

Nicholas J. Seewald, Ph.D.

Curriculum Vitae

✉ seewaldn@penntestimony.upenn.edu  nickseewald.com  [nickseewald](https://github.com/nickseewald)

Professional Data

Department of Biostatistics, Epidemiology, and Informatics
University of Pennsylvania Perelman School of Medicine
624 Blockley Hall
423 Guardian Drive
Philadelphia, PA 19104

Education

University of Michigan, Ann Arbor, MI.

Ph.D. Statistics 2021

Design and Analytic Considerations for Sequential, Multiple-Assignment Randomized Trials with Continuous Longitudinal Outcomes. Advised by Daniel Almirall, Ph.D.

DOI: [n4r2](https://doi.org/10.2196/14422)

M.A. Statistics 2018

M.S. Biostatistics 2015

University of Notre Dame, Notre Dame, IN.

B.S. Mathematics (with Life Science), *cum laude* 2013

Faculty & Research Positions

University of Pennsylvania, Philadelphia, PA.

Senior Scholar, Center for Clinical Epidemiology and Biostatistics 2025 - Present

Assistant Professor of Biostatistics 2023 - Present

Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

Postdoctoral Fellow, Department of Health Policy and Management 2021-2023

Advised by Elizabeth A. Stuart, Ph.D. and Emma E. (Beth) McGinty, Ph.D.

Awards

7. Excellence in Teaching. Johns Hopkins Bloomberg School of Public Health, AY 2022-23, First Term.
6. Junior Researcher Travel Grant, American Causal Inference Conference, 2022. Supported by the National Science Foundation, awarded to Duke University.

5. Brenda Gunderson Graduate Student Instructor Award. Department of Statistics, University of Michigan, 2021. (Inaugural recipient)
4. Outstanding Graduate Student Instructor. Rackham Graduate School, University of Michigan, 2021. (University-wide)
3. Outstanding Graduate Student Instructor. Department of Statistics, University of Michigan, 2020.
2. Best Departmental Poster, Statistics. Michigan Student Symposium for Interdisciplinary Statistical Sciences, 2017.
1. Best Departmental Poster, Biostatistics. Michigan Student Symposium for Interdisciplinary Statistical Sciences, 2015.

Publications

Underline denotes trainee with significant mentoring.

Peer-Reviewed Articles

21. Stone EM, **Seewald NJ**, Rosen JG (To Appear) “The impact of Medicaid expansion on HIV pre-exposure prophylaxis coverage.” *Health Affairs*.
20. Hamm RF, Mumford SI, Forkpa M, **Seewald NJ**, Beidas RS, Srinivas SK, Parry S, Levine LD (2025) “The impact of implementing a standardized protocol for labor induction on obstetric disparities: secondary analysis of a type I hybrid effectiveness-implementation trial.” *Pregnancy*, 1, e70077. DOI: [pwrr](#).
19. Anbil S, **Seewald NJ**, Chiorean EG, Hussein M, Kasi PM, Laux DE, Schwartz GK, Shapiro G, Lin KK, Craib M, Maloney L, McLachlan K, Tukachinsky H, Schrock AB, Wang S, Sokol ES, Decker B, Nathanson KL, Domchek SM, Reiss KA (2025) “LODESTAR: A Single Arm Phase II Study of Rucaparib in Solid Tumors with Pathogenic Germline or Somatic Variants in Homologous Recombination Repair Genes.” *JCO Precision Oncology*, 9, e2500090. DOI: [pv75](#).
18. Moin EE, **Seewald NJ**, Halpern SD (2025) “Use of Life Support and Outcomes Among Patients Admitted to Intensive Care Units.” *JAMA*, 333:20, 1793-1803. DOI: [pg4w](#).
17. Till JE, **Seewald NJ**, Yazdani Z, Wang Z, Ballinger D, Samberg H, Dandu S, Macia C, Yin M, Abdalla A, Prior T, Shah S, Patel T, McCoy E, Monsour M, Wills CA, Bochenek V, Serrano J, Snuderl M, Phillips RE, O’Rourke DM, Amankulor NM, Nabavizadeh A, Desai AS, Gollomp K, Binder ZA, Zhou W, Bagley SJ, Carpenter EL (2025) “Corticosteroid-dependent association between prognostic peripheral blood cell-free DNA levels and neutrophil-mediated NETosis in patients with glioblastoma.” *Clinical Cancer Research*, 31:7, 1292–1304. DOI: [pgbf](#).
16. Stone EM, Jopson AD, **Seewald NJ**, Stuart EA, Wise E, McCourt AD, German D, McGinty EE (2025) “Effects of Texas state agency integration on mental health service use among individuals with co-occurring cognitive disabilities and mental health conditions.” *Community Mental Health Journal*, 61, 111-121. DOI: [nmmv](#).

