

CARSON MOWRER, MS, MPH

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cmowrer13.github.io

EDUCATION

PhD	<i>University of North Carolina at Chapel Hill, Biostatistics</i>	Expected May 2029
MS	<i>Oregon State University, Data Analytics</i> Advisors: Virginia Lesser, DrPH, MS Sharmodeep Bhattacharyya, PhD, MS	June 2025
MPH	<i>Oregon State University, Epidemiology</i> Advisor: Ellen Smit, PhD, RD	June 2024
BS	<i>Oregon State University, Mathematics</i> Concentration: Statistics	June 2022
BS	<i>Oregon State University, Economics</i> Concentration: Mathematical Economics	June 2022

RELEVANT COURSEWORK

Core Mathematical and Statistical Foundations

- Advanced Probability and Statistical Inference I and II
- Theory of Statistics I, II, and III
- Probability I and II
- Linear Algebra I and II
- Advanced Calculus I and II, Multivariable Advanced Calculus

Biostatistics and Statistical Methods

- Statistical Methods I, II, and III
- Causal Inference in Biomedical Research
- Advanced Epidemiological Methods
- Applied Survival Analysis
- Statistical Genomics
- Applied Stochastic Models

Biostatistics Applications and Specialized Topics

- Biostatistics with Applications in Pharmacology
- Design and Analysis of Clinical Trials
- Mathematical Modeling of Biological Systems
- GIS and Public Health
- Data Visualization

RESEARCH EXPERIENCE

Graduate Researcher, UNC Chapel Hill

March 2026 to Present

Supervisor: Eric A. Whitsel, MD, MPH

- Validated commonly used radon prediction models and maps using in-home measurement data.
- Applied measurement error correction methods to reduce bias in estimating associations between residential radon exposure and incident stroke.

Graduate Research Assistant, UNC Chapel Hill

October 2025 to Present

Supervisor: Danielle R. Stevens, PhD

- Investigated associations between endocrine-disrupting chemical exposures and fetal organ development using longitudinal growth modeling and methods for analyzing exposure mixtures in the Human Placenta and Phthalates 3D Study.
- Developed statistical methods and R software for estimating causal effects of exposure mixtures and their interaction.

Graduate Research Assistant, Oregon State University

June 2023 to October 2025

Supervisor: Matthew Bozigar, PhD, MA

- Designed and executed data collection protocol to measure community noise in Portland, OR to create a high-resolution map of noise exposure.
- Analyzed association between residential radon exposure and brain/central nervous system cancer in Women's Health Initiative cohort.

Research Consultant, Samaritan Health Services

September 2023 to October 2025

Supervisor: Paulina Kaiser, PhD, MPH

- Developed and implemented a privacy-preserving record linkage methodology to join electronic health records with data from community organizations.
- Analyzed temporal associations between receipt of housing/social services and emergency medical care.

Graduate Research Intern, Samaritan Health Services

June 2023 to September 2023

Preceptor: Paulina Kaiser, PhD, MPH

- Analyzed impact of a pilot program embedding physical therapists into primary care clinics.
- Studied clinical trial organization and institutional review boards, and abstracted data from electronic medical records for clinical trials.

TEACHING EXPERIENCE

Graduate Teaching Assistant, UNC Chapel Hill

August 2026 to December 2026

Biostatistics Department

- Assisted for BIOS 511: Introduction to Statistical Computing and Data Management.
- Led twice-weekly lab sections and held office hours

Grader, UNC Chapel Hill
Biostatistics Department

January 2026 to May 2026

- Graded assignments and exams for BIOS 600: Principles of Statistical Inference

Graduate Teaching Assistant, Oregon State University September 2022 to June 2023
Statistics Department

- Assisted for ST 201: Principles of Statistics and ST 352: Introduction to Statistical Methods II.
- Experience with both in-person and Ecampus instruction.
- Led 30-student recitation and lab sections with emphasis on practical application of lecture material and statistical software.

PEER REVIEWED PUBLICATIONS

Mowrer C, Larkin A, Roscoe C, Grady ST, Peters JL, Haggerty B, Hystad P, Bozigar M. “Systematic measurement and characterization of community noise in a medium-large city in the United States”. *Journal of Exposure Science and Environmental Epidemiology*. 19 July 2025.

MANUSCRIPTS UNDER REVIEW AND IN PREPARATION

Mowrer C, Whitsel EA, Collins JM, Chen S, Ekanayaka A, Manson JE, Meliker JR, Reiner AP, Schwartz GG, Shadyab AH, Shi C, Smith RL, Stewart JD, Venkatachalam H, Bozigar M. “Residential radon concentration and the risk of malignant brain and central nervous system cancer in United States postmenopausal women: a prospective cohort study”. (Accepted by Neuroepidemiology).

Chen S, Collins JM, Ekanayaka A, **Mowrer C**, Stewart JD, Huang D, Allison M, Haring B, LaMonte M, Nudy M, Reiner AP, Schwartz GG, Shou D, Tinker L, Williamson M, Smith RL, Whitsel EA. “Indoor radon and incident heart failure in the Women’s Health Initiative”. (Under review).

