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

- Led the analytical planning and development of novel methodologies for evaluating vaccine effectiveness in longitudinal studies of respiratory infections, including COVID-19 and influenza.
- Collaborated on multiple research projects, providing expert guidance, and contributing to six peer-reviewed publications, which advanced the understanding of vaccine impacts and informed subsequent public health recommendations.
- Conducted workshops and tutorials with 50+ participants on technical subjects such as using Git/GitHub and R packages for data analysis, enhancing team skills and supporting research through hands-on training.

2020–Present

Senior Researcher
Unit for Infectious Disease Modelling
Centre for Infectious Diseases, Epidemiology, and Surveillance
National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands

- Led development and implementation of a transmission model to support key decisions throughout the COVID-19 vaccine roll out in the Netherlands, resulting in an open-source R package, published peer-reviewed manuscript, and critical data-driven insights that directly influenced public health policy.
- Liaised with government advisory boards and engaged key stakeholders to translate complex scientific findings into actionable pandemic health policies through detailed presentations and reports, ensuring effective implementation of evidence-based strategies.
- Identified key gaps in the scientific literature and spearheaded the design and funding acquisition of a research project, collaborating with a multidisciplinary team and securing a €600,000 grant.

Employment

2020–2021 **Visiting Researcher**
MRC Centre for Global Infectious Disease Analysis
Department of Infectious Disease Epidemiology, School of Public Health
Imperial College London, London, UK

- Provided expert consultation on statistical methodologies to estimate COVID-19 vaccine effectiveness using data from a large-scale population surveillance study.

2018–2020 **Research Associate**
MRC Centre for Global Infectious Disease Analysis
Department of Infectious Disease Epidemiology, School of Public Health
Imperial College London, London, UK

- Led the development and management of the analytical pipeline for the Real-time Assessment of Community Transmission (REACT-1) study, enhancing the monitoring and analysis of SARS-CoV-2 transmission dynamics.
- Provided fortnightly situation reports on the COVID-19 epidemiological situation to the UK government, directly supporting pandemic response and informing public health strategies across England.
- Designed and implemented an agent-based model and R package to analyze individual susceptibility to repeated exposures, including infections and vaccinations, advancing understanding of population-level immunity and disease spread.

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

2022	Exceptional Service Award (**€1400**) National Institute of Public Health and the Environment (RIVM), Bilthoven, The Netherlands
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

Workshops

2024	Introduction to R
2023	Introduction to Git and GitHub
2023	Using the `Lexis` class for time-to-event data

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

Languages

English (native)

Dutch (fluent)

Publications

Preprints

2024 **Ainslie, K E C**, M. Hooiveld, and J. Wallinga. On the epidemiological characteristics of scabies. *(in preparation)*, Oct. 2024

Published

2024 T. K. Tsang, S. G. Sullivan, X. Huang, C. Wang, Y. Wang, J. Nealon, B. Yang, **Ainslie, K E C**, and B. J. Cowling. Prior infections and effectiveness of SARS-CoV-2 vaccine in test-negative studies: A systematic review and meta-analysis. *Am. J. Epidemiol.*, June 2024

2024 K. Sherratt, A. Srivastava, **Ainslie, K**, D. E. Singh, A. Cublier, M. C. Marinescu, J. Carretero, A. C. Garcia, N. Franco, L. Willem, S. Abrams, C. Faes, P. Beutels, N. Hens, S. Müller, B. Charlton, R. Ewert, S. Paltra, C. Rakow, J. Rehmann, T. Conrad, C. Schütte, K. Nagel, S. Abbott, R. Grah, R. Niehus, B. Prasse, F. Sandmann, and S. Funk. Characterising information gains and losses when collecting multiple epidemic model outputs. *Epidemics*, 47(100765):100765, June 2024

2024 D. Chen, B. J. Cowling, **Ainslie, K E C**, Y. Lin, J. Y. Wong, E. H. Y. Lau, P. Wu, and J. Nealon. Association of COVID-19 vaccination with duration of hospitalization in older adults in hong kong. *Vaccine*, 42(9):2385–2393, Apr. 2024

2024 F. Miura, J. A. Backer, G. van Rijckevorsel, R. Bavalia, S. Raven, M. Petrignani, **Ainslie, K E C**, J. Wallinga, and Dutch Mpox Response Team. Time scales of human mpox transmission in the netherlands. *J. Infect. Dis.*, 229(3):800–804, Mar. 2024

