# Lauren Blair Wilner

 laurenwilner | lauren-blair-wilner | laurenwilner.github.io |
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## EDUCATION

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| 2010 - 2014 | **BA, International Relations, Community Health, Studio Art**, Tufts University |
| 2014 - 2015 | **Master's in Public Health, Epidemiology and Biostatistics**, Tufts University School of Medicine |
| | **Thesis:** Sustained use in a relief-to-recovery household water chlorination program in Haiti: comparing external evaluation findings with internal supervisor and community health worker monitoring data |
| | **Mentor:** Dr. Daniele Lantagne |
| 2022 - present | **PhD, Epidemiology**, University of Washington |
| | **Thesis:** Assessing the impact of floods and federal policies on older adult mortality: leveraging Bayesian, quasi-experimental, and agent-based modeling techniques |
| | **Mentor:** Dr. Joan Casey |

## WORK EXPERIENCE

**Research Assistant** — 2023 - present

*University of Washington, Seattle WA*
*Department of Environmental and Occupational Health Sciences*

– Research assistant with Dr. Joan Casey leading projects on climate change and health, working with collaborators in various industries and across different universities. Collaborating on projects on wildfires, power outages, extreme heat, and climate disasters and their impacts on human health.

**Research Assistant** — 2025

*University of Washington, Seattle WA*
*Center for Studies in Demography and Ecology*

– Research assistant with Drs. Sara Curran and Ann Bosworth leading research on the Federal Emergency Management Agency (FEMA) programs and procedures as they relate to climate disaster preparedness and response, with a particular focus on their impacts on health.

**Research Assistant** — 2022 - 2024

*University of Washington, Seattle WA*
*Department of Epidemiology*

– Research assistant with Professor Steve Mooney leading various research projects surrounding built environment and health, including studies on physical activity, traffic safety, and data privacy practices. Developed an R package now hosted on CRAN and have led the analyses, reports, and presentations for three different projects.

**Research scientist, disease expenditures (DEX) project** — 2022-2023

*University of Washington, Seattle WA*
*Institute for Health Metrics and Evaluation (IHME)*

– Statistical modeler for the Disease Expenditure (DEX) team. Led the Skilled Nursing Facility and Dental care envelope estimation.

**Managing research scientist, Global Burden of Disease (GBD)** — 2022
**Research scientist, Global Burden of Disease (GBD)** — 2019-2022

### Researcher, Global Burden of Disease (GBD) 2017-2019
*University of Washington, Seattle WA*
*Institute for Health Metrics and Evaluation (IHME)*

– Statistical modeler for all congenital birth defects for the Global Burden of Disease (GBD) study.

– Reviewed articles from systematic literature reviews and extracted data. Formatted, transformed, reviewed, and assessed data sources to determine their relevance and utility for ongoing analysis; Developed and managed large datasets to be used in epidemiological and statistical analyses via a cluster computing system.

– Ran and interpreted results from advanced statistical models including: ensemble models testing all combinations of covariates to maximize out-of-sample predictive validity, Bayesian hierarchical meta-regression models estimating the prevalence and incidence, and other novel meta-regression tools.

– Designed and ran entire modeling pipeline from data processing to statistical modeling to design/generation of diagnostic tables and figures, primarily in both R and Python.

– Led a team of researchers and data professionals modeling birth defects, blood disorders, and cerebral palsy; Led and co-lead peer-reviewed publications; presented at internal and external meetings and conferences.

### ASPPH/CDC Allan Rosenfield Global Health Fellow 2015 - 2017
*Centers for Disease Control and Prevention (CDC)*
*Division of Global Health Protection/Center for Global Health (DGHP/CGH)*
*Field Epidemiology Training Programs (FETP)*

– Assistant program manager for FETP (FETPs are Ministry of Health – CDC partnerships globally to establish epidemiology training programs for host country doctors and public health professionals.) implementation across Francophone West Africa (approximately 75% travel to countries in the region); acting Public Health Advisor for implementation of FETP Senegal.

– Provided technical support for FETP implementation in Zika-affected countries of Central/South America.

– Assisted with conducting monitoring and evaluation of FETPs worldwide.