15. **Seewald NJ**, McGinty EE, Stuart EA (2024) “Target Trial Emulation for Evaluating Health Policy.” *Annals of Internal Medicine*, 177:11, 1530-1538. DOI: [nmmw](#).
14. McGinty EE, Tormohlen KN, **Seewald NJ**, Bicket MC, McCourt AD, Rutkow L, White SA, Stuart EA (2023) “Effects of U.S. state medical cannabis laws on treatment of chronic non-cancer pain.” *Annals of Internal Medicine*, 176:7, 904-912. DOI: [khxp](#).
13. McGinty EE, **Seewald NJ**, Bandara S, Cerdá M, Daumit G, Eisenberg, M, Griffin BA, Igusa T, Jackson JW, Kennedy-Hendricks A, Marsteller J, Miech EJ, Purtle J, Schmid I, Schuler MS, Yuan CT, Stuart, EA (2022) “Scaling interventions to manage chronic disease: Innovative methods at the intersection of health policy research and implementation science.” *Prevention Science*, 25, 96-108. DOI: [jbkm](#).
12. McGinty EE, Bicket MC, **Seewald NJ**, Stuart EA, Alexander GC, Barry, CL, McCourt AD, Rutkow, L (2022) “Effects of state opioid prescribing laws on use of opioid and other pain treatments among commercially insured U.S. adults.” *Annals of Internal Medicine*, 175:5, 617-627. DOI: [hss3](#).
11. **Seewald NJ**, Kidwell KM, Wu T, Nahum-Shani I, Almirall D (2020) “Sample size considerations for comparing dynamic treatment regimens in a sequential multiple-assignment randomized trial with a continuous longitudinal outcome.” *Statistical Methods in Medical Research*, 29:7, 1891-1912. DOI: [gf85ss](#).
10. **Seewald NJ**, Smith SN, Lee AJ, Klasnja P, Murphy SA (2019) “Practical Considerations for Data Collection and Management in Mobile Health Micro-randomized Trials.” *Statistics in Biosciences*, 11:2, 355-370. DOI: [gfsvx7](#).
9. Klasnja P, Smith S, **Seewald NJ**, Lee A, Hall K, Luers B, Heckler E, Murphy SA (2018) “Efficacy of contextually-tailored suggestions for physical activity: A micro-randomized optimization trial of HeartSteps.” *Annals of Behavioral Medicine*, 53:6, 573-582. DOI: [hh5s](#).
8. Kidwell KM, **Seewald NJ**, Tran Q, Kasari K, Almirall D (2018) “Design and analysis considerations for comparing dynamic treatment regimens with binary outcomes from sequential multiple assignment randomized trials.” *Journal of Applied Statistics*, 45:9, 1628-1651. DOI: [hh5r](#).
7. Meurer WJ, **Seewald NJ**, Kidwell KM (2017) “Sequential Multiple Assignment Randomized Trials: An Opportunity for Improved Design of Stroke Reperfusion Trials.” *Journal of Stroke and Cerebrovascular Diseases*, 26:4, 717-724. DOI: [hh5t](#).
6. Kadakia KC, Kidwell KM, **Seewald NJ**, Snyder CF, Storniolo AM, Otte JL, Flockhart DA, Hayes DF, Stearns V, Henry NL (2017) “Prospective assessment of patient-reported outcomes and estradiol and drug concentrations in patients experiencing toxicity from adjuvant aromatase inhibitors.” *Breast Cancer Research and Treatment*, 164, 411-419. DOI: [gbktjs](#).
5. Hertz DL, Kidwell KM, **Seewald NJ**, Gersch CL, Desta Z, Flockhart DA, Storniolo A-M, Stearns V, Skaar TC, Hayes DF, Henry NL, and Rae JM (2016) “Polymorphisms in Drug-Metabolizing Enzymes and Steady-State Exemestane Concentration in Postmenopausal Patients with Breast Cancer.” *The Pharmacogenomics Journal*, 17, 521-527. DOI: [f9pc88](#).

