

Gail E. Potter

Curriculum Vitae

Fred Hutchinson Cancer Research Center
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EDUCATION

University of Washington (2005-2010)

PhD, Statistics, December 2010

- Track in Statistical Demography ([Center for Statistics and the Social Sciences](#))
- Completed Qualifying Examinations in Statistical Theory and Applied Statistics

Oberlin College (1993-1997)

B.A. Mathematics, May 1997 (Cumulative GPA: 3.7; Major GPA: 3.8)

RESEARCH INTERESTS

Stochastic modeling, mathematical statistics, social network analysis, epidemic models, statistical demography, data analysis

RESEARCH & WORK EXPERIENCE

Fred Hutchinson Cancer Research Center, Vaccine and Infectious Disease Division, Seattle, WA
Post-doctoral Research Fellow, 12/10–present; Research Assistant, 9/08–11/10. Under supervision of Dr. Ira M. Longini, Jr. and Dr. M. Elizabeth Halloran, develop statistical models for influenza transmission through networks of face-to-face social contacts. As a member of the interdisciplinary [Center for Statistics and Quantitative Infectious Diseases](#), collaborate with epidemiologists, biostatisticians, and computer programmers on studies analyzing disease transmission.

Institut de Recherche pour le Développement (IRD), Niakhar, Senegal

Statistical Advisor funded by external grant, 7/09 – 8/09

In collaboration with Jonathan Sugimoto (PhD, Epidemiology, University of Washington), IRD, and PATH, advised researchers on design and implementation of a social contact survey administered in conjunction with an influenza vaccine trial.

University of Pennsylvania Population Studies Center, Mchinji Malawi

Research Intern with the *Malawi Longitudinal Study of Families and Health*, 6/08 – 8/08

Managed a team of data entry specialists during survey implementation in Malawi, Africa. Supervised data entry, merged databases in STATA, performed consistency checks, supervised data cleaning, and coordinated communication between the data entry team, the interview supervisors, and the qualitative researchers. Advocated for employee needs with the project manager and organized social events to support employee morale during fieldwork in a cross-cultural research community.

University of Washington, Seattle, WA

Supervised independent study with Dr. Mark S. Handcock, summer 2006 and 9/07 – 5/08

Studied the methodology used to estimate HIV/AIDS prevalence by the Joint United Nations Programme on HIV/AIDS (UNAIDS). Analyzed economic resource exchange networks in a Malawian village.

Boulder Community Hospital, Boulder, CO

Unit Coordinator/Secretary, 8/03 to 6/05. Managed the flow of patients in the surgery recovery room, served as point of contact for patient care providers in various departments, logged surgery cases electronically, and multi-tasked numerous secretarial duties in an emotionally charged environment. Created an Excel workbook to automate the daily staffing assignments and ensure fair staffing distribution. I worked the same job in the pre-operative unit for surgery from 8/03 to 8/04.

Baxter Hemoglobin Therapeutics, Boulder, CO

Receptionist/Documentation Assistant, 11/02 to 9/03 Implemented an electronic system to track employee training, designed and maintained Access databases to track documents, designed and led engaging and creative training sessions on Quality Assurance procedures and software for individuals and groups of up to 90 employees, assisted with writing and proofreading Standard Operating procedures, greeted visitors, answered phones, and performed other miscellaneous reception and office duties.

The Urban Institute, Washington, DC

Research Assistant for Drs. Jeff Passel, Rebecca Clark, and Linda Giannarelli. 6/98 to 6/99. Performed data analysis supporting child welfare and immigration policy studies. Duties included extensive SAS programming, exploratory data analysis, imputing variables, implementing prediction programs, testing survey questionnaires, and others.

PUBLICATIONS

Gail E. Potter and Neil Hens. [A penalized likelihood approach to estimate within-household contact networks from egocentric data](#), *submitted and under review*.

Gail E. Potter, Mark S. Handcock, Ira M. Longini, Jr., and M. Elizabeth Halloran. [Estimating Within-School Contact Networks to Understand Influenza Transmission](#), (2012) *The Annals of Applied Statistics*, **6** (1), 1-26.

Gail E. Potter, Mark S. Handcock, Ira M. Longini, Jr., and M. Elizabeth Halloran. [Estimating Within-Household Contact Networks from Egocentric Data](#), (2011) *The Annals of Applied Statistics*, **5** (3), 1816-1838.