2024 C. Zachreson, J. Savulescu, F. M. Shearer, M. J. Plank, S. Coghlan, J. C. Miller, **Ainslie, K E C**, and N. Geard. Ethical frameworks should be applied to computational modelling of infectious disease interventions. *PLoS Comput. Biol.*, 20 (3):e1011933, Mar. 2024

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. doi: https://doi.org/10.1377/hlthaff.2023.00688

2023 S. G. Sullivan, A. Khvorov, X. Huang, C. Wang, **Ainslie, K**, J. Nealon, B. Yang, B. Cowling, and T. Tsang. The need for a clinical case definition in test-negative design studies estimating vaccine effectiveness. *NPJ Vaccines*, 8, Aug. 2023

2022 **Ainslie, K. E. C.**, J. A. Backer, P. T. de Boer, A. J. van Hoek, D. Klinkenberg, H. K. Altes, K. Y. Leung, H. de Melker, F. Miura, and J. Wallinga. 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. doi: https://doi.org/10.2807/1560-7917.ES.2022.27.44.2101090

2022 M. Chadeau-Hyam, H. Wang, O. Eales, D. Haw, B. Bodinier, M. Whitaker, C. E. Walters, K. E. C. Ainslie, C. Atchison, C. Fronterre, P. J. Diggle, A. J. Page, A. J. Trotter, D. Ashby, W. Barclay, G. Taylor, G. Cooke, H. Ward, A. Darzi, S. Riley, C. A. Donnelly, P. Elliott, and COVID-19 Genomics UK consortium. SARS-CoV-2 infection and vaccine effectiveness in england (REACT-1): a series of cross-sectional random community surveys. *Lancet Respir Med*, 10(4):355–366, Apr. 2022

2022 O. Eales, **K. E.C. Ainslie**, C. E. Walters, H. Wang, C. Atchison, D. Ashby, C. A. Donnelly, G. Cooke, W. Barclay, H. Ward, A. Darzi, P. Elliott, and S. Riley. Appropriately smoothing prevalence data to inform estimates of growth rate and reproduction number. *Epidemics*, 40:100604, 2022. ISSN 1755-4365. doi: https://doi.org/10.1016/j.epidem.2022.100604

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. doi: 10.1016/j.vaccine.2022.03.065

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. doi: 10.1371/journal.pcbi.1009697

2021 P. Elliott, D. Haw, H. Wang, O. Eales, C. E. Walters, **K. E. C. Ainslie**, C. Atchison, C. Fronterre, P. J. Diggle, A. J. Page, A. J. Trotter, S. J. Prosolek, D. Ashby, C. A. Donnelly, W. Barclay, G. Taylor, G. Cooke, H. Ward, A. Darzi, and S. Riley. Exponential growth, high prevalence of SARS-CoV-2, and vaccine effectiveness associated with the delta variant. *Science*, 374(6574):eabl9551, 2021. doi: 10.1126/science.abl9551

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. doi: 10.1080/21645515.2021.1968738.

2021 S. Riley, **K. E. C. Ainslie**, O. Eales, C. E. Walters, H. Wang, C. Atchison, C. Fronterre, P. J. Diggle, D. Ashby, C. A. Donnelly, G. Cooke, W. Barclay, H. Ward, A. Darzi, and P. Elliott. Resurgence of SARS-CoV-2: Detection by community viral surveillance. *Science*, 372(6545):990–995, 2021. ISSN 0036-8075. doi: 10.1126/science.abf0874

2021 P. Nouvellet, S. Bhatia, A. Cori, **K. E. C. Ainslie**, M. Baguelin, S. Bhatt, A. Boonyasiri, N. F. Brazeau, L. Cattarino, L. V. Cooper, H. Coupland, Z. M. Cucunuba, G. Cuomo-Dannenburg, A. Dighe, B. A. Djaafara, I. Dorigatti, O. D. Eales, S. L. van Elsland, F. F. Nascimento, R. G. FitzJohn, K. A. M. Gaythorpe, L. Geidelberg, W. D. Green, A. Hamlet, K. Hauck, W. Hinsley, N. Imai, B. Jeffrey, E. Knock, D. J. Laydon, J. A. Lees, T. Mangal, T. A. Mellan, G. Nedjati-Gilani, K. V. Parag, M. Pons-Salort, M. Ragonnet-Cronin, S. Riley, H. J. T. Unwin, R. Verity, M. A. C. Vollmer, E. Volz, P. G. T. Walker, C. E. Walters, H. Wang, O. J. Watson, C. Whittaker, L. K. Whittles, X. Xi, N. M. Ferguson, and C. A. Donnelly. Reduction in mobility and COVID-19 transmission. *Nature Communications*, 12:1090, 2021. doi: 10.1038/s41467-021-21358-2

