Jon Wakefield

Professor, Departments of Statistics and Biostatistics, University of Washington, jonno@uw.edu
January 2025

Education

- University of Nottingham, Nottingham, Ph.D., 1992
- University of Nottingham, Nottingham, B.Sc. (Honors), Mathematics with Statistics, 1985

Positions

- Adjunct Professor, Department of Health Metrics Sciences, University of Washington, September 2019-present.
- Acting Chair, Department of Statistics, University of Washington, September 2014-December 2015.
- Chair, Department of Statistics, University of Washington, June 2010-August 2011.
- Acting Chair, Department of Statistics, University of Washington, November 2009-June 2010.
- Professor, Departments of Statistics and Biostatistics, University of Washington, 2002-present.
- Associate Professor, Departments of Statistics and Biostatistics, University of Washington,1999-2002.
- Reader, Department of Epidemiology and Public Health, Imperial College of Science, Technology and Medicine, London, June-September 1999.
- Senior Lecturer in Statistics, Department of Epidemiology and Public Health, Imperial College of Science, Technology and Medicine, London, April 1996-1999.
- Lecturer, Mathematics Department, Imperial College of Science, Technology, and Medicine, London, 1990-1995.
- Lecturer, Mathematics Department, University of Nottingham, 1989-1990.

Other Positions

- Member of the WHO-DESA Technical Advisory Group on COVID-19 Mortality Assessment.
- Member of the Technical Advisory Group of the United Nations Inter-agency Group for Child Mortality Estimation (IGME).
- Research Affiliate, Center for Statistics and the Social Sciences (CSSS).
- Department of Statistics, M.S. Adviser. September 2013-August 2015, September 2020-present.

Previous Positions

- Training Director, Center for Studies in Demography and Ecology (CSDE). September 2018-August 2020.
- Former Member of the Technical Advisory Group of the United Nations Core Stillbirth Estimation Group (CSEG).
- Member of the National Academies of Sciences, Engineering and Medicine Committee on Applied and Theoretical Statistics (CATS).
- Former Member of the Technical Advisory Group of the United Nations Maternal Mortality Estimation Inter-agency Group (MMIEG).

Honors

- Fellow of the American Statistical Association, 2007

- The Guy Medal in Bronze, The Royal Statistical Society, 2000

Books

- Wakefield, J.C. (2013). *Bayesian and Frequentist Regression Methods.* Springer.
- Elliott, P., Wakefield, J., Best, N.G. and Briggs, D. (2000). *Spatial Epidemiology: Methods and Applications.* Oxford University Press.

Selected Peer-Reviewed Publications: PhD Students and Post Docs in Bold

1. Wakefield J, **Gao P**, Fuglstad G-A and Li ZR and (2024). The two cultures for prevalence mapping: small area estimation and geostatistics. To appear. *Statistical Science*.
2. **Michal V,** Wakefield J, Schmidt AM, Cavanaugh A, Robinson B and Baumgartner J (2024). Model-based prediction for small domains using covariates: a comparison of four methods. *Journal of Survey Statistics and Methodology,* 12, 1489-1514.
3. Boerma T**, …** Wakefield J (2025). Tracking progress in reproductive, maternal, newborn, child and adolescent health and nutrition: the Countdown to 2030 for Women's, Children's and Adolescents' Health. *The Lancet*.
4. Li ZR, **Martin BD, Dong TQ**, Fuglstad G-A**, Paige J**, Riebler A, Clark S and Wakefield J (2024). Space-Time Smoothing of Survey Outcomes using the R Package SUMMER. To appear, *The R Journal*.
5. Wakefield J and **Knutson, V** (2024). Excess mortality estimation. *Annual Review of Statistics and Its Application*, 12.
6. **Aleshin-Guendel S** and Wakefield J (2024). Adaptive Gaussian Markov random fields for child mortality estimation. *Biostatistics*. Published August 5, 2024.
7. **Gascoigne C**, Smith T, **Paige J** and Wakefield J (2023). Estimating subnational under-five mortality rates using a spatio-temporal age-period-cohort model. *Spatial and Spatio-temporal Epidemiology,* 52.
8. **Gao PA** and Wakefield J (2024). Smoothed model-assisted small area estimation. *Canadian Journal of Statistics*, 52, 337-358.
9. **Paige J,** Fuglstad G-A, Riebler A and Wakefield J (2024). Spatial aggregation with respect to a population distribution: impact on inference. *Spatial Statistics.* Available online.
10. **Gao PA** and Wakefield J (2024). A spatial variance-smoothing area level model for small area estimation of demographic rates*. International Statistical Review*. To appear.
11. **Goldstein I**, Wakefield J and Minin V (2022). Incorporating testing volume into estimation of effective reproduction number dynamics. *Journal of the Royal Statistical Society, Series A*, 187, 436-453.
12. **Rane M,** Wakefield J, Rohani P, Halloran E (2022). Association between pertussis vaccination coverage and other sociodemographic factors and pertussis incidence using surveillance data. *Epidemics*. To appear.
13. **Allorant A**, Fullman N, Leslie HH,Sarr M, Gueye D, Eliakimu E, Wakefield J, Dieleman JL, Pigott D, Puttkammer N, Reiner RC (2023). A small area model to assess temporal trends and sub-national disparities in healthcare quality. *Nature Communications*, 14, 4555.
14. **Allorant A**, Fullman N, Leslie HH, Eliakimu E, Wakefield J, Dieleman JL, Pigott D, Puttkammer N, Reiner RC (2022). A methodological framework to assess temporal and sub-national disparities in healthcare quality metrics using facility surveys. *Nature Communications*. To appear.
15. **Okonek T** and Wakefield J (2024). A computationally efficient approach to fully Bayesian benchmarking. *Journal of Official Statistics*, 40, 283-316.
16. **Peterson E**, Nethrey RC, Padellini T, Chen JT, Coull BA, Piel FB, Wakefield J, Blangiardo M and Waller L (2024). A Bayesian hierarchical small area population model accounting for data source specific methodologies from American Community Survey, population estimates program and decennial census data. Annals of Applied Statistics. To appear.
17. **Wu Y** and Wakefield J (2024). Modeling urban/rural fractions and low- and middle-income countries. Journal of the Royal Statistical Society, Series A. To appear.

