

M. ELIZABETH HALLORAN
Curriculum Vitae
September 24, 2018

Degrees

1989 DSc Population Sciences, Harvard School of Public Health, Boston, MA
Concentration: Human Ecology and Population Dynamics of Infectious Disease
1985 MPH Tropical Public Health, Harvard School of Public Health, Boston, MA
1983 MD *Freie Universität Berlin*, West Berlin, Germany, licensure in Germany 1983
1972 BSc General Science, University of Oregon, Eugene, Oregon

Faculty Positions (primary)

1/06–present Full Member Program in Biostatistics, Bioinformatics, and Epidemiology
Vaccine and Infectious Diseases and Public Health Sciences
Fred Hutchinson Cancer Research Center, Seattle
1/06–present Professor Department of Biostatistics, School of Public
Health, University of Washington
6/15–present Professor Department of Epidemiology, School of Public
Health, University of Washington
9/98–12/05 Professor Department of Biostatistics, Rollins School of
9/93–8/98 Associate Professor Public Health, Emory University
9/90–8/93 Assistant Professor Division of Biostatistics,
School of Public Health, Emory University
12/89–8/90 Assistant Professor Department of Epidemiology and Biostatistics
School of Medicine, Emory University

Faculty Positions (secondary) and Responsibilities

9/14–present Director, MIDAS Center for Inference and Dynamics of Infectious Diseases
6/09–present Director and Founder, Summer Institute in Statistics and Modeling in Infectious
Diseases, Department of Biostatistics, University of Washington
6/08–present Adjunct Professor, Applied Mathematics and Epidemiology, University of Washington
9/05–12/05 Director, NIH/NIGMS Training Grant in Biostatistics in Genetics,
Immunology, and Neuroimaging (BGIN), Emory
2/04–12/05 Director, Center for Highthroughput Experimental Design and Analysis (CHEDA), Emory
9/02–12/05 Director, Center for AIDS Research, Biostatistics Core, Emory
9/92–8/03 Director, NIH Statistical and Clinical Research Training Grant in AIDS, Emory
9/96–12/05 Faculty, Population Biology, Ecology, and Evolution (PBEE) PhD Program,
Graduate Division of Biological and Biomedical Sciences, Emory
6/94–12/05 Secondary appointment Department of Epidemiology, Emory
9/92–12/05 Secondary appointment Department of Biology, Emory College

Visiting situations

Winter 1995	Visiting Associate Professor	University of Minnesota, Biostatistics
Spring 1995	Visiting Associate Professor	Carnegie Mellon University, Statistics
Summer 1993, 94, 95, 99	Visiting Scholar	Stanford University, Statistics
Summer 2003	Visiting Faculty	Los Alamos National Laboratories, Statistics
Winter, Spring 2005	Visiting Faculty	UC Santa Barbara, Statistics

Postdoctoral Education and Positions

- 1989 Research Associate, Department of Biology, Princeton University, based at the Department of Pure and Applied Biology, Imperial College, University of London.
Faculty Advisor: Robert M. May.
- 1985-86 Research Fellow, Department of Tropical Public Health, Harvard School of Public Health, Boston, MA. Faculty Advisor: Andrew Spielman.
- 1984 Diploma in tropical medicine and parasitic diseases
Bernard-Nocht Institute of Tropical Medicine, Hamburg, Germany
- 1982-83 Medical Internship, City Hospital of Neukölln, Berlin, Germany

Other education

- 1993-94 Graduate Student, Department of Mathematics, Georgia Institute of Technology, Atlanta, GA
- 1981 Clinical electives: University of Southampton, Southampton, United Kingdom,
orthopedics, neurology, neurosurgery
- 1973-75 Graduate student, Max-Planck Institute for Molecular Genetics, Berlin, Germany
- 1974-75 *Vordiplom* examination in biology: emphasis on plant physiology,
Freie Universität Berlin, Berlin, Germany
- 1968-70 Case Western Reserve University, Cleveland, Ohio, Majors: physics, philosophy of mathematics
- 1968 Harvard University Summer School, Boston, MA, abstract algebra and calculus

Other Research Experience

- 1989-90 Collaborator, Oswaldo Cruz Foundation, Rio de Janeiro, Brazil, Rockefeller Foundation-funded project on modeling of AIDS vaccines at the cellular level
- 1987 Epidemiologist, Theobald Smith Institute, Massachusetts State Laboratories, Boston, MA, formulation of a protocol for the National Seroprevalence Study of HIV Infection in Childbearing Women
- 1986-87 Co-organizer, comparative study of health effects of the war in Nicaragua in collaboration with people from Harvard School of Public Health, and the Schools of Public Health and Medicine in Managua, Nicaragua
- 1983-84 Medical research associate, City Hospital of Neukölln, West Berlin, study of a hypo-allergenic oral formula to prevent chronic diarrhea in infants with acute diarrhea
- 1971-72 University of Oregon, Institute of Molecular Biology, Eugene, Oregon, student assistant in DNA recombination studies using λ phage.

Honors and Awards

- 2016 Aspen Institute Italia Prize for Research and Collaboration between Italy and United States
- 2010 NIH/NIAID MERIT Award. Methods for Evaluating Vaccine Efficacy
- 2009 Fellow, American Association for the Advancement of Science
- 2006-2007 Dr. Ross Prentice Professor of Biostatistics, University of Washington
- 2002 40th Don W. Gudakunst Memorial Lecture, Department of Epidemiology, University of Michigan
- 1996 Fellow, American Statistical Association
- 1997 Fellow, Royal Statistical Society
- 9/86-6/87 Graduate Associate, Takemi Program of International Health, Harvard School of Public Health

Language Facility

English (native), German (fluent), Spanish (reading), French (reading)

Memberships

1990– American Association for the Advancement of Science
2010– American Society of Tropical Medicine and Hygiene (1993–2002)
1990– American Statistical Association
1990– Biometric Society
1994– Institute of Mathematical Statistics
1996– Royal Statistical Society
1989–2009 Society for Epidemiologic Research
1989–2004 Society for Vector Ecology

