Kylie E. C. Ainslie, PhD

Qualifications

2018	PhD Biostatistics, Emory University, Atlanta, GA
2016	MSc Biostatistics, Emory University, Atlanta, GA
2011	AB Biology and Mathematics (Double major), Ripon College, Ripon, WI *Magna Cum Laude*, Phi Beta Kappa

Employment

2022–Present

Honorary Assistant Professor
School of Public Health
University of Hong Kong, Hong Kong SAR

- Determine the real world protection provided by vaccines against respiratory diseases, such as COVID-19 and influenza

2020–Present

Senior Researcher
Centre for Infectious Diseases, Epidemiology, and Surveillance
National Institute for Public Health and the Environment, Bilthoven,
The Netherlands

- Evaluate the impact of vaccination strategies on COVID-19 disease outcomes using transmission models.
- Liaise with government advisory boards to communicate scientific findings to inform pandemic health policy, including presentations and reports.
- Collaborate with internal and external partners to achieve research goals.

2018–2021

Research Associate / Visiting Researcher
MRC Centre for Global Infectious Disease Analysis
Department of Infectious Disease Epidemiology, School of Public Health
Imperial College London, London, UK

- Lead analytical pipeline within the Real-time Assessment of Community Transmission (REACT-1) study of SARS-CoV-2 transmission.
- Inform UK government about the real-time COVID-19 epidemiological situation in England as part of front line pandemic response.
- Develop agent-based model and R package of individual susceptibility to repeated exposures (e.g., infections, vaccinations).

Employment

2016–2018	**Research Assistant** SAS Institute Inc., Atlanta Regional Office, Atlanta, GA
2015–2016	**Research Assistant** Department of Biostatistics and Bioinformatics Emory University, Atlanta, GA
2012–2015	**Research Assistant** Biostatistics and Bioinformatics Shared Resource Winship Cancer Institute, Emory University, Atlanta, GA

Grants

2022	Evaluation of WAning Vaccine Effectiveness (WAVE) Role: Principal Investigator; Funder: RIVM; Amount:€600,000
2022	Efficient and rapidly SCAlable EU-wide evidence-driven Pandemic response plans through dynamic Epidemic data assimilation (ESCAPE) Role: Consortium member/ Work package leader; Funder: European Commission; Amount: €3.2 million

Awards

2020	Session Funding (**$1000**) and complimentary registration (**$400**) Society for Epidemiological Research Annual Meeting, Boston, MA
2016	Poster Competition Award, Georgia Statistics Day Georgia Institute of Technology, Atlanta, GA
2014–2016	Trainee, Broadening Experiences in Scientific Training (BEST) Program Emory University, Atlanta, GA
2016	Scholarship and Travel Award Recipient Summer Institute in Statistics and Modeling of Infectious Diseases University of Washington, Seattle, WA
2012	Travel Award Recipient, Statistical Genetics and Genomics Short Course University of Alabama at Birmingham, Birmingham, AL
2007–2011	Knop Science Scholarship (**$120,000**) Ripon College, Ripon, WI

Teaching and Supervision

Teaching

2019–2020	Lecturer, Further Infectious Disease Modelling Imperial College London, London, UK
2019	Guest Lecturer, Introduction to Statistical Programming I Duke University, Durham, NC
2018	Demonstrator, Epidemiology and Control of Infectious Disease Short Course Imperial College London, London, UK
2017	Graduate Teaching Assistant, R Programming Emory University, Atlanta, GA
2013–2014	Graduate Teaching Assistant, Linear Modeling Emory University, Atlanta, GA
2012–2013	Graduate Teaching Assistant, Introductory Statistical Methods Emory University, Atlanta, GA

Supervision

2018	David Cook, MSc of Epidemiology (with Dr. Ada Yan and Professor Steven Riley)

Service

Leadership Roles

2024	Organizer, R-Ladies Amsterdam
2020	Session Organizer and Chair, Society for Epidemiological Research Annual Meeting 2020
2018–2019	Postdoctoral Representative Department of Infectious Disease Epidemiology, Imperial College London
2018–2019	Chair, Steering Committee, Council for Emerging and New Statisticians Eastern North American Region, International Biometrics Society
2019	Session Organizer, Eastern North American Region Conference 2019
2018	Session Organizer, Eastern North American Region Conference 2018
2016–2018	Member, Steering Committee, Council for Emerging and New Statisticians Eastern North American Region, International Biometrics Society
2015–2018	Editor-In-Chief, Atlanta BEST Magazine
2015–2016	Professional Development Chair Department of Biostatistics and Bioinformatics, Emory University
2014–2015	Editor, Atlanta BEST Magazine

Computing

Programs	R (advanced), SAS (Certified Base Programmer), C++, LaTeX, Adobe InDesign
R packages	pika, serosolver, roa, morevac, vacamole, wave (in development)
GitHub	`https://github.com/kylieainslie`
Website	`https://kylieainslie.github.io/`

Languages

English (native)

Dutch (fluent)

Selected Publications

2023 M. Jit, **K. E. C. Ainslie**, C. Althaus, C. Caetano, V. Colizza, D. Paolotti, P. Beutels, et al. Reflections on epidemiological modeling to inform policy during the covid-19 pandemic in western europe, 2020–23. *Health Affairs*, 42, 2023