18. **Knutson V, Aleshin-Guendel S**, Karlinsky A, Msemburi W and Wakefield J (2023). Estimating global and country-specific excess mortality during the COVID-19 pandemic. *Annals of Applied Statistics*, 17, 1353-1374.
19. Msemburi W, Karlinsky A**, Knutson V, Aleshin-Guendel S**, Chatterji S and Wakefield J (2023). Estimates of the excess mortality associated with the COVID-19 pandemic from the World Health Organization. *Nature,* 613, 130-137.
20. **Meisner J,** Kato A, Lemerani MM, Miaka EM, Ismail AT, Wakefield J, Rowhani-Rabhar A, Pigott DM, Mayer JD and Rabinowitz PM (2023). Does a one health approach to human African trypanosomiasis control hasten elimination? A stochastic compartmental modeling approach. *Acta Tropica*, 240, 106804.
21. Augusto O, Roberton T, Fernandes Q, Chicumbe S, Manhica I, Tembe S, Wagenaar BH, Anselmi L, Wakefield J and Sherr K (2023). Early effects of COVID-19 on maternal and child health service disruption in Mozambique. *Frontiers in Public Health,* published on-line April 17, 2023.
22. **Hsiao Y**, Fiorio L, Wakefield J and Zagheni E (2023). Modeling the bias of digital data: An approach to combining digital with official statistics to estimate and predict migration trends. *Sociological Methods and Research*, https://doi.org/10.1177/00491241221140144.
23. **Meisner J,** Kato A, Lemerani MM, Miaka EM, Taban AI, Wakefield J, Rowhani-Rabhar A, Pigott DM, Mayer JD and Rabinowitz PM (2023). Livestock, pathogens, vectors and their environment: A causal inference-based approach to estimating the pathway-specific effect of livestock on human African trypanosomiasis risk. PLOS Global Public Health. Published November 15.
24. **Meisner J,** Kato A, Lemerani MM, Miaka EM, Taban AI, Wakefield J, Rowhani-Rabhar A, Pigott DM, Mayer JD and Rabinowitz PM (2022). The effect of livestock density on Trypanosoma brucei gambiense and T.b. rhodesiense: A causal inference-based approach. PLOS Neglected Tropical Diseases. Published, August 29, 2022.
25. **Meisner J,** Kato A, Lemerani MM, Miaka EM, Taban AI, Wakefield J, Rowhani-Rabhar A, Pigott DM, Mayer JD and Rabinowitz PM (2022). A time-series approach to mapping livestock density using household survey data. *Nature Scientific Reports*, 12, 13310.
26. Wang Z, **Fix M,** Hug L, Mishra A, You D, Blencowe H, Wakefield J and Alkema L (2022). Estimating the stillbirth rate for 195 countries using a Bayesian sparse regression model with temporal smoothing. *Annals of Applied Statistics*, 16, 2101-2121.
27. **Gao P** and Wakefield J (2023). Smoothed model-assisted small area estimation of proportions. To appear, *The Canadian Journal of Statistics*.
28. **Paige J,** Fuglstad G-A, Riebler A and Wakefield J (2022). Spatial aggregation with respect to a population distribution: impact on inference. *Spatial Statistics*, 52, 100714.
29. **Osgood-Zimmerman A** and Wakefield J (2023). A statistical review of template model builder: a flexible tool for spatial modeling. *International Statistical Review*, Published on-line: 18 December 2022.
30. **Wilson KL** and Wakefield J (2022). A probabilistic model for analyzing summary birth history data. *Demographic Research*, 47, 291-344.
31. **Schumacher A**, McCormick T, Wakefield J, Chu Y, Perin J, Villavicenio F, Simon N and Liu L (2022). A flexible Bayesian framework to estimate age- and cause-specific child mortality over time from sample registration data. *Annals of Applied Statistics*, 16, 124-143.
32. Hughes JP, **Williamson BD, Krakauer C, Chau G, Ortiz B**, Wakefield J, Hendrix C, Amico KR, Holtz TH, Bekker L-G and Grant R (2022). Combining information to estimate adherence in studies of pre-exposure prophylaxis for HIV prevention: application to HPTN 067. *Statistics in Medicine,* 41, 1120-1136.
33. **Paige J,** Fuglstad G-A, Riebler A and Wakefield J (2022). Bayesian Multiresolution Modeling of Georeferenced Data: An Extension of `LatticeKrig'. *Computational Statistics and Data Analysis,* 173, 107503.