Editorial service

2011–present Editorial Board, *Epidemiologic Methods*
2014–present Editorial Board, *Observational Studies*
2009–2012 Editorial Board, *Statistical Communications in Infectious Diseases*
2008–present Editorial Board, *Epidemics*
2004–2014 Associate Editor, *Biometrics*
2002–2009 Associate Editor, *American Journal of Epidemiology* (also 1991–97)
1994–2005 Editorial Board, *Statistics in Medicine*
1998–2003 Associate Editor, *Journal of the American Statistical Association*,
Applications and Case Studies
1993–98 Editorial Board, *Epidemiology*

Service to professional associations

2014–2018 Nominating Committee, Statistics Section, American Association for Advancement of Science
2012–2014 Chair-elect, Chair, Past, Section on Statistics in Epidemiology, American Statistical Association
2010–2014 Elected Member-at-Large, Statistics Section, American Association for Advancement of Science
2008–2012 Committee on Sections, Section on Statistics in Epidemiology, American Statistical Association
2003–2005 Member, Committee on Excellence in Statistical Reporting Award, American Statistical Association
2004–2006 Member, (2006 Chair) Fellow Selection Committee, American Statistical Association
1998–2003 Board of Trustees, National Institute of Statistical Sciences
1991–93 Member, Core exam writing group, American Board of Preventive Medicine.
1994–95 Program Chair, Section on Epidemiology, American Statistical Association

Technical assistance and consulting

2015–present Scientific Advisory Group, WHO Blueprint for R and D to prevent outbreaks
2016–present WHO Blueprint Working Group for Study Designs for Outbreaks
2015–2016 Wellcome Trust PhD Programmes Committee
2013–present Dengue Modeling Consortium (FHCRC, U Florida, Johns Hopkins, Imperial College, Sanofi Pasteur)
2011–2016 NIH Study Section on Clinical Research and Field Studies
2008–2017 Merck Advisory Panel for Second Generation HPV Vaccines
2013–2014 PATH Technical Consulting Group I: Phase III cluster-randomized design for malaria transmission blocking vaccines

2013–2014 PATH Technical Consulting Group II: Novel design of Phase III studies for malaria transmission blocking vaccines

2013 Reviewer, Director’s Young Innovator Award Second Stage, NIH, April 11, 2013, Bethesda

2013 Invited participant, Workshop on Enhancing Training for Biomedical Training for Big Data, Big Data for Knowledge (BD2K) Initiative, NIH, July 29-30, 2013

2004–2008 NIH Study Section for Biostatistics Methods and Research Design

2007–2008 WHO Quiver Committee

2008 NIH Reviewer, Young Innovator Awards

2007 NIH Panel for Interviewing the Pioneer Award Finalists.

2006 Merck, consultation on HIV vaccines, October 10, 2006.

2005 National Centers for Disease Control and Prevention, June 21, 2005, Plan for pandemic influenza.

2005 Global Health Security Action Group (G7 plus Mexico) (Influenza Modeling Workshop and Tabletop Exercise) London, May 31-June 3, 2005, under auspices of DHHS.

2005 Texas Influenza Vaccine Study Investigators’ Meeting, Temple, Texas, May 24-25, 2005.

2004-2005 Riverside County Health Department Modeling Workshop for Public Health Practitioners, Palm Springs, California, March 2005, Planning Committee and two talks.

2004 FDA on improving FDA’s approach to clinical trials and vaccines, October 2004, invited talk.

2004 Merck, consultation on design of vaccine studies, October 4, 2004.

2004 Department of Health and Human Services, August 2004, Planning for pandemic influenza.

2002–2004 Working Group on Smallpox Modeling of the Secretary’s Committee on Public Health Preparedness.

2004 WHO, External Review Group, Estimating Measles Mortality, January, 2004

1999–2003 Data Safety and Monitoring Board, Vaxgen International and Domestic HIV Vaccine Trials, Thailand and USA.

1998–2002 Aviron, consulting, influenza vaccine community trials

1999–2002 Merck Research Laboratories, consulting

2001 NIH R01 external reviewer, SNEM-5 Study section, December, 2001

2001 NIH/NCI, Chair of P01 Site visit and review, January, 2001

2001 NIH/NCI, Ad hoc Member, P01 Parent Committee, March, 2001

2001 EPA, Scientific Advisory Panel, Probabilistic Models and Methodologies: Advancing the Ecological Risk Assessment Process in the EPA Office of Pesticide Programs, March 13-16, 2001

2001 NSF review of Technology Center proposal

1998-2004 External NSF grant review, one or two per year

1992–99 NIH Biostatistics Special Study Section (then SNEM-5) (15 times 1992–99, chair five times)

1995–97 NSF Institute of Mathematics and its Applications, Organizing Committee for Summer 1997 Workshop on Statistics in the Health Sciences.

1994–95 National Academy of Science, Institute of Medicine, Committee on Vaccine Development: Establishing Priorities for the U.S. for the 21st Century

1995 NSF, Division of Mathematical Sciences, Review Panel Career Advancement Awards and Research Planning Grants

1994–98 PDU/TDR/WHO Transmission-blocking Malaria Vaccine Task Force

1994 NIH Review: HIV Vaccine Preparedness Study and Phase III Trial Sites (6/94)

1995 NIH P01 Review Group with reverse site visit, National Cancer Institute

1997 NIH P01 Initial Review Group with site visit, National Cancer Institute (5/97)

1993 CDC Expert panel discussion on varicella vaccines, January 12, 1993.

- 1991 Consultant, Evaluating the Schools of Public Health in Bolivia, March 1-16, 1991.
 1990 Consultant, Seminar on Methods for Study Designs for Malaria Vaccines,
 Instituto de Inmunologia, Bogota, Colombia, July 16-19, 1990.
 1989 Participant, First International Meeting of Unesco Project to Improve
 Primary School Performance, Nutrition and Health Stockholm, Sweden, April 3-5.

