

IAN PSHEA-SMITH, MPH

MEDICAL GEOGRAPHER & GLOBAL HEALTH EPIDEMIOLOGIST

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EDUCATION

PhD, Medical Geography and Global Health | Projected defense: Summer 2026

University of Florida, Gainesville, Florida

Awards: Verena Lighthouse Scholar, Evan Coe Medical Geography Award (Travel & Excellence), Distinguished Teaching Award, two oral presentation awards & one poster presentation award

Dissertation: Modelling the distributions of arbovirus vectors using machine learning and traditional regression approaches: Mosquitoes in Haiti, Ticks in the Republic of Georgia & *Culicoides* in Florida

MPH, Global Health Epidemiology

University of Michigan, Ann Arbor, Michigan

Awards: Latin American and Caribbean Studies Tinker Fellow, Global Public Health Research Award Recipient, Outstanding Commitment to Public Health Practice

Projects: Mosquito landing behavior in northern Ecuador, Infection prevention in Grenada's Homes for the Aging, Key informant perspectives on long-COVID in San Antonio, Texas

BSc, International Health | Minors in Biology & Spanish

Bethel University, Mishawaka, Indiana

Awards: Scholar Athlete in Track & Field, Outstanding Major in International Health

Projects: Narrative review of zoonotic malaria in South East Asia, Segregation distortion in *Drosophila melanogaster*

RESEARCH EXPERIENCE

Graduate Research & Teaching Assistant

September 2023 – Present

University of Florida Department of Geography, Gainesville, Florida

- Conducted research relating to mosquito ecology and zoonotic disease using machine learning and traditional regression approaches
- Constructed and submitted proposals, manuscripts and conference presentations
- Led coursework on medical geography and served as a grader for interdisciplinary courses

Research Assistant II

April, 2023 – Present

University of Michigan Department of Epidemiology, Ann Arbor, Michigan

- Conducted data analysis (R, SAS) for multiple studies on mosquito behavior patterns in northern Ecuador
- Applied modeling techniques and epidemiological theory
- Presented findings at research meetings and drafted results for publication

Global Health Intern

May 2023 – August 2023

Eversight Vision, Ann Arbor, Michigan

- Conducted a meta analysis of global attitudes towards corneal donation
- Analyzed data using Microsoft Excel and R
- Drafted results for publication and presentation, coordinating authorship and submission

RESEARCH EXPERIENCE (CONT.)

Research Assistant I

September 2021 – April 2022

University of Michigan Department of Health Behavior, Ann Arbor, Michigan

- Processed data relating to a parent-focused behavioral intervention on childhood obesity
- Coded & processed qualitative data using SPSS & Dedoose
- Participated in IRB & HIPAA compliance and trainings

Science Laboratory Assistant

January 2020 – May 2021

Bethel University, Mishawaka, Indiana

- Conducted molecular genetics research on segregation distortion in *Drosophila melanogaster*
- Performed PCR, gel electrophoresis, plasmid transformation and shotgun cloning
- Assisted in routine laboratory management including inventory, culture preparation and flu husbandry

CLINICAL EXPERIENCE

Clinical Informatics Specialist

December 2020 – September 2021

Oak Street Health LaSalle Park, South Bend, Indiana

- Documented patient's medical history, medications, medical management & diagnoses
- Performed efficient & precise medical coding compliant with the Centre for Medicare's guidelines
- Lead daily team meetings presenting patients to provider and clinical team-members

Medical Registrar & COVID-19 Testing Attendant

December 2020 – May 2021

Beacon Health System, Granger & South Bend, Indiana

- Swabbed patients and performed RT-PCR assays on samples to assess for COVID-19
- Registered patients in EMRs & charted information
- Trained and supervised employees on proper procedures and EMR usage

Medical Scribe

Scribe America, Elkhart General Hospital, Elkhart, Indiana

April 2018 – May 2019

- Documented provider visits for emergency medicine physicians
- Incorporated knowledge of pharmaceuticals, medical terminology and pathophysiology
- Followed HIPPA guidelines and navigated complex power dynamics and interpersonal relationships

PUBLIC HEALTH EXPERIENCE

Epidemiology & Entomology Intern

Summer 2022

Research Center for Infectious and Vector Diseases (CIREV), Quito, Ecuador

- Collected mosquitoes for identification and molecular analysis using HLC & HDN methods
- Analyzed data from mosquito collections using R and SAS
- Crafted protocols and drafted manuscripts for publication
- Assisted in mosquito husbandry associated with a sterile insect release programme

Intercultural Intern

Fall 2019

Devon Oasis, Little India, Chicago, Illinois

- Provided social support and basic health/nutritional education to incoming refugee families
- Developed course materials for TESOL and health education
- Supervised homework tutoring sessions and assisted with college applications

PUBLIC HEALTH EXPERIENCE (CONT.)

