
TRACY L. AYERS
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PERSONAL

INFORMATION: Country of Citizenship: United States of America
Home Phone Number: (404) 786-8336
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EDUCATION: 9/98-8/01: Florida State University, Sociology, – MS
Tallahassee, FL (Mortality – Cancer and Infant)
9/96-12/00: Florida State University, Geography – MS
Tallahassee, FL (Geographic Information Systems, Immigration and Labor Market Interactions)
8/92-5/96: Jacksonville University, Geography and Sociology – BS
Jacksonville, Florida
Geography and Sociology Majors; Photography Minor
(Social Inequality, Hispanic Populations, and Environmental Policy)
8/87-6/92: Stanton College Preparatory High School, Jacksonville, FL

WORK EXPERIENCE:

11/05- present **Epidemiologist**
Enteric Diseases Epidemiology Branch
Centers for Disease Control and Prevention – Atlanta, Georgia

Major Duties:

Assist with epidemiological investigations, epidemiological research, and foodborne disease outbreak surveillance; present epidemiologic papers at scientific conferences; publish work in scientific literature; serve as liaison for Foodborne Outbreak data; completion of data requests received internally and externally for summaries and research, and via the Freedom of Information Act and Data Quality Act

Major Projects:

Attribution of Human Illness to Foods Consumed using Foodborne Outbreak Surveillance Data

Responsibilities include performing data analysis of implicated food items in reported outbreaks using SQL Analysis Services to create hierarchical relationships of food commodities. Developed algorithm for food classification. Methodology developed will be used as the standard for foodborne outbreak analysis and provides long-term guidance to regulatory agencies for control measures and policy development. The developed outbreak attribution model methodology was shared with international attribution experts at the MedVetNet Workshop entitled “Methods of attributing human *Salmonella* and *Campylobacter* infections with different animals, food and environmental sources.” Copenhagen, Denmark. May 2007.

Global Salmonella Surveillance (GSS) - Port-of-Spain, Trinidad

Global Salm-Surv is a global network of laboratories and individuals involved in surveillance, isolation, identification and antimicrobial resistance testing of *Salmonella*. I participated as an instructor to strengthen the capacities of assessing the burden of foodborne illnesses of its Member States in the Caribbean region (CAREC). Instruction included basic sampling techniques, survey design, and attribution methodologies.

9/01-10/05:

Surveillance Coordinator

Disease Investigations Branch
Disease Outbreak and Control Division
Hawaii Department of Health - Honolulu, Hawaii

Major Duties:

Conduct epidemiologic investigations, conduct epidemiological research, and public health surveillance; present epidemiologic papers at scientific and medical conferences; publish work in the scientific literature; disseminate vital public health information to the media and the public; grant proposal writing, development and management of Institutional Review Board (IRB) activities for respiratory surveillance and antimicrobial resistance studies

Major Projects:

State of Hawaii Antimicrobial Resistance Project (SHARP)

Create, design, and implement the first statewide population-based antimicrobial resistance surveillance system of its kind. Meet with community and private sector stakeholders to establish buy-in for surveillance project. Coordinate data collection from over six institutions and design a standardized database system that can incorporate the disparate data formats and codes for over 300 organisms, drugs, and specimen sources. This Microsoft SQL-based surveillance system contains over 6 million records, and grows annually by 2 million records. Responsibilities include managing the development and implementation of the project, write Memorandum of Agreements with stakeholders, prepare and track Institutional Review Board (IRB) documents.

Enhanced Respiratory Illness Surveillance Project at University of Hawaii

Collaborative project between HDOH and University of Hawaii to determine baseline levels of select respiratory agents in the community and among travelers, funded through Federal Bioterrorism Grant. Responsibilities include writing project proposal, managing contract renewals and extensions, preparing and tracking IRB documents, coordinating logistics, and devising and maintaining project timeline.

Honolulu International Airport Influenza Surveillance

Multi-level collaboration between federal, state and local agencies to conduct viral respiratory illness surveillance among international travelers. Responsibilities include determining needs and responsibilities of collaborating agencies, developing surveillance protocol and proposal, implementing and coordinating project logistics, preparing and tracking IRB documents, and monitoring compliance with study protocols.

Analysis, Visualization, Reporting and Geographic Information System (AVRGIS)

Design and implement web-based reporting and analysis tool to enable epidemiological investigations staff to perform analysis and information dissemination of reported infectious diseases in real-time. Responsibilities include developing and implementing contracts, monitoring project development, complying with project protocol and deadlines, designing and implementing geocoding services used by ArcIMS system, and maintaining and improving system functionality beyond contract completion including any system reconfigurations.