University of Washington courses

Analytic Methods for Infectious Disease, Winter 2007, Winter 2009

University of Washington Reading Courses with Students

- Kathleen Curtius, PhD, Applied Mathematics, winter 2010, math modeling of infectious diseases,
 Erin de la Cruz, Dual degree, Medicine and Biostatistics PhD, summer, fall quarter intern 2012,
 dengue phylodynamics.
 Roddy Theobald, PhD, statistics, spring 2013. Causal inference with interference, 5 credits.
 Amanda Allen, PhD, statistics, spring 2013. Analysis of infectious disease data. 5 credits.
 Lauren Schwartz, PhD, epidemiology, fall 2013. Analysis of vaccine studies. 1 credit.
 Lauren Schwartz, Leora Feldstein, PhD, epidemiology, fall 2013. Analysis of vaccine studies. 2 credits.
 Lauren Schwartz, PhD, epidemiology, Analysis of vaccine studies. 2014: Spring, 2 credits; Summer, 2 credits;
 Fall, 1 credit, 2015, Dissertation credits
 Leora Feldstein, PhD, epidemiology, Analysis of vaccine studies. 2014: Spring, 2 credits; Summer, 2 credits;
 Fall 2, credits, 2015 Dissertation credits

Emory University courses

- Causal Inference WS 2005-06
 Bayes and empirical Bayes methods, SS 1996, WS 1998-99, WS 2000-01, SS 2003.
 Analysis of microarray data, SS 2002, WS 2003.
 Missing and mismeasured data, WS 1996-97, SS 2000.
 Statistical computing, WS 1997-98, SS 2000.
 Theory of survival analysis, including counting processes, SS 1992, SS 1994.
 Generalized Linear Models, SS 2001.
 Introduction to analytic methods for infectious disease interventions, SS 1993.
 Analytic methods for infectious disease interventions, SS 1990-91, SS 1992-93, WS 1995-96, WS 1997-98.
 Population Biology and Dynamics of Disease, WS 1993-94.
 Advanced Seminar in Biometry, WS 1990-91, SS 1993.
 Epidemiology of AIDS: methodological issues, SS 1989-90, WS 1991-92.
 PhD Research Seminar, WS 1995-96, WS 1996-97, WS 1998-99.

Harvard University courses

- SS 1989 Teaching Fellow (course coordinator), Biology, Epidemiology, Economics and Policy
 of Malaria (BEEP), Department of Tropical Public Health, School of Public Health
 WS 1988 Population Dynamics of Infectious Diseases in Humans, Biology Department,
 Faculty of Arts and Sciences
 1986-87 Population Dynamics of Infectious Diseases in Humans, full year undergraduate seminar,
 Biology Department, Faculty of Arts and Sciences.

Short courses and tutorials

- 1992 New England Epidemiology Summer Program, Boston MA, July 12-31,
Concepts in Infectious Disease Epidemiology
- 1992 University of São Paulo, Brazil, August 3-6, Concepts in Infectious Disease Epidemiology
- 1997 Chiron Corporation, Emeryville, CA, December 15-16,
Design and Analysis of Vaccine Studies
- 1998 Bristol Myers Squibb, Connecticut, April 24,
Design and Analysis of Vaccine Studies, Causal Inference
- 2000 Research Methods on Vaccines and Immunization in Public Health,
Oswaldo Cruz Foundation, Rio de Janeiro, Brazil, December 18-22.
- 2006 Analytic Methods for Infectious Diseases, ENAR Biometrics Meeting, Tampa, FL, March, 2006
- 2007 Analytic Methods for Infectious Diseases, ENAR Biometrics Meeting, Atlanta GA, March, 2007
- 2011 Design and Analysis of Vaccine Studies, Deming Conference, Atlantic City, NJ, December 2011

Scientific Initiatives/Workshops

- 6/09–present Director and Founder, Summer Institute in Statistics and Modeling in Infectious Diseases,
Department of Biostatistics, University of Washington
- 2007-2009 Proposer and Organizer, Workshop on Analysis of Infectious Disease Data, Mathematisches
Forschungsinstitut in Oberwolfach, Germany, November 1–7, 2009.
- 2013 Co-organizer, Workshop on Integrating Genomic Data and Transmission Analysis, University
of Florida, January 2013
- 2011–2013 Proposer and Organizer, Workshop on Analysis of Infectious Disease Data, Mathematisches
Forschungsinstitut in Oberwolfach, Germany, November 10-16, 2013.
- 2016–2018 Proposer and Organizer, Workshop on Analysis of Infectious Disease Data, Mathematisches
Forschungsinstitut in Oberwolfach, Germany, February, 2018.

Doctoral dissertations directed

Emory:

- 1992 P. Rhodes, PhD Biostatistics
- 1992 O. Devine, PhD Biostatistics
- 1995 M. Kolczak, PhD Biostatistics
- 1997 D. Dunson, PhD Biostatistics
- 1998 G.T. Golm, PhD Biostatistics
- 2001 K. T. Cuenco, PhD Epidemiology
- 2003 Haitao Chu, PhD Biostatistics
- 2007 Haiyan Wu, PhD Biostatistics

U Washington:

- 2011 Nicole Basta, PhD Epidemiology
- 2016 Leora Feldstein, PhD Epidemiology
- 2018 Lauren Schwartz, PhD Epidemiology
- (2019) Natasha Wenzel, PhD Epidemiology
- (2019) Madhura Rane, PhD Epidemiology

Doctoral committees

Emory:

1990 V.J.C. Suman, PhD Biostatistics.
1990 W.S. Clark, PhD Biostatistics
1994 J. Bertolli, PhD Epidemiology (UCLA).
1995 D.J. Mosur, PhD Epidemiology.
1997 L.K. Durham, PhD Biostatistics.
1997 M.R. Sternberg, PhD Biostatistics
1999 B. Viswanathan, PhD Biostatistics
2000 M. Hudgens, PhD Biostatistics
2000 D. Price, PhD Biostatistics
2002 E. Hill, PhD Biostatistics
2004 Y. Yang, PhD Biostatistics
2006 E. Tassone, PhD Biostatistics

U Washington:

2008 JoAnna Scott, PhD Biostatistics
2010 Jonathan Sugimoto, PhD Epidemiology
2010 Gail Potter, PhD, Statistics
2011 Laura Matrajt, PhD, Applied Mathematics
2014 Amanda Koepke, PhD, Statistics
2016 Leigh Fisher, PhD Biostatistics
2017 Yingying Chen, PhD Biostatistics
(2018) Jon Fintze, PhD Biostatistics
(2018) Allison Black, PhD Epidemiology
(2018) Maryclare Griffin PhD Statistics

U Florida:

2017 Diana Riojas, PhD Epidemiology

Masters' theses directed

1992 N. Wahlay, general MPH.
1999 D. Cowart, biostatistics MSPH.

Faculty sponsor

1992–96 F. Powell, PhD student Biostatistics, recipient of an NIH minority predoctoral fellowship
2009–2010 Jerusha T. Achterberg, PhD student Anthropology, minority supplement to NIGMS MIDAS grant
2016–2018 Lauren Schwartz, NIH NIAID F31

Peer-reviewed publications

1. Russo VEA, Gallori E, and Halloran ME. (1977) Ethylene is Involved in the Autochemotropism of Phycomyces. *Planta* **134**:61-67.
2. Struchiner CJ, Halloran ME, and Spielman A. (1989) Modeling Malaria Vaccines I: New Uses for Old Ideas. *Math Biosc.* **94**:87-113.