2022 **Ainslie, K. E. C.**, J. A. Backer, P. T. de Boer, A. J. van Hoek, D. Klinkenberg, H. Korthals Altes, K. Y. Leung, et al. A scenario modelling analysis to anticipate the impact of COVID-19 vaccination in adolescents and children on disease outcomes in the Netherlands, summer 2021. *Eurosurveillance*, 44(27):pii=2101090, 2022

2022 O. Eales, **K. E. C. Ainslie**, C. E. Walters, H. Wang, C. Atchison, D. Ashby, C. A. Donnelly, et al. Appropriately smoothing prevalence data to inform estimates of growth rate and reproduction number. *Epidemics*, 40:100604, 2022

2022 **Ainslie, K. E. C.** and S. Riley. Is annual vaccination best?: a modelling study of influenza vaccination in children. *Vaccine*, 40(21):2940–2948, 2022

2021 F. Miura, K. Y. Leung, D. Klinkenberg, **K. E. C. Ainslie**, and J. Wallinga. Optimal vaccine allocation for COVID-19 in the Netherlands: a data-driven prioritization. *PLoS Computational Biology*, 17(12):e1009697, 2021

2021 P. Elliott, D. Haw, H. Wang, O. Eales, C. E. Walters, **Kylie E. C. Ainslie**, C. Atchison, et al. Exponential growth, high prevalence of SARS-CoV-2, and vaccine effectiveness associated with the delta variant. *Science*, 374(6574):eabl9551, 2021

2021 M. Haber, J. E. Tate, B. A. Lopman, W. Qia, **K. E. C. Ainslie**, and U. D. Parashar. Comparing statistical methods for detecting and estimating waning efficacy of rotavirus vaccines in developing countries. *Hum Vaccin Immunother*, 17(11):4632–4635, 2021

2021 S. Riley, **K. E. C. Ainslie**, O. Eales, C. E. Walters, H. Wang, C. Atchison, C. Fronterre, et al. Resurgence of SARS-CoV-2: Detection by community viral surveillance. *Science*, 372(6545):990–995, 2021

2021 P. Nouvellet, S. Bhatia, A. Cori, **K. E. C. Ainslie**, M. Baguelin, S. Bhatt, A. Boonyasiri, et al. Reduction in mobility and COVID-19 transmission. *Nature Communications*, 12:1090, 2021

2020 H. Ward, C. J. Atchison, M. Whitaker, **K. E. C. Ainslie**, J. Elliott, L. C. Okell, R. Redd, et al. SARS-CoV-2 antibody prevalence in England following the first peak of the pandemic. *Nature Communications*, 12:905, 2021

2020 B. Jeffrey*, C. E. Walters*, **K. E. C. Ainslie***, O. Eales*, C. Ciavarella, S. Bhatia, S. Hayes, et al. Anonymised and aggregated crowd level mobility data from mobile phones suggests that initial compliance with COVID-19 social distancing interventions was high and geographically consistent across the UK. *Wellcome Open Research*, 5:170, 2020
* equal contribution

2020 **Ainslie, K. E. C.***, C. E. Walters*, H. Fu*, S. Bhatia, H. Wang, X. Xi, M. Baguelin, et al. Evidence of initial success for china exiting COVID-19 social distancing policy after achieving containment. *Wellcome Open Research*, 5:81, 2020
* equal contribution

2020 J. Hay, A. Mintor, **K. E. C. Ainslie**, J. Lessler, B. Yang, D. A. T. Cummings, A. Kucharski, and S. Riley. An open source tool to infer epidemiological and immunological dynamics from serological data: serosolver. *PLoS Comp Biol*, 16(5):e1007840, 2020

2019 **Ainslie, K. E. C.**, M. Haber, and W. A. Orenstein. Challenges in estimating influenza vaccine effectiveness. *Expert Review of Vaccines*, 18(6):615–628, 2019

2019 **Ainslie, K. E. C.**, M. Haber, and W. A. Orenstein. Bias of influenza vaccine effectiveness estimates from test-negative studies conducted during an influenza pandemic. *Vaccine*, 37(14):1987–1993, 2019

2018 **Ainslie, K. E. C.**, M. Haber, and W. A. Orenstein. A dynamic model of bias of estimates of influenza vaccine effectiveness from observational studies. *American Journal of Epidemiology*, 118(2):451–460, 2018

2017 **Ainslie, K. E. C.**, M. Shi, M. Haber, and W. A. Orenstein. On the bias of estimates of influenza vaccine effectiveness from the test-negative studies. *Vaccine*, 35:7297–7301, 2017

2017 **Ainslie, K. E. C.**, M. Haber, R. E. Malosh, J. G. Petrie, and A. S. Monto. Maximum likelihood estimation of influenza vaccine effectiveness against transmission from the household and from the community. *Statistics in Medicine*, 37(6):970–982, 2017

2017 M. Shi, Q. An, **K. E. C. Ainslie**, M. Haber, and W. A. Orenstein. A comparison of the test-negative and the traditional case-control study designs for estimation of influenza vaccine effectiveness under nonrandom vaccination. *BMC Infectious Diseases*, 17:757–777, 2017