4. Kadakia KC, Snyder CF, Kidwell KM, **Seewald NJ**, Flockhart DA, Skaar TC, Desta Z, Rae JM, Otte JL, Carpenter JS, Storniolo AM, Hayes DF, Stearns V, Henry NL (2016) "Patient-Reported Outcomes and Early Discontinuation in Aromatase Inhibitor-Treated Postmenopausal Women With Early Stage Breast Cancer." *The Oncologist*, 21:5, 539-546. DOI: [hh5w](#).
3. Hertz DL, Caram MV, Kidwell KM, Thibert JN, Gersch C, **Seewald NJ**, Smerage J, Rubenfire M, Henry NL, Cooney KA, Leja M, Griggs JJ, and Rae JM (2016) "Evidence for association of SNPs in ABCB1 and CBR3, but not RAC2, NCF4, SLC28A3 or TOP2B, with chronic cardiotoxicity in a cohort of breast cancer patients treated with anthracyclines." *Pharmacogenomics*, 17, 231-240. DOI: [f83s4t](#).
2. Randolph AH, **Seewald NJ**, Rickert K and Brown SN (2013) "Tris (3, 5-di-tert-butylcatecholato) molybdenum (VI): Lewis acidity and nonclassical oxygen atom transfer reactions." *Inorganic Chemistry*, 52:21, 12587-12598. DOI: [f5g68q](#).
1. Marshall-Roth T, Liebscher SC, Rickert K, **Seewald NJ**, Oliver AG and Brown, SN (2012) "Nonclassical oxygen atom transfer reactions of oxomolybdenum(vi) bis(catecholate)." *Chemical Communications*, 48, 7826-7828. DOI: [hh5x](#).

Peer-Reviewed Book Chapters

3. Smith SN, **Seewald NJ**, Klasnja P (2023) "Design Considerations for Preparation, Optimization, Evaluation and Maintaining Digital Therapeutics". In *Digital Therapeutics for Mental Health and Addiction: State of the Science and Vision for the Future*, edited by N. Jacobson, T. Kowatsch, and L. Marsch, 135-150. Cambridge: Academic Press. doi: [jf2w](#).
2. **Seewald NJ**, Hackworth O, Almirall D (2021) "Sequential, multiple assignment, randomized trials (SMART)". In *Principles and Practice of Clinical Trials*, edited by S. Piantadosi and C.L. Meinert. Cham: Springer. DOI: [hh5z](#).
1. Smith SN, Lee AJ, Hall K, **Seewald NJ**, Boruvka A, Murphy SA, Klasnja P (2017) "Design lessons from a micro-randomized pilot study in mobile health". In *Mobile Health*, edited by J. Rehg, S.A. Murphy, and S. Kumar, 59-82. Cham: Springer. DOI: [hh5v](#).

Conference Proceedings

10. Taranto E, **Seewald NJ**, Bayne LJ, Walinsky E, Deluca S, Shih NNC, Sanchez P, Nivar I, Ambasager B, Murray C, Chevalier A, Smith CG, Makhlin I, Rohn K, Goodspeed BL, Savage J, Wileyto P, Wang J, Belka G, Chislock E, Berry LR, Berry D, Nayak A, Feldman M, Clark AS, Chodosh LA, DeMichele A (2025) "Circulating tumor DNA (ctDNA), dormant disseminated tumor cells (DTCs) and recurrence outcomes in breast cancer survivors on the SURMOUNT Study," In: Proceedings of the San Antonio Breast Cancer Symposium 2024; 2024 Dec 10-13; San Antonio, TX. *Clinical Cancer Research*, 31(12 Suppl):PS9-03. DOI: [prxp](#).
9. Mayer M, **Seewald N**, Perez EU, Homet Moreno B, Ramamurthy C, Babcock A, Li H, Mamtani R (2025) "Real-world time on treatment (rwTOT) with first-line (1L) enfortumab vedotin and pembrolizumab (EV+P) after U.S. Food and Drug Administration approval for advanced urothelial cancer (aUC)," *Journal of Clinical Oncology*, 43:731-731. DOI: [pb6t](#).