3. Halloran ME, Struchiner CJ, and Spielman A. (1989) Modeling Malaria Vaccines II: Population Effects of Stage-specific Malaria Vaccines Dependent on Natural Boosting. *Math Biosc*, **94**:115-149.
4. Nicaragua Health Study Collaborative at Harvard, and CEIS, and UNAN. (1989) Health Effects of the War in Nicaragua in Two Communities. *Am J Pub Health*, **79**:424-430.
5. Halloran ME, Bundy DAP, and Pollitt E. (1989) Infectious Disease and the Unesco Basic Education Initiative. *Parasitology Today*, **5**:359-362.
6. Struchiner CJ, Halloran ME, Robins JM, Spielman A. (1990) The Behavior of Common Measures of Association Used to Assess a Vaccination Program under Complex Transmission Patterns - A Computer Simulation Study of Malaria Vaccines. *Int J Epidemiol*, **19**:187-196.
7. Longini IM, Haber MJ, Halloran, ME. (1990) Efectos directos e indirectos de las vacunas: un anotación sobre la estimación de la eficacia vacunal a partir de brotes por agentes de infecciones agudas como sarampión. *Bol Med Hosp Infant Mex*, **47**:516-520.
8. Halloran ME, Haber MJ, Longini IM, Struchiner CJ. (1991) Direct and Indirect Effects in Vaccine Efficacy and Effectiveness. *Am J Epidemiol*, **133**:323-331.
9. Haber MJ, Longini IM, Halloran, ME. (1991) Measures of the Effects of Vaccination in a Randomly Mixing Population. *Int J Epidemiol*, **20**:300-310.
10. Haber MJ, Longini IM, Halloran, ME. (1991) Estimation of Vaccine Efficacy in Outbreaks of Acute Infectious Diseases. *Statistics in Medicine*, **10**:1573-1584.
11. Halloran ME and Struchiner CJ. (1991) Study designs for dependent happenings. *Epidemiology*, **2**:331-338. PMID: 1742381
12. Struchiner CJ and Halloran ME. (1992) Models of AIDS Vaccines: The Cellular Level. *Memorias de Instituto Oswaldo Cruz*, Rio de Janeiro, **87**:103-113.
13. Halloran ME, Haber MJ, and Longini, IM. (1992) Interpretation and Estimation of Vaccine Efficacy under Heterogeneity. *Am J Epidemiol*, **136**:328-343.
14. Halloran ME and Struchiner CJ. (1992) Modeling transmission dynamics of stage-specific malaria vaccines. *Parasitology Today*, **8**:77-85.
15. Halloran ME. (1992) Persistence, Drugs, and Rock'n'Roll. *Trends in Ecology and Evolution*, **7**:212-214.
16. Longini IM, Halloran ME, Haber MJ, Chen, RT. (1993) Measuring Vaccine Efficacy from Epidemics of Acute Infectious Agents: Study Designs and Estimation Methods. *Statistics in Medicine*, **12**:249-263.
17. Brunet R, Struchiner CJ, and Halloran ME (1993) On the distribution of vaccine protection under heterogeneous response. *Math Biosc*, **116**:111-125.
18. Longini IM, Halloran ME, and Haber MJ (1993) Estimation of vaccine efficacy from epidemics of acute infectious agents under vaccine-related heterogeneity. *Math Biosc*, **117**:271-281.
19. Halloran, ME. (1993) *Salmonella enteritidis* infection in France and the United States: causes versus causal models. *American Journal of Public Health* **83**:1667-1669.

20. Lieu TA, Cochi SL, Black S, Halloran ME, Shinefield HR, Holmes SR, Wharton M, and Washington AE. (1994) Cost-effectiveness of a routine varicella vaccination program for US children. *Journal of the American Medical Association*, **271**:375–381.
21. Halloran, ME. (1994) *Mycobacterium tuberculosis*: just desserts for an ungrateful luncheon guest. *Trends in Ecology and Evolution* **9**:72–74.
22. Halloran ME, Longini IM, Struchiner CJ, Haber MJ, Brunet R. (1994) Exposure efficacy and change in contact rates in evaluating HIV vaccines in the field, *Statistics in Medicine*, **13**:357-377.
23. Halloran ME, Struchiner CJ, and Watelet, L. (1994) Epidemiologic effects of vaccines with complex direct effects in an age-structured population, *Math Biosciences* **121**:193–225.
24. Halloran ME, Cochi SL, Lieu TA, Wharton M, Fehrs L. (1994) Epidemiologic and morbidity effects of routine varicella immunization of preschool children in the United States, *American Journal of Epidemiology*, **140**:81–104.
25. Devine OJ, Louis TA, Halloran ME. (1994) Empirical Bayes methods for stabilizing incidence rates before mapping, *Epidemiology* **5**:622-630.
26. Longini, IM, Halloran, ME, Haber MJ. (1995) Some current trends in estimating vaccine efficacy, in *Epidemic Models: Their Structure and Relation to Data*, pp. 394–403, ed. D. Mollison, Cambridge University Press, Cambridge.
27. Halloran ME, Longini IM, Struchiner CJ, Haber MJ. (1995) Feasibility of prophylactic HIV vaccine trials: some statistical issues. in *Models for Infectious Human Diseases*, pp. 76–82, ed. V.S. Isham and G. Medley, Cambridge University Press, Cambridge.
28. Devine OJ, Louis TA, Halloran ME. (1994) Empirical Bayes estimators for spatially correlated incidence rates, *Environmetrics*, **5**:381-398.
29. Haber M, Halloran ME, Longini IM, Watelet L. (1995) Estimation of vaccine efficacy in non-randomly mixing populations. *Biometrical Journal* **37**:1, 25–38.
30. Halloran ME and Struchiner CJ. (1995) Causal inference for infectious diseases, *Epidemiology*, **6**:142–151. PMID: 7742400
31. Struchiner CJ, Halloran ME, Brunet R, Ribeiro JMC, Massad E. (1995) Malaria vaccines: lessons from the field. *Cadernos do Saúde Pública*, **10**(supplement 2):310-326.
32. Longini IM and Halloran ME. (1995) AIDS: Modeling Epidemic Control. letter to *Science* **267**:1250-1251.
33. Haber MJ, Orenstein WA, Halloran, ME, Longini IM, and Watelet, L. (1995) The effect of disease prior to an outbreak on estimates of vaccine efficacy, *American Journal of Epidemiology*, **141**:980–990.
34. Norohna, CP, Struchiner CJ, Halloran ME. (1995) Assessment of the direct effectiveness of BC meningococcal vaccine in Rio de Janeiro, Brazil: a case-control study, *International Journal of Epidemiology*, **24**(5):1050-1057.
35. Haber MJ, Watelet L, and Halloran, ME. (1995) On individual and population effectiveness of vaccination. *Int J Epidemiol.* **24**:1249–1260.