34. Turner AN, Kline D, Norris AH, Phillips WG, Root E, Wakefield J, Li Z, Lemeshow S, Spahnie M, Luff A, Chu Y, Francis MK, Gallo MF, Chakraborty P, Lindstrom M, Lozanski G, Miller W, Clark S (2022). Prevalence of current and past COVID-19 in Ohio adults. *Annals of Epidemiology.* 67, 50-60.
35. Kline D, Li Z, Chu Y, Wakefield J, Miller WC, Turner AN and Clark S (2022). Estimating seroprevalence of SARS-CoV-2 in Ohio: A Bayesian multilevel poststratification approach with multiple diagnostic tests. *PNAS.*, 118, e2023947118.
36. **Aleshin-Guendel S**, Sadinle M and Wakefield J (2022). The central role of the identifying assumptions for population size estimation (with discussion). To appear, *Biometrics.*
37. **Dong TQ** and Wakefield J (2021). Space-time smoothing models for subnational measles routine immunization coverage estimation with complex survey data. *Annals of Applied Statistics*, 15, 1959-1979.
38. **Dong T** and Wakefield J (2021). Modeling and presentation of vaccine coverage estimates using data from household surveys. *Vaccine,* 39, 2584-2594.
39. **Wu Y,** Li ZR, Mayala BK, Wang H, **Gao P, Paige J,** Fuglstad G-A, **Moe C, Godwin J,** Donohue RE, Croft TN and Wakefield J (2021). Spatial modeling for subnational administrative level 2 small-area estimation. *DHS Spatial Analysis Reports No. 21*. Rockville, Maryland, USA.
40. **Fintzi J**, Wakefield J and Minin V (2021). A linear noise approximation for stochastic epidemic models fit to partially observed incidence counts. *Biometrics,* 78, 1530-1541.
41. Hug L, You D, Blencowe H, Mishra A, Wang Z, Fix M, Wakefield J, Moran AC, Gaigbe-Togbe V, Suzuki E, Blau DM, Cousens S, Creanga A, Croft T, Hill K, Joseph KS, Maswime S, MCClure EM, Pattinson R, Pedersen J, Smith LK, Zeirline J and Alkema L (2021). Global, regional, and national estimates and trends in stillbirths from 2000 to 2019: a systematic assessment. *The Lancet.* 398, 722-785.
42. Eaton JW, ..., **Okonek T,** …, Wakefield J, ..., Shiraishi RW (2021). Naomi: a new modelling tool for estimating HIV epidemic indicators at the district level in sub-Saharan Africa. *Journal of the International AIDS Society.* Publihed online 21 September 2021.
43. **Wilson K** and Wakefield J (2022). Estimation of health and demographic indicators with incomplete geographic information. *Spatial and Spatio-Temporal Epidemiology*. 37, 100421.
44. **Marquez N** and Wakefield J (2022). Harmonizing child mortality data at disparate geographic levels. To appear, *Statistical Methods in Medical Research*. 30, https://doi.org/10.1177/0962280220988742
45. **Sbarra A,** …, Wakefield J, …, Mosser J (2020). Mapping routine measles vaccination in low- and middle-income countries. *Nature,* 589, 415-419.
46. **Firth C,** Carlini B, Dilley J, Wakefield J and Hajat A (2020). What about equity? Neighborhood deprivation and cannabis retailers in Portland, Oregon. *Cannabis*, 3, 157-172.
47. **Godwin J** and Wakefield J (2020). Space-time modeling of child mortality at the admin-2 level in a low- and middle-income countries context. *Statistics in Medicine*, 40, 1593-1638.
48. Wakefield J, **Okonek T** and Pedersen J (2020). Small area estimation for disease prevalence mapping. *International Statistical Review*, 88, 398-418**.**
49. **Wilson K** and Wakefield J (2020). Child mortality estimation incorporating summary birth history. *Biometrics*, 77, 1456-1466.
50. **Paige J,** Fuglstad G-A, Riebler A and Wakefield J (2020). Design- and model-based approaches to small-area estimation in a low- and middle-income country context: comparisons and recommendations. *Journal of Survey Statistics and Methodology*. Published online 4 September 2020.
51. **Fisher L** and Wakefield J (2020). Ecological inference for infectious disease data, with application to vaccination strategies. *Statistics in Medicine*, 39, 220-238.
52. **Wilson K** and Wakefield J (2018). Pointless spatial modeling. *Biostatistics*. 21, e17-e32.
53. Liang P, Mayer J, Wakefield J, Chau T-S, Kwon S, Scott S and Ko C (2020). Trends in Sociodemographic Disparities in Colorectal Cancer Staging and Survival: A SEER–Medicare Analysis. Published: January 22, 2020. *Clinical and Translational Gastronenterology*, 11, e00155.