Environmental & Vector Technician

Summer 2019

Elkhart County Environmental Health Department, Goshen, Indiana

- Assessed distribution of mosquitoes & ticks, alongside vector identification and control
 - Created guide for pesticide use and contraindications
 - Performed weekly surface-water quality analyses
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TEACHING EXPERIENCE

University of Florida Instructor of Record

- **GEO 3452 | Introduction to Medical Geography**
 - Three semesters, 30–50 students per semester
 - Managed and led online course, graded all course material, designed course content

University of Florida Teaching Assistant

- **IDS 2935 | The Next Pandemic**
 - Three semesters, 150–200 students per semester
 - Graded weekly assignments, quizzes, exams and presentations

University of Michigan Graduate Student Instructor

- **SOC 302 | Health & Society**
 - Two semesters, 3 25–student sections per semester
 - Lectured on supplementary information, led discussion sections and graded essays

Bethel University Teaching Assistant & Grader

- **BIOL 220 | Clinical Microbiology with Laboratory**
 - One semester, 2 20–student sections
 - Prepared media and cultures for procedures, supervised laboratory sessions and graded assignments
 - **BIOL 115 | Human Biology with Laboratory**
 - One semester, 3 25–student sections
 - Prepared materials and equipment for procedures, supervised laboratory sessions and graded assignments
 - **SPAN 161 – 162 | Elementary Spanish I & 2**
 - Four semesters, 3 25–student sections per semester
 - Graded weekly quizzes, semester exams and short writing assignments
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INVITED TALKS & WORKSHOPS

- **Genomic Surveillance and Epidemiological Models for Outbreak Response Workshop** | May 2025, Emerging Pathogens Institute, University of Florida, Gainesville, Florida
 - **Global Health Epidemiology Panel** | EPID 664 – Field Methods in Global Health Epidemiology, January 2023, Department of Epidemiology, University of Michigan, Ann Arbor, Michigan
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SCIENTIFIC PRESENTATIONS

- **Pshea-Smith IA, Okech B, Boncy J, Existe A, Metrailler M, Matulis GA, Blackburn JK, von Fricken ME.** Mosquito biodiversity in a pathogen endemic setting in Haiti.
 - Poster presentation
 - Emerging Pathogens Institute Research Day
 - Gainesville, Florida; 2025

SCIENTIFIC PRESENTATIONS (CONT.)

- **Pshea-Smith IA**, Okech B, Sutherland I, Dunford J, So J, Koehler J, Boncy J, Matulis G, Ponciano JM, Blackburn JK, von Fricken ME. Mosquitoes & Haiti: Modelling mosquito distribution and examining mosquito diversity under current and future climate scenarios.
 - Oral presentation
 - [Annual meeting of the American Association of Geographers](#)
 - Detroit, Michigan; 2025
- **Pshea-Smith IA**, Werner E, Dunn M, Bashshur R. Geographic trends of keratitis in Florida and its association with social vulnerability.
 - Oral presentation
 - [Florida Society of Geographers Annual Meeting](#)
 - Gainesville, Florida; 2025
- **Pshea-Smith IA**, Okech B, Sutherland I, Dunford J, So J, Koehler J, Boncy J, Matulis G, Ponciano JM, Blackburn JK, von Fricken ME. Estimating spatial distributions of *Aedes aegypti*, *Aedes albopictus* and *Culex quinquefasciatus* in Haiti using machine learning.
 - Poster presentation
 - [Annual meeting of the American Society of Tropical Medicine and Hygiene](#)
 - New Orleans, Louisiana; 2024
- **Pshea-Smith IA**, Okech B, Sutherland I, Dunford J, So J, Koehler J, Boncy J, Matulis G, Ponciano JM, Blackburn JK, von Fricken ME. Modelling and predicting counts and environmental correlates of *Aedes aegypti*, *Aedes albopictus* and *Culex quinquefasciatus* in Haiti.
 - Oral presentation
 - [International Medical Geography Symposium](#)
 - Atlanta, Georgia; 2024
- **Pshea-Smith IA**, Okech B, Sutherland I, Dunford J, So J, Blackburn JK, von Fricken ME. Spatiotemporal Patterns of Three Mosquito Species in Haiti, 2018–2019.
 - Poster presentation
 - [Emerging Pathogens Institute Research Day 2024](#)
 - Gainesville, Florida; 2024
- **Pshea-Smith IA**, Ponce P, Cevallos V, Carrasco A, Morrison AC, Coloma J, Eisenberg JNS. Determinants of *Aedes aegypti* & *Culex* Species Landing Rates in Northern Esmeraldas Province, Ecuador: A Human Landing Catch Study, June 2021 – July 2022.
 - Poster presentation
 - [Annual meeting of the American Society of Tropical Medicine and Hygiene](#)
 - Chicago, Illinois; 2023

SCIENTIFIC PUBLICATIONS

- **Pshea-Smith IA**, Ash KD, Werner E, Dunn M, Bashshur R. The Geography of Keratitis in Florida and its Correlation with Social Vulnerability
 - **In preparation**
- **Pshea-Smith IA**, Bissainte D, Ash KD. Climate Change, Colonisation, Conflict & Corruption – A vulnerabilising assemblage in the context of infectious disease in Haiti
 - **In preparation**

SCIENTIFIC PUBLICATIONS (CONT.)

