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CURRICULUM VITAE

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Education

University of Minnesota, Minneapolis, Minnesota: Ph.D., Biometry/Biomathematics- 1977

University of Florida, Gainesville, Florida: M.S., Statistics/Operations Research- 1973

University of Florida, Gainesville, Florida: B.S., Engineering/Operations Research- 1971

Research and/or Professional Experience

- 7/11- present Full Professor, Department of Biostatistics, Colleges of Public Health and Health Professions, and Medicine, University of Florida, Gainesville, FL
- 7/11- present Director, Center for Statistics and Quantitative Infectious Diseases (CSQUID), Emerging Pathogens Institute, University of Florida, Gainesville, FL
- 1/06- 6/11 Full Member, Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, WA.;
Full Professor of Biostatistics, Department of Biostatistics, School of Public Health, University of Washington, Seattle, WA.
- 1/06 – 6/11 Director, Mathematical Modeling for HIV/STD Research, Center for AIDS Research, University of Washington, Seattle, WA.
- 7/06 – 7/07 Ross Prentice Professor of Biostatistics, Department of Biostatistics, School of Public Health and Community Medicine, University of Washington, Seattle, WA.

9/88- 12/05	Full Professor of Biostatistics (9/92- 12/05), Associate Professor (9/88- 8/92), Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, Georgia
1/93- 7/93	Visiting Fellow, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, Cambridge, England
8/84- 8/88	Assistant Professor of Biometry, Department of Statistics and Biometry, Emory University, Atlanta, Georgia
9/82- 7/84	Assistant Research Scientist in Epidemiology, Department of Epidemiology, University of Michigan, Ann Arbor, Michigan
9/82- 6/83	Visiting Assistant Professor of Statistics, Department of Statistics, University of Michigan, Ann Arbor, Michigan
1/80- 06/82	Postdoctoral Research Scholar in Biometry and Epidemiology, Department of Epidemiology, University of Michigan, Ann Arbor, Michigan
8/77- 12/79	Assistant Professor of Statistics, Department of Information and Systems, Universidad del Valle, Cali, Colombia, South America
8/77- 12/79	Postdoctoral Associate, International Center for Medical Research and Training, Cali, Colombia, South America

Principal Areas of Interest

Biostatistics, stochastic processes, infectious disease epidemiology

Publications in Peer Review Literature

1. Hodgson, T.J., K.E. Kilpatrick, and I.M. Longini: An integer quadratic programming approach to scheduling multispecialty clinics," *AIIE Transactions*, **9**, 69-74 (1977).
2. Longini, I.M., Ackerman, E. and Elveback, L.R.: An optimization model for influenza A epidemics. *Mathematical Biosciences* **38**,141-157 (1978).
3. Longini, I.M.: A chain binomial model of endemicity. *Mathematical Biosciences* **50**, 85-93 (1980).
4. Longini, I.M. and Koopman, J.S.: Household and community transmission parameters from final distributions of infections in households. *Biometrics* **38**, 115-126 (1982).
5. Longini, I.M., Koopman, J., Monto, A.S. and Fox, J.P.: Estimating household and community transmission parameters for influenza. *American Journal of Epidemiology* **115**, 736-751 (1982).
6. Longini, I.M., Koopman, J. and Monto, A.S.: Estimation procedures for transmission parameters from influenza epidemics: Use of serological data. *Voprosy Virusologii*, **No. 2**, 176-181 (1983). (In Russian.)

7. Longini, I.M.: Models of epidemics and endemicity in genetically variable host populations. *Journal of Mathematical Biology* **17**, 289-304 (1983).
8. Monto, A.S., Koopman, J.S., Longini, I.M. and Isaacson, R.E.: The Tecumseh Study. XII. Enteric agents in the community. *Journal of Infectious Diseases* **148**, 284-291 (1983).
9. Longini, I.M., Monto, A.S. and Koopman, J.S.: Statistical procedures for estimating the community probability of illness in family studies: Rhinovirus and influenza. *International Journal of Epidemiology* **13**, 99-106 (1984).
10. Longini, I.M., Higgins, M.W., Hinton, P.C., Moll, P.P. and Keller, J.R.: Environmental and genetic sources of aggregation of blood pressure in Tecumseh, Michigan. *American Journal of Epidemiology* **120**, 131-144 (1984).
11. Higgins, M.W. and Longini, I.M.: Discussion: The Tecumseh Community Health Study, in *Genetic Epidemiology of Coronary Heart Disease* (eds. D.C. Rao, R.C. Elston, L.H. Kuller, M. Feinleib, C. Carter, R. Havlik) Alan Liss, NY, 43-45 (1984).
12. Longini, I.M., Seaholm, S.K., Ackerman, E., Koopman, J.S. and Monto, A.S.: Simulation studies of influenza epidemics: Assessment of parameter estimation and sensitivity. *International Journal of Epidemiology* **13**, 496-501 (1984).
13. Longini, I.M., Higgins, M.W., Hinton, P.C., Moll, P.P. and Keller, J.R.: Genetic and environmental sources of aggregation of body mass in Tecumseh, Michigan. *Human Biology* **56**, 733-757 (1984).
14. Longini, I.M.: Models of the interaction of host genotypes and infectious disease. *Lecture Notes in Biomathematics* **57** (ed. V. Capasso). Springer-Verlag, New York, 158-163 (1985).
15. Monto, A.S., Koopman, J.S. and Longini, I.M.: The Tecumseh study of illness. XII. Influenza infection and disease, 1976-1981. *American Journal of Epidemiology* **121**, 811-822 (1985).
16. Rvachev, L.A. and Longini, I.M.: A mathematical model for the global spread of influenza. *Mathematical Biosciences*, 75:3 22 (1985).
17. Longini, I.M.: Modeling influenza epidemics, in *Options for the Control of Influenza, UCLA Symposia on Molecular and Cellular Biology, New Series, Volume 36* (eds. A.P. Kendal and P.A. Patriarca) Alan Liss, NY, 89-105 (1986).
18. Longini, I.M., Fine P.E.M. and Thacker, S.B.: Predicting the global spread of new infectious agents. *American Journal of Epidemiology* **123**, 383-391 (1986).
19. Longini, I.M.: The discrete-time general epidemic model: a synthesis. *Mathematical Biosciences* **81**, 19-41 (1986).
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21. Gomez, H., Koopman, J.S., Addy, C.L., Zarate, M.L., Vaca, M.A., Longini, I.M., *et al.*: Dengue epidemics on the pacific coast of Mexico. *International Journal of Epidemiology* **17**, 178-186 (1988).