54. **Li Z, Hsiao Y, Godwin J, Martin B,** Wakefield J and Clark S (2019). Changes in the spatial distribution of the under-five mortality rate: small-area analysis of 122 DHS surveys in 262 subregions of 35 countries in Africa. *PLOS ONE*, 14, e0210645.
55. Wakefield J, Fuglstad G-A, Riebler A**, Godwin J, Wilson K** and Clark SJ (2019). Estimating under five mortality in space and time in a developing world context. *Statistical Methods in Medical Research*, 28, 2614-2634.
56. **Tarr GAM**, Shringi S, Phipps A, Besser TE, Mayer J, Oltean HN, Wakefield J, Tarr PI and Rabinowitz P (2018). Importance of case age in the purported association between phylogenetics and hemolytic uremic syndrome in escherichia coli O157:H7 infections. *Epidemiology and Infection*, 146, 1550-1555.
57. **Cohen-Cline H,** Beresford SAA, Barrington W, Matsueda R, Wakefield J and Duncan GE (2018). Associations between neighborhood characteristics and depression: a twin study. *Journal of Epidemiology and Community Health*, 72, 202-207.
58. **Bauer C** and Wakefield J (2018). Stratified space-time infectious disease modeling: with an application to hand, foot and mouth disease in China. *Journal of the Royal Statistical Society, Series A*, 67, 1379-1398.
59. **Tarr GAM**, Shringi S, Phipps AI, Besser TE, Mayer J, Oltean HN, Wakefield J, Tarr PI and Rabinowitz P (2018). Geogenomic Segregation and Temporal Trends of Human Pathogenic Escherichia coli O157:H7, Washington, USA, 2005-2014. *Emerging Infectious Diseases*, 24, 32-39.
60. **Cohen-Cline H,** Beresford SA, Barrington W, Matsueda R, Wakefield J and Duncan GE (2018). Associations between social capital and depression: A study of adult twins*. Health and Place*, 50, 162-167.
61. **McCoy RC,** Wakefield J and Akey JM (2017). Impacts of Neanderthal-Introgressed Sequences on the Landscape of Human Gene Expression. *Cell*, 168, 916-927.
62. Fintzi J, Wakefield J and Minin V (2016). Efficient Data Augmentation for Fitting Stochastic Epidemic Models to Prevalence Data. *Journal of Statistical Computing*, 26, 918-929.
63. **Psoter KJ**, DeRoos AJ, Wakefield J, Mayer J and Rosenfeld M (2017). Air pollution exposure is associated with MRSA acquisition in young U.S. children with cystic fibrosis. *BMC Pulmonary Medicine*, 17, 106.
64. **Psoter KJ**, DeRoos AJ, Wakefield J, Mayer J and Rosenfeld M (2017). Seasonality of acquisition of respiratory bacterial pathogens in young children with cystic fibrosis. *BMC Infectious Diseases*, 17, 411.
65. **Fisher L,** Wakefield J, Bauer C and Self S (2016). Time Series Modeling of Pathogen-Specific Disease Probabilities with Incomplete Data. *Biometrics,* 73, 283-293.
66. **Smith TR** and Wakefield J (2016). A review and comparison of age-period-cohort models for cancer incidence. *Statistical Science*, 31, 591-610.
67. **Koepke AA,** Longini IM, Halloran ME, Wakefield J and Minin VN (2015). Predictive modeling of cholera outbreaks in Bangladesh. *Annals of Applied Statistics*, 10, 575-592.
68. **Vernot B,** Tucci S, Kelso J, Schraiber J, Wolf AB, Gittelman RM, Dannemann M, Grote S, McCoy RC, Norton H, Scheinfeldt LB, Merriwether DA, Koki G, Friedlaender JS, Wakefield J, Paabo S and Akey JM (2016). Excavating Neandertal and Denisovan DNA from the genomes of Melanesian individuals. *Science*, 352, 235-239.
69. **Psoter KJ**, DeRoos AJ, Mayer J, Wakefield J, Bryan M and Rosenfeld M (2016). Association of environmental factors and risk of initial *Pseudomonas aeruginosa* acquisition in young children with cystic fibrosis. *Epidemiology and Infection*, 144, 1075-83.
70. **Kim A** and Wakefield J (2016). Bayesian Method for Cluster Detection with Application to Five Cancer Sites in Puget Sound. *Epidemiology*, 27, 347-55.
71. **Mercer L,** Wakefield J, Pantazis A, Lutambi A, Masanja H and Clark S (2016). Small Area Estimation of Child Mortality in the Absence of Vital Registration. *Annals of Applied Statistics*, 9, 1889-1905.