West Nile Virus Surveillance, Vector Control Branch, Department of Health

Gather requirements and conduct process analysis to determine inefficiencies in surveillance data collection and analysis of Vector Control Branch's port-of-entry mosquito surveillance. Advise appropriate technology infrastructure on how to meet field data collection and analysis needs within budget constraints. Assisted with proposals to various funding sources.

8/96 – 8/01

Research Assistant,

Institute of Science and Public Affairs,
Florida State University – Tallahassee, FL

Major Duties:

Assist in research investigations by performing literature reviews, data collection, database maintenance, cartography and data analysis.

Field researcher for “The Influence of Field Dependence/Independence on High school Students Problem-Solving Performance in a Computer-Based Geographic Learning Activity” LES Molina (1997)

Content specialist for Sanford Museum for Social Sciences – Provided geographic content and instructional design for museum’s desire to incorporate Florida’s education standards for geography education.

GIS instructor for Institute for Education Technology – Annually, instructed summer training sessions for Florida K-12 educators and assisted in lesson plan design for utilizing GIS and other technologies for implementing Florida education standards in social sciences.

Maintained online database for International Online Geographic Education Bibliography web site at <http://bib.freac.fsu.edu/>.

1/97 – 5/01

Teaching Assistant,

Department of Geography,
College of Social Sciences,
Florida State University – Tallahassee, FL

Major Duties:

Responsible for course content, syllabus, instructional design, lectures, and grading.

Courses taught:

GEA1000 – World Regional Geography

GEA2100 – Geography of the United States and Canada

Distance Learning Class – World Regional Geography

6/96 -8/96

Map Analyst, Internship

Deschutes County Community and Development Planning - Bend, OR

Major Duties:

Performed database entry and maintenance, map analysis and fundamental GIS map corrections for land parcel data in the county for purposes of land zoning, taxation, and permits.

PUBLICATIONS:

Whitehead SJ, Cui XW, De A, **Ayers T**, Effler PV. “Identifying Risk Factors for Underimmunization using Geocoding to Census Tracts: A Statewide Assessment of Children in Hawaii”. *Pediatrics* 2007; 120: e535-e542.

Fenfang Li, **Tracy Ayers**, Sarah Y. Park, F. DeWolfe Miller, Ralph MacFadden, Michele Nakata, Myra Ching-Lee, Paul V. Effler. “Comparing Duplicate Isolate Removal Methods in Surveillance for Methicillin Resistant *Staphylococcus aureus*”. *Emerging Infectious Diseases*. 2005. Vol. 11, No. 10.

Fenfang Li, Sarah Park, **Tracy Ayers**, Ralph McFadden, Michele Nakata, Paul Effler. “Methicillin-resistant *Staphylococcus aureus*, Hawaii, 2000–2002.” *Emerging Infectious Diseases*. 2005. Vol 11. No 8.

Effler P, Pang L, Kitsutani P, Vorndam V, Nakata M, **Ayers T**, et al. “Dengue fever, Hawaii, 2001–2002.” *Emerging Infectious Diseases*. 2005. Vol 11. No. 4

Smith CE, Tom T, Sasaki J, **Ayers T**, Effler PV. "Dengue risk among visitors to Hawaii during an outbreak." *Emerging Infectious Diseases*. 2005. Vol 11. No 4.

Lara E. Lasher, **Tracy L. Ayers**, Pauli Amornkul, Michele Nakata, Paul V. Effler. "Contacting Passengers after Exposure to Measles on International Flight: Implications for Responding to New Disease threats and Bioterrorism". *Public Health Reports*. Vol. 119 No. 4 (July/August 2004).

Forthcoming:

Ayers TL, Ching-Lee M, Eberstein I, Nakata M, Effler PV. "Using GIS to Assess Community-level Health Disparities in Viral Respiratory Illnesses". Target: *American Journal of Public Health*

Painter J, **Ayers TL**, Woodruff R, Blanton E, Perez N, Hoekstra RM, Braden C. "Recipes for Foodborne Outbreaks: a scheme for grouping and organizing foods implicated in foodborne outbreaks" Target: *Emerging Infectious Diseases*.

John Painter, Christopher Braden, **Tracy Ayers**, Robert M. Hoekstra, Frederick Angulo, Patricia M. Griffin, Robert V. Tauxe. "Attribution of Foodborne Illnesses and Deaths to Food Commodities in the United States". Target: *Emerging Infectious Diseases*.