8. O'Leary C, Tischfield D, Avritscher R, El-Haddad G, Fidelman N, Garcia-Monaco R, Vijayvergia N, Kunz P, **Seewald NJ**, Soulen MC (2024) "Does liver tumor morphology predict outcomes after LDT, PRRT or captem?" 17th Annual Multidisciplinary NET Medical Symposium NANETS 2024, Chicago, IL. *Endocrine Abstracts*, 108, C25. DOI: [pfnf](#).
7. Anbil S, **Seewald NJ**, Lin K, Craib M, Connor C, Giordano H, McLachlan K, Kwan T, Maloney L, Tukachinsky H, Schrock A, Wang S, Sokol E, Decker B, Nathanson K., Domchek S, Reiss K (2024) "LODESTAR: A Single Arm Phase II Study of Rucaparib in Solid Tumors with Pathogenic Germline or Somatic Variants in Homologous Recombination Repair (HRR) Genes," [abstract]. In: Proceedings of the AACR Special Conference in Cancer Research: Advances in Pancreatic Cancer Research; 2024 Sep 15-18; Boston, MA. Philadelphia (PA): AACR; *Cancer Research* 84(17 Suppl_2):Abstract nr C006. DOI: [ntfr](#).
6. Hood R, Rathore S, **Seewald NJ**, Reiss KA (2024) "Association of BRCA1/2 pathogenic variants with primary tumor location and metastatic organotropism in pancreatic adenocarcinoma." *Journal of Clinical Oncology*, 42(16 Suppl):4151-4151. DOI: [pg2p](#).
5. Hood R, **Seewald NJ**, Rathore S, Reiss KA (2024) "Interaction of BRCA1 vs BRCA2 pathogenic variants with primary tumor location in pancreatic cancer." *Journal of Clinical Oncology*, 42:16_suppl, e16326-e16326. DOI: [pg2k](#).
4. Kadakia KC, Kidwell KM, **Seewald NJ**, Snyder CF, Flockhart DA, Otte JL, Hayes DF, Storniolo AM, Stearns V, Henry NL (2016), "Crossover from One Aromatase Inhibitor (AI) to Another in the Exemestane and Letrozole Pharmacogenetics (ELPh) Trial," *Journal of Clinical Oncology*, 34, 3 [supplement], 158.
3. Mammoser AG, Weathers SS, **Seewald NJ**, Taylor JMG, Junck L (2015), "Primary CNS Lymphoma; A Review of the University of Michigan Experience 2004-2013," *Journal of Clinical Oncology*, 33, 15 [supplement], e13012.
2. Kadakia KC, Snyder CF, Kidwell KM, **Seewald NJ**, Storniolo AM, Flockhart DA, Carpenter JS, Hayes DF, Stearns V, Henry NL (2015), "Associations between Treatment-Emergent Symptoms and Early Discontinuation of Aromatase Inhibitor (AI) Therapy," *Journal of Clinical Oncology*, 33, 15 [supplement], e20745.
1. Hertz DL, Kidwell KM, **Seewald NJ**, Gersch CL, Desta Z, Flockhart DA, Storniolo AM, Stearns V, Skaar TC, Hayes DF, Henry NL, Rae, JM (2015), "CYP3A4*22 polymorphism is associated with increased exemestane concentrations in postmenopausal breast cancer patients" [abstract]. Proceedings of the Thirty-Eighth Annual CTRC-AACR San Antonio Breast Cancer Symposium: 2015 Dec 8-12; San Antonio, TX. Philadelphia (PA): AACR.

Under Review

6. Gerety M, Charu V, **Seewald NJ**, Glenn D, Schaubel DE, Smith AR, Chen D, Laurin L, Denburg M, Holzman L, Beck L, Mariani LH, Zee J. "Long-term Comparative Effectiveness of Rituximab vs. Calcineurin Inhibitors for the Treatment of Membranous Nephropathy: A Retrospective Matched Cohort Study." Under review at *Journal of the American Society of Nephrology*.
5. Mayer M, **Seewald NJ**, Perez EU, Moreno BH, Ramamurthy C, Babcock A, Li H, Mamtani R. "Real-world time on treatment with first-line Enfortumab Vedotin plus Pembrolizumab after

US Food and Drug Administration approval for advanced urothelial cancer.” Under review at *Urologic Oncology: Seminars and Original Investigations*.