72. **Akullian** A, Ng'eno E, Matheson AI, Macharia D, Leonard C, Bigogo G, Stewart G, Walson J, Wakefield J and Montgomery JM (2015). Environmental transmission of typhoid fever in an urban slum. *PLOS Neglected Tropical Diseases*, 9, e9994212.
73. **Schaafsma T**, Wakefield J, Hanisch R, Bray F, Schuz J, Joy EJM, Watts MJ and McCormack V (2015). Micronutrient intake and the African esophageal cancer belt - ecological insights. *PLOS ONE*, 10, e0140107.
74. **Psoter KJ**, DeRoos AJ, Kaufman JD, Mayer JD, Wakefield J and Rosenfeld M (2015). Fine particulate matter exposure and initial *Pseudomonas aeruginosa* acquisition in cystic fibrosis. *Annals of the American Thoracic Society*, 12, 385-91.
75. **Ross ME** and Wakefield J (2015). Bayesian hierarchical models for smoothing in two-phase studies, with application to small area estimation. *Journal of the Royal Statistical Society, Series A,* 178, 1009-1023.
76. **Smith T,** Wakefield J and Dobra A (2015). Restricted covariance priors with application in spatial statistics. *Bayesian Analysis,* 10, 965-990.
77. **Chen C,** Wakefield J, Self S and Rue H (2016). Bayesian penalized spline models for the analysis of spatio-temporal count data. *Statistics in Medicine*, 35, 1848-1865.
78. **Andrie JM**, Wakefield J and Akey JM (2014). Heritable variation of mRNA decay rates in yeast. *Genome Research,* 24, 2000-2010.
79. **Chen C,** Wakefield J and Lumley T (2014). The use of sampling weights in Bayesian hierarchical models for small area estimation. *Spatial and Spatio-temporal Epidemiology,* 11, 33-43.
80. **Akullian A**, Kohler P, Kinuthia J, Laserson K, Mills LA, Okanda J, Olilo G, Ombo M, Odhiambo F, Rao D, Wakefield J and John-Stewart G (2014). Geographic distribution of HIV stigma among women of childbearing age in rural Kenya. *AIDS*, 28, 1665-1672.
81. **Mercer L,** Wakefield J, Chen C and Lumley T (2014). A Comparison of spatial smoothing weighting methods for small area estimation. *Spatial Statistics*, 8, 69-85.
82. **Connelly CF,** Wakefield J and Akey JM (2014). Evolution and genetic architecture of chromatin accessibility and function in yeast. *PLOS Genetics*, 10, e1004427.
83. **Psoter K**, Rosenfeld M, DeRoos AJ, Mayer JD and Wakefield J (2014). Differential geographical risk of initial Pseudomonas aeruginosa acquisition in young U.S. children with cystic fibrosis. *American Journal of Epidemiology*, 179, 1503-1513.
84. **Glynn A** and Wakefield J (2014). Alleviating ecological bias in Poisson models using optimal subsampling: The effects of Jim Crow on black illiteracy in the Robinson data. *Sociological Methodology,* 44, 159-184.
85. **Psoter KJ,** de Roos AJ Wakefield J, Mayer JD and Rosenfeld M (2013). Season is associated with Pseudomonas aeruginosa acquisition in young children with cystic fibrosis. *Clinical Microbiology and Infection,* 19, E483-E489.
86. **Zheng Z,** Shen J, Cox C, Wakefield JC, Ehm MG, Nelson MR and Weir BS (2013). HIBAG - HLA genotype imputation with attribute bagging. *The Pharmacogenomics Journal*, 14, 192-200.
87. **Shaddick G**, Lee D and Wakefield J (2013). Ecological bias in studies of the short-term effects of air pollution on health. *International Journal of Applied Earth Observation and Geoinformation*, 22, 65-74.
88. Wakefield J and **Kim A** (2013). A Bayesian model for cluster detection. *Biostatistics,* 14, 752-765.
89. **Ross ME** and Wakefield JC (2013). Bayesian inference for two-phase studies with categorical covariates. *Biometrics,* 69, 469-477.
90. Wakefield J (2012). Genome-wide significance thresholds via Bayes factors. *International Journal of Epidemiology*, 41, 286-291.
91. **Fong Y,** Wakefield J, De Rosa S and Frahm N (2012). A robust Bayesian random effects model for nonlinear calibration problems. *Biometrics,* 68, 1103-1112.