- **Pshea-Smith IA**, Okech B, Sutherland I, Dunford J, So J, Koehler J, Boncy J, Matulis G, Ponciano JM, Blackburn JK, von Fricken ME. Modeling counts and environmental correlates of *Aedes aegypti*, *Aedes albopictus* and *Culex quinquefasciatus* in Haiti.
 - **Under review, Journal of the American Society of Tropical Medicine and Hygiene**
- Bashshur R, Werner E, **Pshea-Smith IA**, Dunn, M. Prevalence and geographic distribution of keratitis in the United States and associated factors.
 - **Under review, Ophthalmic Epidemiology**
- **Pshea-Smith IA**, Ponce P, Cevallos V, Carrazco A, Morrison AC, Coloma J, Eisenberg JNS. Landing patterns of *Aedes aegypti* & *Culex quinquefasciatus* in northern Esmeraldas province, Ecuador: Human Landing Catch Study June 2021 – July 2022.
 - **Under review, PLoS NTD**
- **Pshea-Smith IA**, Bashshur M, Itani W, Mofrad ZN, Stout E, Bashshur R. Perceptions on Corneal and Eye Donation: Implications for Corneal Donor Programs. Eye Banking and Corneal Transplantation. 2024 Sep 1;3(3):e0029.

PROFESSIONAL REPORTS & DOCUMENTS

- **Pshea-Smith IA***, Gardner K*, Harrison T*, Tretyakova S*. Dementia Management and Infectious Disease Prevention in Grenada's Homes for the Aging. 2023. Internal report for Grenada's Ministry of Social & Community Development, Housing and Gender Affairs. *All four authors contributed equally to this report.
- **Pshea-Smith IA***, Vyas J*, Fry J*. Long COVID & Health Information in Bexar County. 2023. Internal report for the South-Central Advanced Health Education Center in San Antonio, Texas. *All three authors contributed equally to this report.
- **Pshea-Smith IA***, Tretyakova S*, Grandinetti K*, Powers K*, Tanksley A*. Grenada Red Cross Volunteering Policy. 2022. Internal use document for the Grenada Red Cross Society. *All five authors contributed equally to this report.
- **Pshea-Smith IA**. Elkhart County Pesticide Guide. 2021. Internal use document for the Elkhart County Environmental Health Department.

PROFESSIONAL MEMBERSHIPS

2025 – Present | Florida Society of Geographers
2024 – Present | American Association of Geographers
2024 – Present | Society of Vector Ecology
2021 – Present | American Society of Tropical Medicine and Hygiene

FELLOWSHIPS & AWARDS

2025 | **Doctoral Student Poster Presentation Winner** – Emerging Pathogens Research Day
2025 | **Distinguished Teaching Award as a Graduate Student** – University of Florida
2025 | **Evan Coe Award for Excellence in Medical Geography** – University of Florida
2025 | **Student Oral Presentation Winner** – Ann. Meeting of the Florida Society of Geographers
2024 | **Student Paper Presentation Winner** – International Medical Geography Symposium
2024 | **Evan Coe Medical Geography Travel Award** – University of Florida
2023 | **Verena Lighthouse Scholar** – NSF Biology Integration Institute

FELLOWSHIPS & AWARDS (CONT.)

2023 | **Outstanding Commitment to Public Health Practice** – University of Michigan PHAST

2022 | **Global Public Health Research Award** – University of Michigan

2022 | **Latin American and Caribbean Studies Tinker Fellow** – University of Michigan

2020 | **Outstanding Major in International Health** – Bethel University

2017–2020 | **Scholar Athlete**, Track & Field – Bethel University

TECHNICAL SKILLS

- Data Analysis : R, SAS, ArcGIS Pro
- Microbiology & molecular biology : PCR, electrophoresis, aseptic & sterile technique
- Mosquito identification, husbandry for SIT and environmental control
- Survey development and deployment, semi-structured and focus group interviewing

PROFESSIONAL SKILLS

- Cultural competency & sensitivity
 - Pedagogy in interdisciplinary fields, lesson plan development and discussion facilitation
 - Professional Spanish proficiency; beginner French proficiency
 - Proposal writing for short-term research projects
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INTERESTS

Academic

- Mosquito/vector ecology
- Global health equity
- Refugee health
- Public health practice

Personal

- Long distance running
- Kayaking
- Science fiction & fantasy books