Stevens DR, **Mowrer C**, Sinkovskaya E, Welch BM, Landstrom AP, Przbylska A, Calafat AM, Botelho JC, Abuhamad A, Saade G, Buckley J, Ferguson KK. “Endocrine disrupting chemicals modify fetal cardiac development and function”. (Under review).

Stevens DR, **Mowrer C**, Hinton K, Sinkovskaya E, Przbylska A, Welch BM, Calafat AM, Botelho JC, Abuhamad A, Saade G, Buckley J, Ferguson KK. “Gestational exposure to legacy and replacement phthalates and fetal organ development: findings from the HPP-3D study”. (In preparation).

Martin B, **Mowrer C**, Chalem A, Welch BM, Goldberg M, Werder EJ, Engel SM, Stevens DR. “Use of imaging to examine the roles of environmental chemicals in pregnancy health: a scoping review”. (In preparation).

Larkin A, **Mowrer C**, Roscoe C, Grady ST, Haggerty B, Peters JL, Hystad P, Bozigar M. “A high-resolution land use regression model of outdoor noise with building shielding and road traffic predictors for a medium-large United States city”. (In preparation).

CONFERENCE PROCEEDINGS

Grady ST, Roscoe C, Bozigar M, **Mowrer C**, Khatoon S, Costello JM, Hystad P, Peters JL. “Sounding the alarm in public health: The case for integrating high quality noise exposure into US health studies”. *INTER-NOISE and NOISE-CON Congress and Conference Proceedings*. 25 July 2025.

ORAL PRESENTATIONS

Larkin A, **Mowrer C**, Roscoe C, Grady ST, Haggerty B, Peters JL, Hystad P, Bozigar M. “Predicting noise at high spatial resolution from a systematic measurement campaign in Portland, Oregon”. Annual Cascadia Symposium on Environmental, Occupational, and Population Health; 2025, Jan 10, Blaine, WA.

Mowrer C, Larkin A, Roscoe C, Grady ST, Peters JL, Haggerty B, Hystad P, Bozigar M. “Systematic measurement and modeling of community noise at high spatiotemporal resolution in Portland, Oregon”. International Society of Exposure Science; 2024, Oct 23, Montreal, Canada.

Mowrer C, Larkin A, Peters JL, Haggerty B, Hystad P, Bozigar M. “Systematic measurement of community noise exposures in Portland, Oregon: Implications for environmental justice and population health.” Annual Cascadia Symposium on Environmental, Occupational, and Population Health; 2024, Jan 12, Blaine, WA.

POSTER PRESENTATIONS

Mowrer C, Whitsel EA, Schwartz GG, Reiner AP, Collins JM, Stewart JD, Shi C, Bozigar M. “Residential radon exposure and brain and central nervous system cancer risk: Findings from WHI”. 2025 WHI Investigator Meeting; 2025, May 1, Seattle, WA.

Mowrer C, Whitsel EA, Schwartz GG, Reiner AP, Collins JM, Stewart JD, Shi C, Bozigar M. “Residential radon exposure and brain and central nervous system cancer risk in the Women’s Health Initiative 1993 to Mid-2024”. Annual Cascadia Symposium on Environmental, Occupational, and Population Health; 2025, Jan 9, Blaine, WA.

Mowrer C, Kaiser P, Herrera EZ, Ratliff J, Hackstedt C, Hudson-Hanley B, Edwards M. “Merging HMIS & EMR data via privacy-preserving record linkage”. Oregon Public Health Association Annual Conference; 2024, Oct 7, Corvallis OR.

Mowrer C, Herrera EZ, Kaiser P. “Analysis of Physical Therapy in Primary Care pilot program” Samaritan Regional Scholarly Symposium; 2024, May 29, Corvallis, OR.

PEER REVIEW

Journal

- Journal of Exposure Science and Environmental Epidemiology
- Environmental Science & Technology (co-reviewer)

HONORS AND AWARDS

Trainee Travel Award 2025

- 2025 Women's Health Initiative Investigator Meeting, Seattle, WA

Best Poster Presentation 2025

- Annual Cascadia Symposium on Environmental, Occupational, and Population Health, Blaine, WA

Best Oral Presentation 2024

- Annual Cascadia Symposium on Environmental, Occupational, and Population Health, Blaine, WA

Best Poster Presentation, 2nd Place 2024

- Samaritan Regional Scholarly Symposium, Corvallis, OR

Phi Beta Kappa 2022

- Oregon State University Chapter

COMPUTING SKILLS

Programming and Analysis Software

- R, Python, ArcGIS Pro, SAS, SQL, MATLAB, Git, Docker

REFERENCES

Danielle R. Stevens, PhD

Assistant Professor, Department of Radiology
University of North Carolina at Chapel Hill

Matthew Bozigar, PhD, MA

Assistant Professor, School of Biological and Population Health Sciences
Oregon State University

Sarah C. Emerson, PhD

Associate Professor, Department of Statistics
Oregon State University