36. Struchiner CJ, Brunet R, Halloran ME, Massad E, Azevedo-Neto RS. (1995) On the use of state-space models for the evaluation of health interventions. *Journal of Biological Systems*. **3**:851–865.
37. Longini IM and Halloran ME. (1996) A frailty mixture model for estimating vaccine efficacy. *Applied Statistics*, **45**:165–173.
38. Devine OJ, Louis TA, Halloran ME. (1996) Identifying areas with high rates in mapping using empirical Bayes methods *Geographic Analysis*, **28**: 187–199.
39. Antia R. and Halloran ME. (1996) Recent developments in theories of pathogenesis of AIDS. *Trends in Microbiology*, **4**:282–285.
40. Halloran, ME, Longini, IM and Struchiner, CJ. (1996) Estimability and interpretation of vaccine efficacy using frailty mixing models. *American Journal of Epidemiology*, **144**:83–97.
41. Efron B, Halloran ME, and Holmes, S. (1996) Bootstrap confidence intervals for phylogenetic trees, *Proceedings of the National Academy of Sciences*, **93**:7085–7090. PMID: PMC3890
42. Mosure DJ, Berman S, Kleinbaum D, Halloran ME. (1996) Predictors of *Chlamydia trachomatis* infection among female adolescents: a longitudinal analysis, *American Journal of Epidemiology*, **144**:997–1003.
43. Halloran, ME. (1996) Evaluating HIV vaccines: discussion. *Statistics in Medicine*, **15**: 2405–12.
44. Rhodes P, Halloran ME, Longini IM. (1996) Counting process models for infectious disease data: distinguishing exposure to infection from susceptibility. *J Roy Statist Soc B*, **58**:751–762.
45. Longini, IM, Datta, S, and Halloran, ME. (1996) Measuring vaccine efficacy for both susceptibility to infection and reduction in infectiousness for prophylactic HIV-1 vaccines. *J AIDS and HR*, **13**:440–447.
46. Bertolli J, Pangi C, Frerichs R, and Halloran ME. (1997) A case-control study of the effectiveness of BCG vaccine for preventing leprosy in Yangon, Myanmar. *International Journal of Epidemiology*, **26**:888-896.
47. Halloran ME, Struchiner CJ, and Longini, IM. (1997) Study designs for different efficacy and effectiveness aspects of vaccination, *American Journal of Epidemiology*, **146**:789-803.
48. Datta, S, Halloran, ME and Longini, IM (1998) Augmented HIV vaccine trial designs for estimating reduction in infectiousness and protective efficacy. *Statistics in Medicine*, **17**:185-200.
49. Longini IM, Sagatelian K, Rida WN, and Halloran ME. (1998) Optimal vaccine trial design when estimating vaccine efficacy for susceptibility and infectiousness from multiple populations, *Statistics in Medicine*, **17**:1121-1136.
50. Halloran, ME. (1998) Vaccine studies. Invited entry in *Encyclopedia of Biostatistics*, John Wiley and Sons, Inc., pp 4687-94.
51. Halloran, ME. (1998) Secondary attack rate. Invited entry in *Encyclopedia of Biostatistics*, John Wiley and Sons, Inc., pp 4025-29.
52. Sun F, Ashley AE, Durham LK, Feingold E, Halloran ME, Manatunga AK, Sherman SL. (1998) Testing for contributions of mitochondrial DNA mutations to complex diseases, *Genetic Epidemiology* **15**:451-469.