92. **De Vocht F** and Cherry N and Wakefield J (2012). A Bayesian mixture modeling approach for assessing the effects of correlated exposures in case-control studies. *Journal of Exposure Science and Environmental Epidemiology,* 22, 352-360.
93. **Fong Y,** Wakefield J and Rice K (2012). An efficient Markov chain Monte Carlo method for mixture models by neighborhood pruning. *Journal of Computational and Graphical Statistics*, 21, 197-216.
94. **Skelly DA,** Johansson M Madeoy J, Wakefield J and Akey JM (2012). A powerful and flexible statistical framework for testing hypotheses of allele-specific gene expression from RNA-Seq data. *Genome Research*, 21, 1728-1737.
95. Wang Y, Feng Z, Yang Y, Self S, Gao Y, Longini IM, Wakefield J, Zhang J, Wang L, Chen C, Yao L, **Stanaway JD,** Wang Z and Yang W (2012). Hand, foot and mouth disease in China: patterns of spread and transmissibility during 2008-2009. *Epidemiology,* 22, 781-792.
96. Wakefield J, **Haneuse S,** Dobra A and **Teeple E** (2011). Bayes computation for ecological inference. *Statistics in Medicine*, 30, 1381-1396
97. **Ross ME,** Wakefield J, Davis S and De Roos AJ (2010). Spatial clustering of myelodysplastic syndromes (MDS) in the Seattle-Puget sound region of Washington State. *Cancer Causes Control*, 21, 829-838.
98. **Glynn A** and Wakefield J (2010). Ecological inference in the social sciences. *Statistical Methodology*, 7, 307-322.
99. **Fong Y,** Rue H and Wakefield J (2010). Bayesian inference for generalized linear mixed models. *Biostatistics*, 11, 397-412.
100. **Fong Y,** Wakefield J and Rice K (2010). Bayesian mixture modeling using a hybrid sampler with application to protein subfamily identification. *Biostatistics*, 11, 18-33.
101. Wakefield J**, de Vocht F** and Hung RJ (2010). Bayesian mixture modeling of gene-environment and gene-gene interactions. *Genetic Epidemiology*, 34, 16-25.
102. **Islami F,** Malekshah AF, Kimiagar M, Pourshams A, Wakefield J, Goglani G, Rakhshani N, Nasrollahzadeh D, Salahi R, Semnani et al. (2009). Patterns of food and nutrient consumption in Northern Iran, a high-risk area for esophageal cancer. *Nutrition and Cancer*, 61, 475-483.

Submitted and Under Review: PhD Students and Post Docs in Bold

1. **Dong Q, Wu Y,** Li, ZR, Wakefield, J (2024). Toward a principled workflow for prevalence mapping using household survey data. Under Revision,
2. McGovern A, Wilson K and Wakefield J (2024). Direct-assisted Bayesian unit-level modeling for small area estimation of rare event prevalence. Under revision.
3. **Gao PA** and Wakefield J (2024). Pseudo-Bayesian unit level modeling for small area estimation under informative sampling. Submitted.
4. **Jiang AZ** and Wakefield J (2023). BART-SIMP: a novel framework for flexible spatial covariate modeling and prediction using Bayesian additive regression trees. Submitted.
5. **Osgood-Zimmermann A, Mercer L,** Ferlay J, Plummer M, Bray and Wakefield J (2023). Joint modeling of cancer incidence and mortality: Estimating rates of breast cancer in Europe. Under revision.
6. **Dong TQ** and Wakefield J (2020). Estimating efficacy of measles supplementary immunization activities via discrete-time modeling of disease incidence time series. Under revision. https://arxiv.org/abs/2010.08875
7. **Okonek T,** Wilson K and Wakefield J (2024). A pseudolikelihood approach to under-five mortality estimation. Submitted.
8. **Cheng S**, Wakefield J and Shojaie A (2023). A penalized Poisson likelihood approach to high-dimensional semi-parametric inference for doubly-stochastic point processes. Under revision.

