

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

Tomlin, S., Lu, B. 2025. Counterpart Statistics in the Matched Difference-in-Differences Design. Oral presentation: Joint Statistical Meetings, Nashville, TN, 2025

Tomlin, S. 2025. Counterpart Statistics in the Matched Difference-in-Differences Design. Poster presentation: American Causal Inference Conference, Detroit, MI, 2025

Tomlin, S. 2025. Revisiting Covariate Adjustment in Parametric Difference-in-Differences. Oral presentation: ENAR Spring Meeting 2025, New Orleans, LA.

Tomlin, S. 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

Tomlin, S. 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

Tomlin, S. 2024. On the Matched Difference-in-Differences Design with Counterparts. Oral presentation: Joint Statistical Meetings Portland, OR.

Tomlin, S. 2023. Matching Designs for Causal Inference in Health Policy Evaluation. Oral presentation: Research Day, College of Public Health, The Ohio State University.

Tomlin, S. 2023. Negative Control Adaptive Randomization Inference for Matched Observational Studies. Departmental poster session: Department of Statistics and Division of Biostatistics, The Ohio State University

Grant Application

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

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

Research Experience

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.

Development

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.