53. Durham, LK, Longini, IM, Halloran, ME, Clemens, JD, Nizam, A, Rao, M. (1998) Estimation of vaccine efficacy in the presence of waning; Application to cholera vaccines, *American Journal of Epidemiology*, **147**:948-959.
54. Golm, GT, Halloran, ME, and Longini, IM. (1998) Semiparametric models for mismeasured exposure information in vaccine trials, *Statistics in Medicine*, **17**:2335-2352.
55. Halloran, ME (1998) Statistical issues in HIV vaccine trial design, *Journal of the Royal Statistical Society A*, **161**:265-272.
56. Longini, IM, Hudgens, MG, Halloran, ME, Sagatelian, K. (1999) A Markov model for measuring vaccine efficacy for both susceptibility to infection and reduction in infectiousness for prophylactic HIV-1 vaccines, *Statistics in Medicine*, **18**:53-68.
57. Golm, GT, Halloran, ME and Longini, IM. (1999) Semiparametric methods for multiple exposure mismeasurement and a bivariate outcome in HIV vaccine trials, *Biometrics*, **55**:94–101.
58. Datta, S, Halloran, ME, and Longini, IM (1999) Randomization by individual or by household in vaccine studies?, *Biometrics*, **55**:792-8.
59. Durham, LK, Halloran, ME, Longini, IM, Manatunga, AM (1999) Smoothing methods for exploring time-dependent vaccine effects *Applied Statistics*, **48**(3):395-407.
60. Halloran, ME, Longini, IM, Struchiner, CJ (1999) Design and interpretation of vaccine field studies. *Epidemiologic Reviews*, **21**:73-88.
61. Longini, IM and Hudgens, MG and Halloran, ME. (2001) Estimation of vaccine efficacy for both susceptibility to infection and reduction in infectiousness for prophylactic HIV vaccines with partner augmentation, in *The Quantitative Evaluation of HIV Prevention Programs*, editors Kaplan, E and Brookmeyer, R, Yale University Press, New Haven.
62. Longini, IM, Halloran, ME, Nizam, A, Wolff, M, Mendelman, PM, Fast, P, Belshe, RB. (2000) Estimation of the efficacy of live, attenuated influenza vaccine from a two-year, multi-center vaccine trial: Implications for influenza epidemic control, *Vaccine* **18**:1902-1909.
63. Hudgens MG, Longini IM, Halloran ME, Choopanya K, Vanichsen S, Kitayaporn D, Mastro TD, Mock PA. (2001) Estimating the HIV transmission probability in injecting drug users in Thailand, *Applied Statistics*, **50**:1-14.
64. Halloran, ME and Longini, IM. (2001) Use of validation sets for outcomes and exposure to infection in vaccine field studies. *American Journal of Epidemiology*, **154**:391–398.
65. Halloran, ME. (2001) Invited Commentary on C.P. Farrington, M.N. Kanaan, N.J. Gay, Estimation of the basic reproduction number for infectious diseases from age-stratified serological survey data. *Applied Statistics*, **50**:287–288.
66. Longini IM, Halloran ME, and Nizam, A. (2002) Model-based estimation of vaccine effects from community vaccine trials. *Statistics in Medicine*, **21**:481-495.
67. Hudgens MG, Longini, IM, Vanichsen S, Hu DJ, Kitayaporn D, Mock PA, Halloran ME, Satten GA, Choopanya K, Mastro TD (2002) Estimating HIV-1 subtype-specific transmission probabilities among injection drug users in Bangkok, Thailand, *American Journal of Epidemiology*, **155**:159-168.

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174. Halloran, ME, Auranen, K, Baird S, Basta, NE, Bellan, SE, Brookmeyer, R, Cooper, BS, DeGruttola, V, Hughes, JP, Lessler, J, Lofgren, ET, Longini, IM, Onnela, J-P, Özler, B, Seage, GR, Smith, TA, Vespignani, A, Vynnycky, E, Lipsitch, M (2017) Simulations for designing and interpreting intervention trials in infectious diseases, *BMC Medicine* **15**(1):223. doi: 10.1186/s12916-017-0985-3.

175. Yang, Y, Meng, Y, Halloran, ME, Longini, IM (2018) Dependency of Vaccine Efficacy on Pre-Exposure and Age: A Closer Look at a Tetravalent Dengue Vaccine, *Clinical Infectious Diseases*, **66**(2):178-184. doi: 10.1093/cid/cix766.
176. Dean, NE, Halloran, ME, and Longini, IM (2018) Design of vaccine trials during outbreaks with and without a delayed vaccination comparator, *Annals of Applied Statistics*, **12**:330-347.
177. Bisanzio D, Dzul-Manzanilla F, Gomez-Dantés H , Pavia-Ruz N, Hladish TJ, Lenhart A, Palacio-Vargas J, González Roldan JF, Correa-Morales F, Sánchez-Tejeda G, Kuri Morales P, Manrique-Saide P, Longini IM, Halloran ME, Vazquez-Prokopec GM. (2018) Spatio-temporal coherence of dengue, chikungunya and Zika outbreaks, *PLoS Neglected Tropical Diseases* doi: 10.1371/journal.pntd.0006298.
178. Fong, Y, Halloran, ME, Park, JK, Marks, F, Clemens, JD, Chao, D (2018) Efficacy of a Bivalent Killed Whole-Cell Cholera Vaccine Over Five Years: A Re-analysis of a Cluster-Randomized Trial, *BMC Infectious Diseases* doi: 10.1186/s12879-018-2981-4
179. Feldstein, LR, Rowhani-Rahbar, A, Staples, JE, Halloran, ME and Ellis, EM (2018) An assessment of household and individual level mosquito prevention methods during the chikungunya virus outbreak in the U.S Virgin Islands, 2014–2015, *American Journal of Tropical Medicine and Hygiene* **98**:845-848.
180. Hladish, TJ, Rojas, DP, Pearson, CAB, Gomez-Dantes, H, Halloran, ME, Vazquez-Prokopec, GM, Longini, IM (2018) Effectiveness of indoor residual spraying on dengue transmission, *PLoS Neglected Tropical Diseases*, in press.

Submitted papers

1. Dean, NE, Halloran, ME, and Longini, IM (2017) Per Protocol and Intention to Treat in Vaccine Efficacy Trials in Outbreak Settings, (short communication), under revision.
2. Schwartz, LM, Mutanga, J, Kakaire, R, Davis-Olwell, P, Handel, A, Sekandi, J, Halloran, ME, Kiwanuka, N, Zalwango, S, Whalen, CC (2017) Validation of a pictorial survey tool to measure time-use in an African urban setting, under revision.

Other publications

1. Denker C, Doughten D, Halloran ME *et al.* (1979) *Über die berufliche Erfahrung von weiblichen Ärzten: Ergebnisse einer Befragung*, (Concerning the Experiences of Woman Doctors in their Careers and Personal Lives: Results of an Investigation), Department of Social Medicine, Freie Universität, Berlin-Dahlem, Germany.
2. Shapira A, Beales PF, Halloran ME. (1993) Living with drug resistance to malaria. *Parasitology Today*, 9:168-174.
3. Halloran, ME and Struchiner CJ. (1995) Vaccine effects: Changes in susceptibility, infectiousness, contacts, direct and indirect effects. in Proceedings of the III Brazilian/ II Ibero American/ Latin American Congress on Epidemiology, April, 24–28, 1995. (Biostatistics Technical Report 95–9).
4. Halloran, ME. (1995) The potential outcome approach to cause. Invited Paper at the Interface Conference, Pittsburgh, June 1995, Biostatistics Technical Report 95–3.
5. Zanetta DMT, Halloran ME and Hawley, W. (1995) Analysis of repeated measurement data: an example. Technical Report 95–6, Department of Biostatistics, Emory University.