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24. Longini, I.M. and Monto, A.S.: Efficacy of virucidal nasal tissue in interrupting familial transmission of respiratory agents: a field trial in Tecumseh, Michigan. *American Journal of Epidemiology* **128**, 639-644 (1988).
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34. Longini, I.M., Haber, M.J. and Halloran, M.E.: Direct and indirect effects of vaccines: A note on the estimation of vaccine efficacy from outbreaks of acute infectious agents. *Boletin Medico Del Hospital Infantil de Mexico* **47**, 516-519 (1990). (In Spanish.)
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1. Koepke AA, Longini IM, Halloran ME, Wakefield J, Minin VN: Predictive modeling of cholera outbreaks in Bangladesh. *Annals of Applied Statistics* (Under revision).

2. Sack RB, Siddique AK, Sack DA, Troeger C, Alam M, Iqbal A, Islam MN, Longini IM, Nizam A, Chao DL, Huq A, Morris LD, Stine OC, Colwell RR: The epidemiology of cholera in Bangladesh: Results of surveillance over 16 years in five rural communities. *Lancet* (Submitted).
3. Antia R, Regoes R, Bergstrom C, Johnson P, Longini IM: How will different intervention strategies affect the evolution of the Ebola Virus? *PLoS Comp Biol* (Submitted).
4. Kirpich A, Weppelmann TA, Yang Y, Ali A, Morris JG, Longini IM: Cholera transmission in the Ouest region of Haiti: Dynamic modeling and prediction. *PLoS Neglected Tropical Diseases* (Under revision).
5. Park JK, Mogasale V, Edmunds WJ, Chao DL, Lee JS, Matrajt L, Ochiai RL, Maskery B, Longini IM: A dynamic transmission model to predict the effectiveness of vi-conjugate vaccine in medium and high endemic settings. (In preparation).
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AIDS Epidemiology: A Quantitative Approach. Brookmeyer, R. and Gail, M.H., Oxford University Press, New York, 1994: in *Science* **265**, 1602-1603 (1994).

Service

Member of the Data Safety Monitoring Board for an open label post licensure trial to evaluate the safety and immunogenicity of indigenously manufactured killed bivalent (O1 and O139) whole cell oral cholera vaccine (Shanchol™), International Vaccine Institute.

Awards and Honors

CDC Statistical Science Award "Best Theoretical Paper" published in 1994. Satten, G.A. and Longini, I.M.: Estimation of incidence of HIV infection using cross-sectional marker surveys. *Biometrics* **50**, 675-688 (1994).

CDC James H. Nakano Citation "for an outstanding scientific paper published in 1994." Mastro, T.D., Satten, G.A., Nopkesorn, T., Sangkharomya, S. and Longini, I.M.: Probability of female-to-male transmission of HIV-1 in Thailand. *Lancet* **343**, 204-207 (1994).

Howard M. Temin Award in Epidemiology for Scientific Excellence in the Fight Against HIV/AIDS (1995) for the article: Jacquez, J.A., Koopman, J.S., Simon, C.P. and Longini, I.M.: The role of primary infection in the epidemics of HIV infection in gay cohorts. *Journal of AIDS* **7**, 1169-1184 (1994).

Elected Fellow of the American Statistical Association, 1995

CDC Statistical Science Award "Best Applied Paper" published in 1996. Satten, G.A. and Longini, I.M.: "Markov chains with measurement error: estimating the "true" course of a marker of HIV disease progression (with discussion)". *Applied Statistics* **45**, 275-309 (1996).

Elected Fellow of the American Association for the Advancement of Science (AAAS), 2012

Ph. D. Students and Post-Doc

Chaired Ph.D. Committee for 11 successful candidates
Chaired M.S. Committee for 3 successful masters candidates
Currently advising 3 Ph.D. students

Advised 7 Post Docs

Current Funding

“Methods for Evaluating Vaccine Efficacy” National Institute of Allergy and Infectious Diseases, N.I.H., Investigator.

“Containing Bioterrorist and Emerging Infectious Diseases: Models of Infectious Disease Agent Studies (MIDAS)” National Institute of General Medical Sciences, N.I.H., Principal Investigator.

“Epidemiology and Ecology of *Vibrio Cholerae* in Bangladesh” National Institute of Allergy and Infectious Diseases, N.I.H., Investigator.

“Cholera Transmission in Gressier Region, Haiti” National Institute of Allergy and Infectious Diseases, N.I.H., Investigator.

“Development and Testing of Dengue Vaccines” Dengue Vaccine Initiative, Bill and Melinda Gates Foundation and the International Vaccine Institute, Investigator.

“Mathematical Models for the Optimal Control of Cholera with Vaccine” Bill and Melinda Gates Foundation, Investigator

“Epidemiological studies for the introduction of dengue vaccine into the Yucatan, Mexico” Sanofi Pasteur, Investigator

“Design, analysis and implementation of Ebola vaccine studies in West Africa” World Health Organization, Principal Investigator.