9. Luis DJ, Lomelli M, Ngo MN, Wakefield, J Shahbaba B and Minin V (2022). Statistical implications of relaxing the homogeneous mixing assumption in time series Susceptible-Infectious-Removed models. Submitted. https://arxiv.org/abs/2112.03186
10. **Sutton A**, Almquist Z and Wakefield J (2025), Evaluating multilevel regression and poststratification with spatial priors with a big data behavioral survey. Submitted.
11. **Dharamshi A,** Gao P and Wakefield J (2025). Exact variance estimation for model-assisted survey estimators using U- and V- statistics. Submitted.
12. **Wu Y, Dharamshi A** and Wakefield J (2025). Small area estimation of education levels in low- and middle-income countries. Submitted.

Full list of publications can be found at http://faculty.washington.edu/jonno/research.html

PhD Students

1. Ameer Dharamshi, Department of Biostatistics, University of Washington (current). Co-advised with Daniela Witten.
2. Katie Paulson, Department of Biostatistics, University of Washington (current).
3. Alana McGovern, Department of Statistics, University of Washington (current).
4. Victoria Knutson, Department of Biostatistics, University of Washington (current).
5. Ziyu Jiang. Department of Statistics, University of Washington (current).
6. Yunhan Wu. Department of Biostatistics, University of Washington. Graduated.
7. Victoire Michal, 2024. Department of Biostatistics and Epidemiology. McGill University. Co-advised with Alex Schmidt.
8. Peter Gao, 2023. Department of Statistics, University of Washington. Current Position: Assistant Professor, Department of Mathematics and Statistics, San Jose State University.
9. Taylor Okonek, 2023. Department of Biostatistics, University of Washington. Current Position: Assistant Professor, Mathematics, Statistics, and Computer Science, Macalester College.
10. Austin Schumacher, 2022. Department of Biostatistics, University of Washington. Current Position: Assistant Professor, Department of Health Metrics Sciences, University of Washington.
11. Serge Aleshin-Guendel, 2022. Department of Biostatistics, University of Washington. Current Position: research mathematical statistician in the Center for Statistical Research and Methodology at the United States Census Bureau.
12. Aaron Osgood-Zimmerman, 2022. Department of Statistics, University of Washington. Current Position: Assistant Professor of Mathematics, Bucknell University.
13. Jessica Godwin, 2021. Department of Statistics, University of Washington. Current Position: Statistical Demographer and Training Director, CSDE, University of Washington.
14. Johnny Paige, 2020. Department of Statistics, University of Washington. Current Position: Norwegian University of Science and Technology, Trondheim.
15. Tracy Dong, 2020. Department of Biostatistics, University of Washington. Current Position: Fred Hutchinson Cancer Research Center, Seattle.
16. Katie Wilson, 2019. Department of Biostatistics, University of Washington. Current Position: Teaching Professor, Department of Biostatistics, University of Washington.
17. Jonathan Fintzi, 2018. Department of Biostatistics, University of Washington. Current Position: NIAID, Bethesda.
18. Laina Mercer, 2016. Department of Statistics, University of Washington. Current Position: PATH, Seattle.
19. Leigh Fisher, 2016. Department of Biostatistics, University of Washington. Current Position: Fred Hutchinson Cancer Research Center, Seattle.
20. Theresa Smith, 2014. Department of Statistics, University of Washington. Current Position: University of Bath.
21. Michelle Ross, 2012. Department of Biostatistics, University of Washington. Current Position: Health Canada, Ottawa.
22. Cici Chen, 2012. Department of Statistics, University of Washington. Current Position: University of Texas, Houston.
23. Albert Kim, 2011. Department of Statistics, University of Washington. Current Position: Smith College.
24. Youyi Fong, 2010. Department of Biostatistics, University of Washington. Current Position: Fred Hutchinson Cancer Research Center, Seattle.