6. Dunson, D and Halloran ME. (1996) Estimating transmission blocking efficacy of malaria vaccines, Technical Report 96–16.
7. Halloran ME, Anderson RM, Azevedo-Neto RS, Bellini WJ, Branch O, Burke MA, Compans R, Day K, Gooding L, Gupta S, Katz J, Kew O, Keyserling H, Krause R, Lal AA, Massad E, McLean AR, Rosa P, Rota P, Wiener P, Wynn SG, Zanetta DMT. (1998) Population Biology, Evolution and Immunology of Vaccination and Vaccination Programs. *American Journal of Medical Sciences*, 315:76-86.
8. Golm, GT, Halloran, ME and Longini, IM. (1999) Validation sets for exposure to infection in HIV vaccine trials. Proceedings of the Epidemiology Section of the American Statistical Association, Dallas, August 1998.
9. Golm, GT and Halloran, ME (1998) Optimal sampling fractions and the mean score method for vaccine trials with mismeasured exposure information, Technical Report, Department of Biostatistics, Emory.
10. Halloran, ME. (2004) Statistics, biostatistics, and infectious disease. *Amstat News*, Invited President's Corner article, June, Issue 324, pp 2-3.

Books

1. Halloran, ME, Longini, IM, and Struchiner, CJ (2010) *Design and Analysis of Vaccine Studies*, Springer Verlag.

Edited Collections

1. *Statistics in Genetics*, (1999) eds. Halloran ME and Geisser, S. (IMA volumes in mathematics and its applications; vol.112). Springer Verlag, New York.
2. *Statistics in Epidemiology, Environmental Health and Clinical Trials*, (1999) eds. Halloran ME and Berry, D. (IMA volumes in mathematics and its applications; vol. 116). Springer Verlag, New York.

Book Chapters

1. Halloran ME. (1993) Concept and estimation of attributable risks in HIV epidemiologic research, in *Models and Methods of Epidemiologic Research on HIV Infection*, ed. Alfredo Nicolosi, Raven Press.
2. Halloran ME. (1996) Epidemiologic effects of varicella vaccination, in *Infectious Disease Clinics of North America*, ed. RW Ellis and CJ White. W.B. Saunders Co. **10**:631–655.
3. Halloran ME. (1998) Concepts of Infectious Disease Epidemiology, in *Modern Epidemiology*, ed. Rothman K and Greenland S, 2nd edition, Lippincott Raven Publishers.
4. Halloran ME. (2001) Concepts of Transmission and Dynamics, in *Epidemiologic Methods for the Study of Infectious Diseases*, ed. Thomas, J.C., Weber, D.J., Oxford University Press, Oxford, pp. 56-85.
5. Halloran ME. (2001) Overview of Study Design, *Epidemiologic Methods for the Study of Infectious Diseases*, ed. Thomas, J.C., Weber, D.J., Oxford University Press, Oxford, pp 86-115.
6. Saul, B, Hudgens MG, Halloran ME (2017) Causal Inference in the Study of Infectious Disease, *Handbook of Statistics*, in press.

Book Reviews

1. *Infectious Diseases of Humans*, by R.M. Anderson and R.M. May. in *Trends in Microbiology*, 1994.
2. *Bayesian Data Analysis*, by A. Gelman, J. Carlin, H. Stern, D. Rubin, and *Bayesian and Empirical Bayes Methods for Data Analysis*, by B. Carlin and T.A. Louis, (1997) *Journal of the American Statistical Association*, **92**:1640-1642.

Abstracts

1. T.Cuenco K, Halloran ME, Addiss DG, Streit TG, Lammie PJ. Familial clustering of lymphedema of the leg in a lymphatic filariasis-endemic area. Presented at the Meeting of the Society of Tropical Medical and Hygiene, Houston, November 2000.

Emory University School of Public Health: committees

1990–91	Chair, Ad hoc International Health Evaluation Committee
1991	Member, Search Committee for Director of the Center of International Health
1991–92	Member, Accreditation self-study committee for research
1991–92	Member, Search committee for two Biostatistics Associate Faculty
1992–93	Chair, Search committee for Infectious Disease Epidemiologist, Center for International Health
1992–93	Chair, Search committee for Director of the Division of Biostatistics
1992–93	Chair, Search committee for PhD Faculty (junior and senior), Division of Biostatistics
1993	Member, Search committee for Infectious Disease Epidemiologist, Center for International Health
1993	Member, Search committee for Director of the Division of Biostatistics
1994–97	Editor, Biostatistics Technical Report Series
1994–95	Chair, Biostatistics PhD Curriculum Revision
1995–96	Chair, Biostatistics PhD Review
1996	Member, School Accreditation Committee for Research
1997	Member, School Research Strategic Planning Committee
1996–2003	Member, Biostatistics Computing Committee
1996–1999	Member, School Appointment, Promotions, and Tenure Committee
1999–2002	Member, School Appointment, Promotions, and Tenure Professor Committee
1999–2000	Chair, Search committee for tenure-track faculty, Biostatistics
2000	Chair, Junior faculty review, Biostatistics
2002	Chair, Assistant and Associate Professor review, Biostatistics
2001–2002	Member, Search Committee for Chair of Epidemiology
2002–2004	Member, Search Committee for Chair of Biostatistics
2003–2005	Chair, Biostatistics Computing Advisory Committee
2003–2004	Chair, Biostatistics Ad hoc Committee on Student Financial Support
2004	Chair, Biostatistics Strategic Planning Retreat

Emory University School of Public Health: other service

1990	Author, Perspectives for Epidemiology and Biostatistics in the School of Public Health, Discussion paper for Departmental Faculty Retreat, June 1990.
1992	Advisor, Survey on Gender Issues
1992	Co-organizer, Faculty Discussion on Gender Issues

- 1991 Co-initiator and co-organizer, Meetings of the women faculty on gender issues
 1992 Coordinator, Biostatistics short course by Martin A. Tanner at Emory, 9/14–16.

