

Sean M. Tomlin

BIOSTATISTICIAN · CAUSAL INFERENCE · REAL WORLD EVIDENCE · HEALTH POLICY STATISTICS

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Education

The Ohio State University

DOCTOR OF PHILOSOPHY IN BIOSTATISTICS

Columbus, OH

Aug. 2020 - Aug. 2025

- Dissertation: "Estimating Causal Effects from Observational Data in Quasi-Experimental Designs"
- Advisor: Bo Lu, Ph.D.
- Skills: Causal inference; propensity scores; retrospective/prospective observational data; quasi-experimental methods; panel data; difference-in-differences; policy evaluation; complex survey design; constrained optimization; clinical trials.
- Computing: R, SAS, Python.

The Ohio State University

MASTER OF SCIENCE IN STATISTICS

Columbus, OH

Aug. 2020 - May 2022

Wright State University

BACHELOR OF SCIENCE IN STATISTICS

Dayton, OH

Aug. 2016 - May 2020

- Minor in Mathematics
- *Summa cum Laude* with Honors

Professional Experience

- 2025- **Biostatistician**, Medpace, Inc., Cincinnati, OH
2024-2025 **Dissertation Year Fellow**, Division of Biostatistics, The Ohio State University
2023-2024 **Graduate Research Associate**, College of Public Health, The Ohio State University
2020-2023 **Graduate Fellow**, Division of Biostatistics, The Ohio State University
2020 **Research Intern**, Hypersonic and Airbreathing Propulsion Branch, Research Directorate, National Aeronautics and Space Administration, Langley Research Center, Hampton, VA
2019 **Statistician Intern**, Scientific Test & Analysis Techniques Center of Excellence, Air Force Institute of Technology, Wright-Patterson Air Force Base, OH

Honors and Awards

- 2026 †**Student Paper Award**, SRMS/GSS/SSS Consortium of Sections, Joint Statistical Meetings
2025 **Craig Cooley Memorial Prize**, Department of Statistics, The Ohio State University
2024 **Student Travel Award**, Survey Research Methods Section, Joint Statistical Meetings
2024-2025 **Dissertation Year Fellowship**, The Ohio State University
2022-2023 **College of Public Health Fellowship**, College of Public Health, The Ohio State University
2020-2022 **Susan Huntington Dean's Distinguished University Fellowship**, The Ohio State University
2020 **University Honors Scholar**, Wright State University
2016-2020 **Competitive Honors Scholarship**, Wright State University
2016-2020 **Valedictorian Scholarship**, Wright State University

Publications

WORKING PAPERS

†**Tomlin, Sean**, Andridge, Rebecca, and Lu, Bo. 2026+. Characterizing Retrospective Constraints of Survey Designs for Estimating Population-level Causal Effects. In preparation.

Tomlin, Sean, and Lu, Bo. 2026+. Counterpart Statistics in the Matched Difference-in-Differences Design. In preparation.

Presentations

CONTRIBUTED PRESENTATIONS AND POSTERS

2025. Counterpart Statistics in the Matched Difference-in-Differences Design. Oral presentation: Joint Statistical Meetings, Nashville, TN, 2025
2025. Counterpart Statistics in the Matched Difference-in-Differences Design. Poster presentation: American Causal Inference Conference, Detroit, MI, 2025
2025. Revisiting Covariate Adjustment in Parametric Difference-in-Differences. Oral presentation: ENAR Spring Meeting 2025, New Orleans, LA.
2024. On the Matched Difference-in-Differences Design with Counterparts. Speed presentation and poster: Golden Anniversary Celebration of the Department of Statistics, The Ohio State University
2024. Revisiting the Design and Analysis of Parametric Difference-in-Differences. Departmental poster session: Department of Statistics and Division of Biostatistics, The Ohio State University
2024. On the Matched Difference-in-Differences Design with Counterparts. Oral presentation: Joint Statistical Meetings Portland, OR.
2023. Matching Designs for Causal Inference in Health Policy Evaluation. Oral presentation: Research Day, College of Public Health, The Ohio State University.
2023. Negative Control Adaptive Randomization Inference for Matched Observational Studies. Departmental poster session: Department of Statistics and Division of Biostatistics, The Ohio State University

Research Experience

CLINICAL RESEARCH

Medpace, Inc.

Cincinnati, OH

2025 - Present

FULL SERVICE CLINICAL CONTRACT RESEARCH ORGANIZATION

- Lead statistical and programming activities for multiple clinical studies, including developing Analysis Plans, selecting appropriate methodologies, programming analyses, and preparing statistical methods for clinical reports.
- Support clinical development planning and collaborate with data management and medical writing teams.

SCIENTIFIC APPOINTMENTS

The Ohio State University - Division of Biostatistics

Columbus, OH

2021 - 2025

ADVISOR: BO LU, PH.D.

- Conducting dissertation research on causal inference methods for quasi-experiments, with a focus on difference-in-differences designs, nonnegative outcomes in healthcare utilization, and addressing retrospective constraints from survey design.
- Graduate Research Associate in collaboration with the Center for Injury Research and Policy at Nationwide Children's Hospital; contributed to applied studies involving causal inference in public health and injury epidemiology.

GRANT APPLICATION

- NIH F31 Pre-doctoral Fellowship**, "Causal inference for policy evaluations with individual-level survey data: Estimating the impact of Tobacco 21 policies on adolescent smoking behavior," not funded.
2023

Consulting

- 2025 **Denison University**, Consultation, statistical analysis, and reproducible report for a repeated measures experimental design. Granville, OH, July 2025 - December 2025.

Development

MENTORING

- Jul 2025 **Yuan Wang (Oberlin College)**, Ohio Five Summer Undergraduate Research Experience
Jul 2024 **Syad Rafey (Kenyon College)**, Ohio Five Summer Undergraduate Research Experience
Jul 2023 **Lynn Nguyen (Denison University)**, Ohio Five Summer Undergraduate Research Experience

SERVICE AND OUTREACH

- 2023-2025 **Ohio Five OSU SURE**, Journal Club Leader
2023-2024 **Statistics and Biostatistics Graduate Student Association**, President
2023-2024 **Peer Mentor Program (Statistics and Biostatistics Graduate Student Association)**, Mentor
2023-2024 **Ohio State Science Fair**, Volunteer Judge
2023-2024 **ASA DataFest Ohio State University**, Volunteer

PEER REVIEW

- Annals of Applied Statistics (referee)*
Observational Studies (referee)

PROFESSIONAL MEMBERSHIPS

- American Statistical Association, 2022-present
ENAR, 2024-present
Society for Causal Inference, 2025-present.