4. Moin EE, Bennett RM, Purcell M, Moffett AT, Schmid B, Long K, **Seewald NJ**, Reilly JP, Weissman GE. “Continuous ventilator data captures more variation in clinically meaningful respiratory parameters than conventional measurements.” Under review at *Annals of the American Thoracic Society*.
3. O’Leary C, Tishfield D, Avritscher R, El-Haddad G, Garcia-Monaco R, Fidelman N, Vijayvergia N, Kunz P, **Seewald NJ**, Soulen M “Associations between patterns of neuroendocrine liver metastatic burden and outcomes after liver-directed therapy, systemic chemotherapy and systemic radiotherapy.” Under review at *Neuroendocrinology*.
2. McGinty EE, Wagle P, Luo CL, **Seewald NJ**, Stuart EA, Tormohlen KN “The impact of medical cannabis laws on cannabis and opioid use disorder treatment and overdose-related health-care utilization among adults with chronic non-cancer pain.” Under review at *The Millbank Quarterly*.
1. Eisenberg MD, Tormohlen KN, McCourt AD, Yu J, Neupane R, Ge Y, Rutkow L, Stuart EA, Fingerhood M, **Seewald NJ**, McGinty, EE “Impact of State Telemedicine Policies on Substance Use Disorder (SUD) Treatment During COVID-19.” Under Review at *JAMA Health Forum*.

In Preparation

2. **Seewald NJ**, Cohen M, McGinty EE, Stuart EA. “Ready to Roll? Whether and when to aggregate multilevel data in difference-in-differences.”
1. **Seewald NJ**, Jasper R, Almirall D. “Sample size and timepoint tradeoffs for comparing dynamic treatment regimens in a longitudinal SMART.”

Other Publications and Preprints

4. Moin EE, **Seewald NJ**, Halpern SD “Development and Validation of a Simple Model to Predict Patient Height.” [medRxiv: 2025.03.12.25323846](#)
3. **Seewald NJ**, McGinty EE, Tormohlen K, Schmid I, Stuart EA “Shared control individuals in state-level health policy evaluation.” [arXiv: 2311.18093](#) [stat.ME]
2. **Seewald NJ** (2023) “Adaptive Interventions for a Dynamic and Responsive Public Health Approach,” *American Journal of Public Health*, 113:1, 37-39. DOI: [jqkz](#).
1. **Seewald NJ**, Sun J, Liao P (2016), “MRT-SS Calculator: An R Shiny Application for Sample Size Calculation in Micro-Randomized Trials.” [arXiv: 1609.00695](#) [stat.ME]

Alternative Media

1. Morabia A (host), Chakraborty B, **Seewald NJ** (2023) “SMART and MRT - Emerging methods in public health,” *AJPH Podcast*, American Public Health Association. September 13. Available at <https://youtu.be/TER4kRJpCh0>.

Teaching Experience

Guest Lecturer, University of Pennsylvania Perelman School of Medicine

1. *EPID 7020: Advanced Topics in Epidemiologic Research* Spring 2025
“Quasi-Experimental Designs.”
Course Director: Ellen C. Caniglia, Ph.D.

Course Director, University of Pennsylvania Perelman School of Medicine

- BSTA 6100: Biostatistical Methods for Epidemiology* Fall 2024

Co-Instructor, Johns Hopkins Bloomberg School of Public Health

- Seminar on Statistical Methods for Mental Health* Term 1, AY 2022-3
Promises and Pitfalls of Prediction Models in Mental Health Research
Co-taught with Trang Q. Nguyen, Ph.D.

Guest Lecturer, Johns Hopkins Bloomberg School of Public Health

- Seminar on Statistical Methods for Mental Health* Term 3, AY 2021-2
“Difference in Differences with Variable Treatment Timing.”
Instructor: Elizabeth A. Stuart, Ph.D.

Graduate Student Mentor, University of Michigan

1. *STATS 250: Introduction to Statistics and Data Analysis* AY 2019-20, AY 2020-1
Instructor: Brenda Gunderson, Ph.D.; Jack Miller, Ph.D.

Graduate Student Instructor, University of Michigan

3. *STATS 250: Introduction to Statistics and Data Analysis* Spring 2018, AY 2019-20, AY 2020-1
Instructor: Brenda Gunderson, Ph.D.; Jack Miller, Ph.D.
2. *STATS 415: Data Mining* Winter 2018
Instructor: Liza Levina, Ph.D.
1. *STATS 500: Statistical Learning I: Regression* Fall 2017
Instructor: Brian Thelan, Ph.D.

Instructional Assistant, University of Michigan

1. *STATS 250: Introduction to Statistics and Data Analysis* Summer 2020
Supervisor: Jack Miller, Ph.D.