Emory University service

- 1991–94 Member, Advisory Committee, Institute for Women’s Studies
 1990–91 Member, Emory /Carter Center Task Force
 1991 Initiator and organizer, Mini-conference on perspectives for research on vector-borne diseases at Emory, with Jose M.C. Ribeiro, January, 1991.
 1990–92 Initiator of invitation and organizer for visiting exhibit: The Value of the Human Being: Medicine in Germany 1915-1945.
 1992–93 Member, Search committee for two population biologists, Department of Biology
 1993–96 Member, New PhD Program development of Population Biology, Ecology, and Evolution, Graduate Division of Biological and Biomedical Sciences
 1995 Co-organizer, Emory Workshop on Population Biology, Evolution and Control of Infectious Diseases, February 22–23, 1995.
 1996–97 Chair, Provost’s University Committee to Review Statistics at Emory
 1998–2003 Executive Committee, Atlanta Area Vaccine Dinner Club
 1999–2003 Steering Committee to form Center for Disease Ecology
 2001–2002 Member, Search Committee Georgia Research Alliance Chair, Quantitative Genetics
 2002–2003 Emory Representative to Georgia Research Alliance Bioinformatics Cluster
 2001–2004 Emory representative to American Association of University Women (AAUW)

University of Washington service

- 2006–2012 Biostatistics Faculty Development Committee
 2012–present Biostatistics Committee on Summer Institutes

Active and continued grants

- 4/92-6/20 Principal investigator, National Institutes of Health, R01 AI032042:
 As of 10/2010: R37 AI032042 (MERIT Award)
 Methods for evaluating vaccine efficacy
 Direct costs (15–20): ~\$1,505,340. Indirect costs: ~\$1,066,000.
 Direct costs (10–15): ~\$1,400,000. Indirect costs: ~\$1,000,000.
 Direct costs (05–10): ~\$1,100,000. Indirect costs: ~\$710,000.
 Direct costs (99–05): \$897,584. Indirect costs: \$471,288.
 Direct costs (95–99): \$690,479. Indirect costs: \$393,573.
 Direct costs (92–95): \$298,162. Indirect costs: \$161,847.
- 9/14-7/19 Principal investigator, National Institutes of Health,
 U54 GM111274 MIDAS Center for Excellence:
 Center for Statistics and Quantitative Infectious Diseases
 Direct costs (14-19): ~\$8,000,000. Indirect costs: ~\$4,500,000.
- 12/09-11/19 Principal investigator, Subcontract, National Institutes of Health, R01 AI085073:
 Causal Inference for Infectious Disease Studies
 P.I. Michael Hudgens, UNC Chapel Hill
 Direct costs (subcontract) (09–19): \$430,000. Indirect costs: \$276,000.

3/10-2/19 Director, National Institutes of Health, R25 GM089694:
 Summer Institute in Statistics and Modeling in Infectious Diseases
 Biostatistics, University of Washington
 Direct costs (14–19): \$997,000. Indirect costs: \$79,760.
 Direct costs (10–14): \$720,000. Indirect costs: \$37,000.

Former grants and contracts

5/09-12/14 (MPI) Principal investigator, National Institutes of Health, U01 GM070749:
 Containing Bioterrorist and Emerging Infectious Diseases
 Direct costs (09–14): ~\$2,700,000. Indirect costs: ~\$.

3/07-6/09 Principal investigator, Bill and Melinda Gates Foundation, Contract 5485:
 Evaluating the BMGF Portfolio of New TB Drugs, Diagnostics and Vaccines
 Direct costs (07–09): \$509,663. Indirect costs: \$201,465.

7/05-6/10 Program Director, National Institutes of Health NIGMS T32 GM074909 (left 12/05):
 Biostatistics in Genetics, Immunology, and Neuroimaging
 Direct costs (05-06): \$179,684. Indirect costs: \$7,447.

4/05–11/05 Principal investigator, National Institutes of Health, R56 AI32042-A1:
 Methods for evaluating vaccine efficacy
 Direct costs (05–06): \$267,304. Indirect costs: \$123,233.

10/02-12/05 Core Director (Biostatistics), National Institutes of Health
 CFAR (PI Curran)
 Direct costs (year): \$97,650. Indirect costs: \$.

6/05-5/06 Awardee, Emory University, University Teaching Fund Award
 Course on Causal Inference, Direct costs (year): \$5,000.

10/92-8/03 Program Director, National Institutes of Health T32 AI07442:
 Statistical and Clinical Research Training on AIDS
 Direct costs (97–03): \$429,712. Indirect costs: \$34,377.
 Direct costs (92–97): \$334,635. Indirect costs: \$26,770.

10/03-9/04 Principal investigator, National Institutes of Health, 263-MD-306089:
 Analytic methods for determining smallpox control in response to a
 bioterrorist attack
 Direct costs: \$71,533. Indirect costs: \$26,467.

2/03-7/03 Principal investigator, National Institutes of Health, 263-MD-306089:
 Analytic methods for determining smallpox control in response to a
 bioterrorist attack
 Direct costs: \$71,533. Indirect costs: \$26,467.

12/01-5/02 University Teaching Fund Award, Emory University
 Analysis of Microarray Data
 Direct costs: \$8,000.

9/01-8/02 IPA Agreement, Centers for Disease Control, 01IP09659
 Evaluating Prophylactic Antivirals against Influenza
 Direct costs: \$43,645.

7/00-10/01 Principal investigator, National Institutes of Health, R13 CA91646:
 Conference on Causation, Statistics, and Applications
 Direct costs: \$99,000.

- 4/97-3/01 Principal investigator, National Institutes of Health, R01 AI40846:
 Design and analysis of HIV vaccine trials
 Direct costs (97–01): \$370,000. Indirect costs: \$182,000.
- 4/91-3/97 Principal Investigator, National Institutes of Health FIRST Award R29 AI31057:
 Study designs for malaria and other vector-borne disease
 Direct costs (92–97): \$336,087. Indirect costs: \$158,834.
- 7/94-7/96 Principal Investigator, National Science Foundation Career Advancement Award DMS-9410138:
 Foundations and Methods of Inference
 Direct costs: \$27,500. Indirect costs: \$2,500.
- 1997 University Teaching Fund Award, Emory University
 Developing a course in Statistical Computing
 Direct costs: \$4,900.
- 1997-8 University Research Fund Award, Emory University
 Estimating the Relation of Exposure to Malaria Infection to Immunity
 Direct costs: \$4,811.
- 11/91-3/92 Principal Investigator. Centers for Disease Control Contract 308MIM92
 Application of Mathematical Modeling of a Varicella Vaccination Program
 Direct costs: \$7,028. Indirect costs: \$2,811.
- 9/90-2/91 Principal Investigator. Centers for Disease Control Contract 434MIM90
 Mathematical Modeling of a Varicella Vaccination Program
 Direct costs: \$16,818. Indirect costs: \$1,682.

September 24, 2018