Allison Riley, MPH

Associate Health Scientist

Summary of Experience

Allison Riley is an epidemiologist experienced in the intersection of environmental health and epidemiology. Allison has focused her research efforts on the influence of climate change, environmental exposures including air pollution, and human health outcomes both chronic and infectious disease. Allison received her Bachelor of Science (B.S.) degree with a double major in Global Health Studies and Environmental Science & Sustainability from Allegheny College where she graduated Magna Cum Laude. Her undergraduate research entailed conducting a human health risk assessment and creating a management plan regarding the re-emergence of malaria in the United States due to the influence of climate change. After receiving her undergraduate degree, Allison completed her Master of Public Health (M.P.H.) with a concentration in Epidemiology at the University of Pittsburgh School of Public Health. In her graduate studies, she created a surveillance report relating to climate factors such as extreme temperatures, air pollution, vector-borne diseases, and flooding in Allegheny County, PA. Through these academic and research experiences, Allison built experience in epidemiological methodology, risk assessment, public health communication, and data visualizations. Allison has had the opportunity to present her undergraduate and graduate research projects in academic and professional forums.

Education

Bachelor of Science (B.S.), Global Health Studies and Environmental Science & Sustainability, 2024, Allegheny College

Master of Public Health (M.P.H), Epidemiology, 2025, University of Pittsburgh School of Public Health

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Project Experience

Surveillance Report in Allegheny County, PA

Completed an internship at the Allegheny County Health Department in the Chronic Disease Epidemiology department. Worked to develop an updated climate and health report using county level data. Analyzed county level data on extreme temperatures, air pollution, vector-borne diseases, and flooding in Allegheny County, PA. Created data visualizations in Flourish and ArcGIS to display data trends over time and to highlight vulnerable populations within the county. Developed a template in ArcGIS StoryMaps to organize the surveillance data and communicate the trends with the public. Provided an interpretation of the data trends within the StoryMap. Presented the StoryMap for the Pitt Public Health faculty and Allegheny County Health Department staff in a presentation format and as a poster symposium.

Completed a Master's essay titled "The Influence of Climate Change Factors on Health Outcomes: A Surveillance Report on Extreme Temperature Related Illness and Vector-Borne Diseases in Allegheny County, PA" based on the internship project, but with a specific focus on extreme temperatures and vector-borne diseases. Conducted a literature review on the relationship between climate change and public health outcomes and specifically focused on two main climate change concerns in Allegheny County, PA – extreme temperatures and vector-borne diseases, in particular tick-borne diseases. Researched specific variables and indicators for the influence of climate change on a community. Analyzed the data visualizations to observe trends over time in Allegheny County, PA relating to the indicators. Identified vulnerable populations who are at risk of experiencing worse health outcomes from climate change and provided recommendations for how to aid vulnerable communities.

Human Health Risk Assessment and Management Plan for the Re-emergence of Malaria in the United States Due to the Influence of Climate Change

Completed undergraduate thesis project at Allegheny College titled "The Re-emergence of Malaria in the United States: Management Plan for Public Health Preparedness and Climate Influence." Conducted an extensive literature review on climate change, public health, and malaria in the United States. Analyzed previous mosquito-borne outbreaks in the United States and public health preparedness for vector-borne diseases such as West Nile Virus and Zika Virus. Performed a human health risk assessment based on the US EPA model adapted to vector-borne disease for malaria risk. Developed a management plan with recommendations for vector control agencies, healthcare agencies, and individuals based on literature review and human health risk assessment. Presented this research at multiple poster symposiums at Allegheny College.

Data Analysis

Experienced in using ArcGIS software for ArcGIS Pro mapping, Survey 123 surveys, and ArcGIS StoryMaps web templates. Experienced in SAS and R studio coding platforms for cleaning datasets, running statistical analyses, and creating data visualizations.

Professional Experience

Clinical Trial Research Assistant, University of Pittsburgh School of Public Health – August 2024 – December 2025

Assisted with the ACE (Arterial Stiffness, Cognition, and Equol) Clinical Trial at the Health Studies Research Center at the University of Pittsburgh. Performed data entry for participant documents and conducted office support for participant visits for 230 study participants. Certified to interact with study participants and perform certain physical and cognitive testing procedures.

Environmental Justice Intern, Allegheny County Health Department, – May 2025 – July 2025

Completed practicum at the Allegheny County Health Department as part of the MPH requirements. Designed an ArcGIS StoryMap displaying climate and health data for Allegheny County, PA. Created interactive data visualizations in ArcGIS Pro and Flourish for the public to view trends over time as well as for the health department to reference. Collaborated with the chronic and infectious epidemiology teams, vector control team, air quality team, and sustainability team. Presented the StoryMap project in two poster symposiums.

Urban Community Forestry Intern, Holden Forests & Gardens, – May 2023 – August 2023

Designed and completed a statistical research study examining tree maturity influence on particulate matter concentrations and human health in Cleveland, OH. Visited 4 sites in the Cleveland area with varying tree canopy and performed repeated PM 2.5 and PM 10.0 measurements at rush hour and non-rush hour time periods. Performed an ANOVA and Pearson Correlation analysis regarding PM concentrations with traffic density and percentage of tree canopy. Collaborated with conservation and education departments. Created brochures, outreach materials, and workshop content for an adult education program.

Division of Air Pollution Control Intern, Ohio Environmental Protection Agency, – June 2022 – August 2022

Performed equipment, lane status, performance, and covert audits at the 23 Ohio E-check stations. Executed and organized vehicle emissions testing data entry from the 23 locations throughout Northeast Ohio. Provided administrative support for a team of 4 people at the local office.

Presentations

Riley, A., J. Feldmiller. 19 November 2025. Health Effects of Climate Change in Allegheny County. The University of Pittsburgh Center for Public Health Practice Symposium [Poster symposium]

Riley, A., J. Feldmiller. 29 September 2025. Health Effects of Climate Change in Allegheny County. The University of Pittsburgh Epidemiology in Action Symposium [Poster symposium]

Riley, A., C. Waggett, J. Swann-Quinn. 29 April 2024. Re-emergence of Malaria in the US. Allegheny College Global Health Studies Symposium [Poster symposium]

Riley, A., 4 August 2023. Combining Urban Forestry with Public Health: Using Air Quality Data to Analyze Tree Plantings in Urban Settings. Holden Forests & Gardens SEARCH Symposium [Poster symposium]