Gail E. Potter and Mark S. Handcock, [A Description of Within-Family Resource Exchange Networks in a Malawian Village](#), *Demographic Research* (2010) Vol. 23, p. 117-152

Yang Yang, Jonathan D. Sugimoto, M. Elizabeth Halloran, Nicole E. Basta, Dennis L. Chao, Laura Matrajt, **Gail Potter**, Eben Kenah, Ira M. Longini, Jr. [The Transmissibility and Control of Pandemic Influenza A \(H1N1\) Virus](#). *Science* 30 October 2009: Vol. 326. no. 5953, p. 729 - 733

PRESENTATIONS

Modeling Within-School Contact Networks to Understand Influenza Transmission, Epidemics Conference, Boston, MA, November 2011

[Modeling Within-School Contact Networks to Understand Influenza Transmission](#), *International Society for Disease Surveillance webinar* (School Disease Transmission: Has the time come for coordination between monitors and modelers?), October, 2011 (webinar)

[Modeling a Within-School Contact Network to Understand Influenza Transmission](#), *Joint Statistical Meetings*, Miami, FL, August 2011 (oral presentation)

Modeling a Within-School Contact Network to Understand Influenza Transmission, *Models of Infectious Disease Agent Study (MIDAS) Conference*, Atlanta, GA, June 2011 (oral presentation)

Estimating Within-Household Contact Networks from Egocentric Data, *SIMID Workshop on Infectious Disease Modeling and Economic Evaluation of Vaccines*, Antwerp, Belgium, April 2010 (oral presentation)

Estimating Within-Household Contact Networks from Survey Data, *Models of Infectious Disease Agent Study (MIDAS) Conference*, Chicago, IL, October 2009 (oral presentation)

Estimation of direct contact networks from field survey and outbreak investigation data, *Models of Infectious Disease Agent Study (MIDAS) Conference*, Atlanta, GA, June 2009 (oral presentation)

TEACHING

University of Washington, Seattle, WA

Instructor, [Introduction to R for Social Scientists](#), winter 2009, 2010, 2011, and 2012

Introductory course in R for social science graduate students. Created a course website, wrote new lecture notes, and designed interactive and engaging lectures.

Instructor, [Center for Statistics and the Social Sciences Math Camp](#), 9/08, 9/09, 9/10, 9/11

One-week intensive review of undergraduate mathematics to graduate students in diverse disciplines, including social welfare, sociology, political science, and psychology. Curriculum includes calculus, linear algebra, probability, and statistics.

Mathematics Specialist, NSF-funded [GK-12 Program in Mathematics](#), 8/07 – 6/08

Assisted classroom teachers in a public elementary school with mathematics education by introducing intuitive and exploratory methods.

Teaching Assistant, Structural Equation Models, Fall 2006

This is a specialized methods course for social science graduate students covering latent variable models, factor analysis, and growth models.

Teaching Assistant, Statistics Section, Summer Transition Program, summer 2006

One-month residential program for incoming freshmen who are first-generation college students, minority students, or could otherwise benefit from additional support to succeed in college.

Teaching Assistant, Case-Based Social Statistics, Spring 2006

This course covers statistical methods for the social sciences, and is required for undergraduate sociology honors students.

U.S. Peace Corps, Nepal

English and Mathematics Teacher, 6/99 to 9/01

Completed an intensive three-month training program in language, culture, and pedagogy. Taught English and mathematics in Nepali in a rural public school. Created and ran a girls club to support intellectual and creative development. Trained new Peace Corps Volunteers and performed site development for Peace Corps. Served on the Peace Corps Women in Development Committee and the Peer Support Network. Successfully integrated into Nepali village life and culture, while facing challenges of life in a developing country: numerous health hazards, political instability, and growing violence.

U.S. Peace Corps, Guinea

Mathematics Teacher, 7/97 to 11/97

Completed an intensive three-month training program (in Thies, Senegal), in language, culture, and pedagogy. Lived with Senegalese host family. Taught high school mathematics in French.

SERVICE

- Graduate Student Representative, 2008-2009
- Member, UW Social Network Modeling Group, 2007-Present
- Lead Teaching Assistant, Department of Statistics, 9/06-9/07
- Research Assistant for the Statistics Learning Initiative, 1/07 – 6/07
- Department of Statistics Fun Committee Member, 2006-2007
- Member, National Science Foundation, Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE) Undergraduate Research Committee, 2006-07

AWARDS & HONORS

- Thomas Francis Jr. Global Health Travel Scholarship, 2009, awarded to undertake fieldwork in Niakhar, Senegal
- Dorothy M. Gilford teaching award, 2008-2009, awarded for outstanding performance as a teaching assistant
- National Science Foundation, Graduate Teaching Fellowship, 2007-2008
Awarded to graduate students with strong mathematical ability, teaching skills, and cultural sensitivity. Fellows serve as math specialists in the Seattle public schools.
- National Science Foundation, Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE) Fellowship, 2005-2007
- Achievement Rewards for College Scientists (ARCS) Fellowship, 2005-2007
Awarded for academic excellence and promise in a scientific discipline.
- Hubert M. Blalock Fellowship, 2005
Awarded by University of Washington's Center for Statistics and the Social Science to incoming students who are considered promising candidates for interdisciplinary research.
- University of Colorado Continuing Education Scholarship, 2004
- Phi Beta Kappa Honor Society, elected 1997
- Oberlin co-winner of the William Putnam Mathematics Competition, 1995
- National Merit Scholarship Finalist, 1993