Teaching Assistant, Summer Program in Quantitative Methods of Social Research, Inter-university Consortium for Political and Social Research

1. *Multilevel Models I: Introduction and Application* Summer 2018, Summer 2019
Instructor: Mark Manning, Ph.D.
2. *Introduction to the R Statistical Computing Environment* Summer 2018, Summer 2019
Instructor: John Fox, Ph.D.

Undergraduate Teaching Assistant, University of Notre Dame

1. *BIOS 40411: Biostatistics* Spring 2012
Instructor: Gary Lamberti, Ph.D.

Mentorship Experience

Academic Advisees

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| 1. Melissa Martin | PhD, Biostatistics | 2024 - Present |
| Co-advised with Ian Barnett, Ph.D. | | |

PhD Committee Membership

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| 1. Jimmy Kelliher (Chair) | 2024 - Present |
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Biostatistics Ph.D. Lab Rotation Advisees

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| 1. Ryan Jasper | Fall 2024 |
| 2. Meghan Gerety | Spring 2024 - Present |
| Co-advised with Rebecca Hubbard, Ph.D., in Spring 2024 | |

Masters of Science in Clinical Epidemiology Students

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| 1. Thesis Advisor (Biostatistics), Emily Moin, MD | 2023-2025 |
| 2. Thesis Advisor (Biostatistics), Eleanor Taranto, MD | 2023-2025 |

Consulting Experience

Statistical Consultant

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| 1. <i>Committee for Children</i> , Seattle, WA | May - December 2021 |
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Graduate Student Consultant, University of Michigan

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| 1. <i>Consulting for Statistics, Computing, and Analytics Research (CSCAR)</i> | Fall 2018 |
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Presentations and Posters

Presentations at Scientific Meetings

- 14. Ecological regression in health policy evaluation: A guilt-free dessert
 - Society for Epidemiologic Research Annual Meeting. Boston, MA. June 2025. *Invited.*
- 13. How to ask the right question: Choosing estimands for health policy research
 - ENAR Spring Meeting. New Orleans, LA. March 2025. *Invited.*
- 12. Target trial emulation for evaluating mental health policy
 - Thomas R. Ten Have Symposium on Statistics in Mental Health. New York, NY. June 2024. *Invited.*

11. Practical guidance on whether and when to aggregate individual-level data for causal health policy evaluation
 - American Causal Inference Conference. Seattle, WA. May 2024.
10. Target trials in policy evaluation: A case study in medical cannabis laws
 - Society for Epidemiologic Research Annual Meeting. Portland, OR. June 2023. *Invited*.
9. Handling correlation in stacked difference-in-differences estimates with application to medical cannabis policy
 - International Conference on Computational and Methodological Statistics. Berlin, Germany. December 2023. *Invited*.
 - American Causal Inference Conference. Austin, TX. May 2023.
 - Joint Statistical Meetings. Washington, DC. August 2022.
8. Ready to Roll? Practical guidance on whether and when to aggregate data in health policy evaluation
 - International Conference on Health Policy Statistics. Scottsdale, AZ. January 2023.
7. Policy evaluation in the real world: Experiences with translating cutting-edge methods for an applied audience
 - American Causal Inference Conference. Berkeley, CA. May 2022.
6. Budgeting SMART: Sample size and repeated measures with a cost constraint in a longitudinal sequential, multiple-assignment randomized trial.
 - ENAR Spring Meeting. Virtual. March 2021.
5. Sample size and timepoint tradeoffs for comparing dynamic treatment regimens in a longitudinal SMART.
 - Joint Statistical Meetings. Virtual. August 2020.
4. Design considerations for comparing dynamic treatment regimens in a longitudinal SMART.
 - ENAR Spring Meeting. Virtual. March 2020.
3. Sample size considerations for comparing dynamic treatment regimes in a SMART with a longitudinal outcome.
 - International Conference on Computational and Methodological Statistics. London, UK. December 2019
 - Joint Statistical Meetings. Denver, CO. July 2019.
2. Sample size considerations for comparing dynamic treatment regimens in a sequentially-randomized trial with a continuous longitudinal outcome.
 - Society for Clinical Trials Annual Meeting. New Orleans, LA. May 2019.
1. Sample size considerations for comparing dynamic treatment regimens in a sequential multiple-assignment randomized trial with a continuous longitudinal outcome.
 - Joint Statistical Meetings. Vancouver, BC, Canada. July 2018.
 - ENAR Spring Meeting. Atlanta, GA. March 2018.

