson KR, Kolaczyk ED, Gile KJ, White LF. Understanding tuberculosis care-seeking behavior from active case finding data. *MIDAS Network Annual Meeting.* Atlanta, Georgia. October 2023.

3. **Malatesta S**, Weber SE, Carney T, Parry CDH, Horsburgh CR, Warren RM, White LF, Myers B, Jacobson KR. Alcohol exposure group classification using self-reported and biomarker measures in a South African cohort of persons with tuberculosis: a latent class analysis. *The Union World Conference on Lung Health*. Virtual conference. November 2022.

Invited Presentations

2023 'Inferring associations with respondent-driven sampling data'. New England Statistics Symposium. Boston, MA.

2022 'Methods for Handling Missing Data for Estimating Time to Mycobacterial Culture Conversion'. Molecular Biology and Human Genetics Divisional Seminar. Stellenbosch University, Cape Town, South Africa.

Teaching Experience

Boston University School of Public Health

2022 – 2025 Teaching Assistant, Public Health Surveillance, a Methods Based Approach (Fall semester)
2022 Teaching Assistant, Advanced Methods in Infectious Disease Epidemiology (Fall semester)

Honors and Awards

2023 Clinical science poster presentation award, Boston University School of Medicine Evans Days
2023 Student travel award, The Union – North America Region
2019 Phi Beta Kappa, honor society
2019 Mu Sigma Rho, national statistics honor society

Selected Software Packages and Repositories

More information at https://github.com/samalatesta

1. tbSTATIS: R package to classify tuberculosis disease severity that integrates multiple data sources collected at time of diagnosis

2. RDSAssociation: R package to infer bivariate association with respondent-driven sampling data

Mentoring Activities

2024 Lia Rotti, PhD Biostatistics student, training rotation mentor
2023 William Bouck, BS Statistics student, Utah State University, summer project mentor
2022 Alexandra Lewis, MS Biostatistics student, practicum mentor
2021 – 2024 Victoria Overbeck, MPH Epidemiology and Biostatistics student/research coordinator, mentor

Service

Boston University School of Public Health

2025 – Present Co-organizer, Boston University Infectious Disease Modeling Group
2025 Organizer, Quantitative TB Research Group
2024 Student Representative, Graduate Education Committee, Dept. of Biostatistics
2023 Student Admissions Ambassador, Dept. of Biostatistics

Ad Hoc Reviewing Activities

American Journal of Epidemiology
BMC Infectious Diseases
BMJ Public Health
Molecular Biology and Evolution

Professional Memberships

American Statistical Association
International Biometric Society
International Union Against Tuberculosis and Lung Disease