PRESENTATIONS:

2007:

Ayers TL, Painter J, and Braden C. "Using Foodborne Outbreak Surveillance to Determine the Attribution of Human Illness to Foods Consumed". Council of State and Territorial Epidemiologists. Atlantic City, NJ. June 2007.

Ayers TL, Ching-Lee M, Eberstein I, Nakata M, Effler PV. "Using GIS to Assess Community-level Health Disparities in Viral Respiratory Illnesses" Council of State and Territorial Epidemiologists. Atlantic City, NJ. June 2007.

Ayers, TL. "Summary of Outbreak Data from eFORS". National Foodborne Epidemiologists Meeting. Miami FL.

Ayers TL, Painter J, and Braden C. "Using Foodborne Outbreak Surveillance to Determine the Attribution of Human Illness to Foods Consumed". MedVetNet Workshop: Methods of attributing human *Salmonella* and *Campylobacter* infections with different animals, food and environmental sources. Copenhagen, Denmark. May 2007.

Ayers TL. "CDC's Foodborne Outbreak Reporting System (eFORS)" Mechanisms for Improved Access and Sharing of Food Safety Information. Washington, DC. March 2007

Ayers TL. Scallan, E. "Point of Exposure Attribution: A Blending Approach". FoodNet Vision Meeting. Atlanta GA March 2007.

Ayers TL, Lynch M. "Summary of Foodborne Outbreak Data" EHS-Net Vision Meeting. Atlanta GA. January 2007.

2006:

Ayers TL, Painter J, and Braden C. "Using Foodborne Outbreak Surveillance to Determine the Attribution of Human Illness to Foods Consumed". Council of State and Territorial Epidemiologists. Anaheim CA. May 2006.

Ayers TL, Painter J, and Braden C. "Attribution of Human Illness to Food Commodities" Society for Risk Analysis. Baltimore MD, December 2006.

Ayers TL. Maldonado M, Scallan, E. "Point of Exposure Attribution: A Blending Approach". Society for Risk Analysis. Baltimore MD, December 2006.

Ayers, TL. "Summary of Outbreak Data from eFORS". National Foodborne Epidemiologists Meeting. Miami FL.

Ayers TL. Chow C, Park SY, Nakata M, Effler PV. "Enhanced Influenza Surveillance and Response at an International Airport in the United States". International Conference on Emerging Infectious Diseases. Atlanta GA. March 2006.

Ayers TL, Lynch M. "Summary of Foodborne Outbreak Data" EHS-Net Vision Meeting. Atlanta GA. January 2006

2003: "New Disease Threats and Bioterrorism: Using GIS Disease Surveillance Techniques". Advancements in Surveillance and Epidemiology. Miami FL. 2003

2000: "GIS Curriculum Development for World Regional Geography" National World Geography and History Conference. Austin, TX. 2000

1999: "Immigration and Internal Labor Market Flows in a Rural Locale". Florida Society of Geographers. Gainesville FL.

1998: "Education Technology for Social Science Educators". Florida Education Technology Conference.

**POST GRADUATE
EDUCATION/TRAINING:**

University of Hawaii, Manoa:

Public Health 792: Biosecurity, Bioterrorism, and Bioagents

Public Health 696: Advances in Bioterrorism Surveillance and Outbreak Investigation

Kapi`olani Community College:

ITS 103: Introduction to Programming Process (Visual Basic)

ITS 104: Introduction to Networking and Security

ITS 118: Visual Basic for Business Applications

SPAN 101 & 102: Elementary Spanish I & II

University of California, Berkeley:

Introduction to Applied Spatial Epidemiology: Public Health Research Laboratories, Tracking analyst, spatial statistic tools and cluster analysis techniques.

PROFESSIONAL ASSOCIATIONS:

American Public Health Association (since 2003)

Hawaii GIS Community Council (since 2001)

Association of American Geographers (1997-2000)

Florida Society of Geographers (1996-2000)

Sigma Xi (1996 – 1998)

COMPUTER SKILLS:

Experienced at using SPSS, SAS, Microsoft Access, Microsoft SQL, Visual Basic studio.NET, ArcGIS 9x (including Spatial Analyst, Geostatistical Analyst, Geocoding), ArcIMS, ArcView3x, Dreamweaver UltraDev, Adobe Photoshop, Adobe Freehand, and Microsoft Office.