Invited Colloquia

1. Design thinking for policy evaluation: The policy trial emulation framework
 - Department of Statistics, North Carolina State University. Raleigh, NC. April 2025.
2. Target trial emulation for evaluating health policy
 - Philadelphia Chapter, American Statistical Association. Virtual. March 2024.
3. Using individual-level data in difference-in-differences for health policy evaluation.
 - Department of Biostatistics and Data Science, Wake Forest University School of Medicine. Virtual. March 2023.
 - Department of Biostatistics, Epidemiology and Informatics, University of Pennsylvania Perelman Medical School. Virtual. March 2023.
 - Department of Public Health Sciences, Henry Ford Health. Virtual. February 2023.
 - Division of Biostatistics, Northwestern University Feinberg School of Medicine. Chicago, IL. January 2023.
 - Departments of Population Health Sciences and Biostatistics and Medical Informatics, University of Wisconsin-Madison. Madison, WI. January 2023.
 - Department of Biostatistics, University of Colorado Anschutz Medical Campus. Virtual. January 2023.
 - Johns Hopkins ALACRITY Center Research in Progress Meeting. Virtual. November 2022.
4. A brief introduction to multi-stage trials for developing dynamic treatment regimens.
 - MNeuroNetwork Lab Seminar, University of Michigan. Virtual. March 2022.
 - Working Group on Clinical Research, University of Rochester Medical Center. Virtual. October 2021.
5. Design, analysis, and sizing of sequential multiple assignment randomized trials with binary outcomes.
 - Graduate Student Statistical Topics Seminar Series, Department of Statistics, University of Michigan. September 2015.

Posters

1. “Ready to roll? Practical guidance on whether and when to aggregate data in health policy evaluation”
 - AcademyHealth Annual Research Meeting. Washington, DC. June 2022.
2. Sample size considerations for comparing dynamic treatment regimens in a sequential multiple-assignment randomized trial with a continuous longitudinal outcome.
 - Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI. March 2019.
 - Thomas R. Ten Have Symposium on Statistics in Mental Health. Chicago, IL. June 2018.
3. Sample size considerations for the analysis of continuous repeated-measures outcomes in sequential multiple-assignment randomized trials.

- Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI. March 2017.
- 4. A SMART web-based sample size calculator.
 - Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI. March 2015.
 - IMPACT Symposium III: Advances in Clinical Trial Statistics: Multiplicity Adjustment and SMARTs. Cary, NC. November 2014.

Research Grants

Funded

1. Impact of U.S. State Recreational Cannabis Laws on Opioid Prescribing for Chronic Non-Cancer Pain and Statistical Methods for Informative Policy Adoption

Role: Principal Investigator
Funding Source: Thomas B. McCabe and Jeannette E. Laws McCabe Fund
<https://www.med.upenn.edu/evdresearch/mccabe-fund.html>
Funding Level: Pilot Award, 7/1/24 - 12/31/25: \$36,347

Software

1. SMARTsize: A sample size calculator for sequential, multiple-assignment, randomized trials with binary or continuous outcomes in which the primary aim is to compare two embedded dynamic treatment regimes.
<https://nseewald1.shinyapps.io/SMARTsize/>
2. MRT-SS Calculator: A sample size calculator for micro-randomized trials in which the primary aim is to detect the proximal effect of providing an intervention.
<https://pengliao.shinyapps.io/mrt-calculator/>

Professional Service

Public Training Materials

1. “Building Effective Adaptive Interventions in Mental Health Services Research.”
 Johns Hopkins ALACRITY Center for Health and Longevity in Mental Illness
<https://youtube.com/playlist?list=PLj4-nn-p-zv1o-cR9jiITTRfgkwmyqjoD>

Workshop Design and Facilitation

1. “SMART Designs for Developing Adaptive Interventions”
 - Statistical Horizons, Virtual. July 8-11, 2025.
 - Statistical Horizons, Virtual. August 19-23, 2024.
2. “Embedding Qualitative and Quantitative Methods for Policy Evaluation”