25. Sierra Li, 2007. Department of Biostatistics, University of Washington. Current Position: City of Hope.
26. Adam Glynn, 2007. Department of Statistics, University of Washington. Current Position: Emory University.
27. Sebastien Haneuse, 2004. Department of Biostatistics, University of Washington. Current Position: Harvard University.
28. Chuan Zhou, 2003. Department of Biostatistics, University of Washington. Current Position: University of Washington.
29. Ruth Salway, 2002. Department of Epidemiology and Public Health, Imperial College, London. Current Position: University of Bristol.
30. Gavin Shaddick, 2002. Department of Epidemiology and Public Health, Imperial College, London. Current Position: University of Exeter.
31. Alex Bottle, 2001. Department of Epidemiology and Public Health, Imperial College, London. Current Position: Imperial College, London
32. Nargis Rahman, 1999. Department of Mathematics, Imperial College, London. Current Position: Office of National Statistics, London
33. James Bennett, 1996. Department of Mathematics, Imperial College, London. Current Position: Imperial College, London.
34. Stephen Walker, 1995. Department of Mathematics, Imperial College, London. Current Position: University of Texas, Austin.

MS Students

1. Yuan Hsiao, 2022. Department of Statistics, University of Washington. Current Position: Assistant Professor of Sociology, Yale University.
2. Erin Hade, 2001. Department of Biostatistics, University of Washington. Current Position: Ohio State University.

Postdoctoral Researchers

1. Michelle Ross, 2012-2014. Department of Biostatistics, University of Washington. Current Position: Health Canada.
2. Miranda Fix, 2018-2020. Department of Biostatistics, University of Washington. Current Position: Weyerhaeuser, Seattle.

More information on all former students can be found at http://faculty.washington.edu/jonno/people.html

Short Courses and Workshops

- *Spatial Epidemiology*: Departmanto de Probabilidad y Estadistica, IIMASUNAM, Mexico, January 2001.
- *Spatial Epidemiology*: Center of Biostatistics, Ohio State University, Summer Program, June 2003.
- *Spatial Epidemiology*: School of Population Health, University of Western Australia, as Raine Visiting Professor, September 2003.
- *Spatial Epidemiology*: International Agency for Research on Cancer, Lyon, France, July 2005.
- *Statistical methods for Genetics*: International Agency for Research on Cancer, Lyon, France, July 2008.
- *Bayesian Methods in Genetics*: Summer Institutes in Statistical Genetics, University of Washington, taught with Peter Hoff, June 2011, July 2012, July 2013, July 2014, July 2015. Taught with Ken Rice, July 2016, July 2017, July 2018, July 2019, July 2020 July 2021, July 2022.
- *Spatial Statistics in Epidemiology and Public Health*: Summer Institutes in Statistics and Modeling in Infectious Diseases, University of Washington, taught with Lance Waller, July 2013, July 2014, July 2015, July 2016, July 2017, July 2018, July 2019, July 2020, July 2021, July 2022.
- *Statistical Methods for Spatial and Spatio-Temporal Health Data*: University of Newcastle. Graduate training course, organized by the Royal Statistical Society, July 2014.
- *Age-Period-Cohort Methods and Analysis:* International Society for Clinical Biostatistics. Vigo, Spain, July 2017.

- *Bayesian Small Area Estimation using Complex Data*: CSSS 20th Anniversary Conference, University of Washington, May 2018.
- *Small Area Estimation for Child Mortality, United Nations Workshop:* Quito, Ecuador. Taught with PhD student Katie Wilson, May 2019.
- *Small Area Estimation for Child Mortality, United Nations Workshop:* Johannesburg, South Africa. Taught with PhD student Katie Wilson, May 2019.
- *Age-Period-Cohort Methods and Analysis:* Summer Institutes in Statistics for Clinical and Epidemiological Research University of Washington, July 2019, July 2020, July 2021.
- *Small Area Estimation for Child Mortality, United Nations Workshop:* Blantyre, Malawi, November 2019.
- *Small Area Estimation:* Summer Institutes in Statistics for Clinical and Epidemiological Research, University of Washington, July 2020, July 2021, July 2022.
- *Small area estimation.* WHO workshop on Maternal Health. Kigali, Rwanda, November, 2023.
- *Small area estimation*. WHO workshop on Maternal and Child Health. Kigali, Rwanda, June, 2024.

Grant Funding

- I have been PI and co-PI on a number of grants from NCI, NIAID, NHGRI and NIGMS. Other funding sources include the United Nations (UNICEF) and World Health Organization. These awards have provided student support over the years.

Currently:

- Title: Statistical Issues in AIDS Research, NIH, Co-PI.
- Title: Bayesian Mortality Estimation from Disparate Data Sources, NIH, PI.