### Data Analyst 2014 - 2017
*International Nutrition Foundation (INF) TRUMF Ghana Study*

• Performed statistical analysis for USAID-funded field
study at Friedman School of Nutrition.

### Data Analyst/GIS Specialist 2014-2015
### Research Assistant/Intern 2013 - 2014
*Food Aid Quality Review (FAQR) Study*

– Co-created data collection instruments and templates for USAID-funded field studies in Malawi, Sierra Leone, and Burkina Faso on effectiveness and cost-effectiveness of supplementary feeding programs.

– Led and performed all required literature reviews and statistical and GIS analyses for three FAQR field studies; prepared methods and results for manuscripts and presentations.

### Mobile Health Education Intern 2015 - 2017
*Rubenstein Ecosystems Science Laboratory*

**Research Assistant/Data Analyst** 2014 - 2015

*Harvard Business School Zambian Water Project*

**Field Human Resources Intern** 2013

*Doctors without Borders (MSF)*

**Consulting Intern** 2013

*Partners Senegal*

**Administrative Intern** 2012

*Village Health Works (VHW)*

**Grants & Research Manager** 2012 - 2017

*Zimbabwe Orphans Fund (ZOF)*

**Research Assistant** 2011 - 2014

*Tufts University, Medford MA*
*Global Development and Environment Institute (GDAE)*

**Intern** 2011

*Humanity in Action (HIA)*

## Honors, awards, and scholarships

**Graduate Student Conference Presentation Award** 2025

*University of Washington Graduate School*

  Selected to receive a travel award to present at the International Society for Environmental Epidemiology (ISEE) annual conference in Atlanta, GA.

**ARCS Scholar** 2022-2025

*Achievement Rewards for College Scientists (ARCS) Foundation Seattle Chapter*

  Selected to be a scholar in the ARCS fellowship program based on academic achievement.

**UW Top Scholar Award** 2022-2025

*University of Washington Graduate School*

  Awarded doctoral funding as a top prospective student.

**Dean's list** 2010-2014

*Tufts University*

**Cum Laude** 2014

*Tufts University*

## Professional activities

Society memberships

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| **Member, American Geophysical Union** | 2025 |
| **Member, International Society for Environmental Epidemiology** | 2023 - present |
| **Member, Society for Epidemiologic Research** | 2022 - present |
| **Member, American Public Health Association** | 2015 - 2017 |

Peer review

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| **Nature** | 2025 |
| **Environmental Health Perspectives** | 2025 |

Professional development

**Introduction to Bayesian Statistics: Likelihoods, Priors & Posteriors** 2024
  *University of Washington*
**Agent Based Modeling in R** 2024
  *University of Washington*
**Using Text as Data** 2025
  *University of Washington*


## PUBLICATIONS

## FUNDING HISTORY

**Assessing the impact of floods and federal policies on older adult mortality: leveraging Bayesian, quasi-experimental, and agent-based modeling techniques**
Role on Project: Principal Investigator
Dates: September 2025 - August 2027
Funding Agency: NIH/NIA F31-AG094267
Funding: $99,076 direct costs
Description: The overarching goal of this training award is to use novel methods to first assess whether FEMA programs buffer against flood-related mortality and then evaluate the short- and long-term mortality impacts of floods in the US.

## CONFERENCE PRESENTATIONS AND POSTERS

**Wilner LB**, McBrien H, Flores N, Casey JA. PopExp: An open-source Python package to quickly and efficiently estimate populations exposed to environmental hazards. *International Society for Environmental Epidemiology (ISEE).* Atlanta, GA 2025

**Wilner LB**, Dieleman JL, Casey JA. The National Flood Insurance Program (NFIP): spatial distribution of who can be covered and who is covered across the United States. *Society for Epidemiologic Research (SER).* Boston, MA 2025

**Wilner LB**, Jones-Ngo C, Benmahrnia T, Casey JA. Dual exposure to power outages and wildfire $PM_{2.5}$ in California among vulnerable populations. *The Workshop in Environmental Economics and Data Science (TWEEDS).* Portland, OR 2025

**Wilner LB**, Dieleman JL, Casey JA. The National Flood Insurance Program (NFIP): spatial distribution of designations, policies, and claims across the United States. *Cascadia Annual Symposium on Environmental Occupational and Population health.* Blaine, WA 2025