- Invited pre-conference workshop: 15th International Conference on Health Policy Statistics, San Diego, CA. January 6, 2024. *Co-designer and facilitator with Beth McGinty, Ph.D. and Eli Ben-Michael, Ph.D.*
- 3. "Introduction to Adaptive Interventions and Sequential Multiple Assignment Randomized Trials"
 - Invited pre-conference workshop: Society of Behavioral Medicine Annual Meeting, Baltimore, MD. April 6, 2022. *Co-designer and facilitator with Ahnalee Brincks, Ph.D., and Shawna N. Smith, Ph.D.*
- 4. "Building Just-in-Time Adaptive Interventions."
 - Center for Dissemination and Implementation Science Summer Institute, University of Illinois Chicago. Virtual. October 25-26, 2021. *Small group expert facilitator.*
- 5. "Using SMART Design in Responsive Survey Design."
 - Responsive Survey Design: A Research Education Program. Institute for Social Research, University of Michigan. June 19, 2019. *Co-designer and facilitator with Ahnalee Brincks, Ph.D.*
- 6. "Getting SMART about Adaptive Interventions in Education."
 - Institute of Education Sciences-funded training institute at the University of Michigan. March 11-14, 2019. *Co-designer and facilitator with d³lab d3lab.isr.umich.edu.*
- 7. "Getting SMART: Experimental Design and Analysis Methods for Developing Adaptive Interventions"
 - University of California, San Francisco. May 19, 2015. *Co-facilitator with Inbal Nahum-Shani, Ph.D.*
- 8. "Experimental Design and Analysis Methods for Developing Adaptive Interventions: Getting SMART"
 - Methodology Center Summer Institute. Ann Arbor, MI. June 19-20, 2014. *Small group facilitator.*

Peer Review and Editorial Activities

Editorial

Guest Academic Editor, PLOS Medicine

Ad hoc Reviewer

American Journal of Epidemiology
 American Journal of Public Health
 Annals of Applied Statistics
 Behavior Research Methods
 BMJ
 Contemporary Clinical Trials
 Data Science in Science

Frontiers in Digital Health
Health Services Research
JAMA Health Forum
Journal of the American Statistical Association (Theory and Methods)
Pharmacoepidemiology and Drug Safety
Psychological Methods
R Journal
Statistics and Public Policy
Statistics in Medicine
Value in Health

Departmental Service

7. Member, Biostatistics Seminar Committee. Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania. 2025 - Present.
6. Member, Epidemiology Qualifying Exam Committee. Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania. 2025 - Present.
5. Co-Chair, Junior Faculty Committee. Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania. 2023 - Present.
4. Member, Biostatistics Student Recruitment Committee. Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania. 2023 - Present.
3. Student Representative, Faculty Diversity, Equity, and Inclusion Committee. Department of Statistics, University of Michigan. AY 2020-2021.
2. Co-Lead, Graduate Student Instructor Foundations Colloquium. Department of Statistics, University of Michigan. AY 2020-2021.
1. Steering Committee Member, Graduate Student Diversity, Equity, and Inclusion Working Group. Department of Statistics, University of Michigan. 2020-2021.

Professional Memberships

American Statistical Association (2015 - present)
International Biometrics Society, Eastern North American Region (ENAR) (2015 - present)
Society for Causal Inference (2023 - present)
Society for Clinical Trials (2015 - 2021)
Society of Industrial and Applied Mathematics (SIAM) (2020-2021)
Society of Behavioral Medicine (2022 - 2023)

Organizational Activities

7. Member, Program Committee, 2026 American Causal Inference Conference. Society for Clinical Trials. 2025-2026.
6. Session Chair, ENAR Spring Meeting. March 2025.
5. Chair, Diversity Equity and Inclusion Committee. Society for Causal Inference. 2025 - present.

4. Member, Program Committee, 17th Annual Conference on Statistical Issues in Clinical Trials. University of Pennsylvania. 2024-2025.
3. Member, Outreach Committee, 15th International Conference on Health Policy Statistics. 2024.
2. Session Chair, 14th International Conference on Health Policy Statistics. January 2023.
1. Session Chair, Joint Statistical Meetings. August 2022.

Professional Development

4. U-M Graduate Teacher Certificate. Rackham Graduate School and Center for Research on Learning and Teaching, University of Michigan. Completed April 2021. crlt.umich.edu/um.gtc
3. Inclusive STEM Teaching Project. Completed December 2020. inclusivestemteaching.org
2. Preparing to Teach: Workshop to prepare graduate students for a role as undergraduate faculty responsible for teaching statistics and data science. May 2020. preparingtoteach.org
1. Professional Development Diversity, Equity, and Inclusion Certificate. Rackham Graduate School, University of Michigan. Completed April 2020. rackham.umich.edu