**Wilner LB**, Jones-Ngo C, Benmahrnia T, Casey JA. Dual exposure to power outages and wildfire $PM_{2.5}$ in California among vulnerable populations. *International Society for Environmental Epidemiology (ISEE).* Santiago, Chile 2024

**Wilner LB**, Zhou W, Youngbloom A, Mooney SJ. A shift in data sharing paradigms: a case study of the ways in which big data and complex algorithms allow for increased data sharing while preserving privacy. *Society for Epidemiologic Research (SER)* Portland, OR 2023

**Wilner LB**, Kassebaum NJ. Global, Regional, and National Levels and Trends in Congenital Birth Defects, 1990-2019. *International Conference on Birth Defects and Disabilities.* Colombo, Sri Lanka 2020

**Wilner LB**, Suri DJ, Langlois B, Walton S, and Rogers BL. Effective delivery of social-behavioral change communication through a care group model in a supplementary feeding program: A descriptive analysis. *Experimental Biology* Chicago, IL 2017

**Wilner LB**, Passarelli S, Suri DJ, Maganga G, Langlois B, Marcus S, Chui KKH, Boiteau JM, Rosenberg I, Webb P, and Rogers BL. The Price of Oil: Assessing Behavior Change Communication & Increased Oil Ration on improving Oil Use in Food Aid Preparation for Children Malawi. *Experimental Biology* Boston, MA                                                                                                                                                              2015

## Software

`walkboutr`
R: The goal of `walkboutr` is to process GPS and accelerometry data into walking bouts.

`popexposure`
Python: `popexposure` is an open-source Python package providing fast, memory-efficient, and consistent estimates of the number of people living near environmental hazards.

## Teaching history

Workshops

1. Dr. Joan Casey's research lab at University of Washington, Workshop Instructor, "Git and GitHub for Public Health." November 2025. Seattle, WA

2. Dr. Joan Casey's research lab at University of Washington, Workshop Instructor, "Git and GitHub for Public Health." September 2024. Seattle, WA

3. Dr. Tarik Benmahrnia's research lab at University of California San Diego, Workshop Instructor, "Git and GitHub for Public Health." April 2025. Virtual

4. Society for Epidemiologic Research, Workshop Co-Instructor, "Git and GitHub for Public Health." June 10, 2025. Boston, MA

5. Society for Epidemiologic Research, Workshop Co-Instructor, "Git and GitHub for Public Health." June 18, 2024. Austin, TX

6. California Department of Public Health, Workshop Co-Instructor, "Git and GitHub for Public Health." May 3, 2025. Sacramento, CA

Teaching Assistant Positions

1. SHARP Bootcamp (2-day short course)—Environmental Justice Boot Camp: Theory and Methods to Study Environmental Health Disparities, Teaching Assistant. August 12-13, 2025. Virtual.
   *Facilitated discussion and co-led lab*

2. EPI 560: Data Management for Public Health, Teaching Assistant. Spring 2024. University of Washington, Seattle, WA.
   *Co-led 20 labs lasting 110 minutes for 15 person course; provided written feedback and graded all labs*

3. EPI 560: Data Management for Public Health, Teaching Assistant. Winter 2024. University of Washington, Seattle, WA.
   *Developed course and lab materials for lab-based class*

4. TA Principles of Biostatistics. Fall 2014. Tufts University School of Medicine, Boston, MA
   *Led labs; graded all labs*

5. TA Principles of Biostatistics Tufts. Spring 2015. Tufts University School of Medicine, Boston, MA
   *Led labs; graded all labs*

6. TA Intro to SAS Programming Tufts. Spring 2015. Tufts University School of Medicine, Boston, MA
     *Led labs; graded all labs*

## Technical and language skills

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| **Proficient** | R, SQL, Git, GitHub, LaTeX, French (fluent) |
| **Competent** | Python, Stata, ArcGIS |
| **Familiar** | HTML, SAS |

## Service

**UW Department of Epidemiology Peer Mentor Program**                2023 - present
*Peer mentor*

**UW Department of Epidemiology Curriculum Committee**                2023 - 2024
*Student representative*

**IHME Staff Feedback Improvement Group**                2019
*Researcher representative*