2021 H. Fu, H. Wang, X. Xi, A. Boonyasiri, Y. Wang, W. Hinsley, R. Fraser, K. J.and McCabe, D. Olivera Mesa, J. Skarp, A. Ledda, T. Dewé, A. Dighe, P. Winskill, S. L. van Elsland, **K. E. C. Ainslie**, M. Baguelin, S. Bhatt, O. Boyd, N. F. Brazeau, L. Cattarino, G. Charles, H. Coupland, Z. M. Cucunuba, G. Cuomo-Dannenburg, C. A. Donnelly, I. Dorigatti, O. D. Eales, R. G. FitzJohn, S. Flaxman, K. A. M. Gaythorpe, A. C. Ghani, W. D. Green, A. Hamlet, K. Hauck, D. J. Haw, B. Jeffrey, D. J. Laydon, J. A. Lees, T. Mellan, S. Mishra, G. Nedjati-Gilani, P. Nouvellet, L. Okell, K. V. Parag, M. Ragonnet-Cronin, S. Riley, N. Schmit, H. A. Thompson, H. J. T. Unwin, R. Verity, M. A. C. Vollmer, E. Volz, P. G. T. Walker, C. E. Walters, O. J. Watson, C. Whittaker, L. K. Whittles, N. Imai, S. Bhatia, and N. M. Ferguson. Database of epidemic trends and control measures during the first wave of COVID-19 in mainland china. *Int. J. Infect. Dis.*, 102:463–471, Jan. 2021

2021 H. Ward, G. Cooke, C. Atchison, M. Whitaker, J. Elliott, M. Moshe, J. C. Brown, B. Flower, A. Daunt, **K. E. C. Ainslie**, D. Ashby, C. Donnelly, S. Riley, A. Darzi, W. Barclay, and P. Elliott. Prevalence of antibody positivity to SARS-CoV-2 following the first peak of infection in England: Serial cross-sectional studies of 365,000 adults. *The Lancet Regional Health – Europe*, 4:100098, 2021. doi: 10.1016/j.lanepe.2021.100098

2020 A. Dighe, L. Cattarino, G. Cuomo-Dannenburg, J. Skarp, N. Imai, S. Bhatia, K. Gaythorpe, **Ainslie, KEC**, M. Baguelin, S. Bhatt, A. Boonyasiri, N. Brazeau, L. Cooper, H. Coupland, Z. Cucunuba, I. Dorigatti, O. Eales, S. van Elsland, R. FitzJohn, W. Green, D. Haw, W. Hinsley, E. Knock, D. Laydon, T. Mellan, S. Mishra, G. Nedjati-Gilani, P. Nouvellet, M. Pons-Salort, H. Thompson, H. Unwin, R. Verity, M. Vollmer, C. Walters, O. Watson, C. Whittaker, L. Whittles, A. Ghani, C. Donnelly, N. Ferguson, and S. Riley. Response to covid-19 in south korea and implications for lifting stringent interventions. *BMC Med*, 18(1):321, Oct 2020. doi: 10.1186/s12916-020-01791-8

2020 N. C. Grassly, M. Pons-Salort, E. P. K. Parker, P. J. White, N. M. Ferguson, and **Imperial College COVID-19 Response Team***. Comparison of molecular testing strategies for covid-19 control: a mathematical modelling study. *Lancet Infectious Diseases*, 2020. doi: 10.1016/S1473-3099(20)30630-7
* as part of the Imperial College COVID-19 Response Team

2020 H. Thompson, N. Imai, A. Dighe, **K. E. C. Ainslie**, M. Baguelin, S. Bhatia, S. Bhatt, A. Boonyasiri, O. Boyd, N. Brazeau, L. Cattarino, L. Cooper, H. Coupland, Z. Cucunuba, G. Cuomo-Dannenburg, B. Djaafara, I. Dorigatti, S. van Elsland, R. Fitzjohn, H. Fu, K. Gaythorpe, W. Green, T. Hallett, A. Hamlet, D. Haw, S. Hayes, W. Hinsley, B. Jeffrey, E. Knock, D. Laydon, J. Lees, T. Mangal, T. Mellan, S. Mishra, A. Mousa, G. Nedjati-Gilani, P. Nouvellet, L. Okell, K. Parag, M. Ragonnet-Cronin, S. R. H. Unwin, R. Verity, M. Vollmer, E. Volz, P. Walker, C. Walters, H. Wang, Y. Wang, O. Watson, C. Whittaker, L. Whittles, P. Winskill, X. Xi, C. Donnelly, and N. Ferguson. SARS-CoV-2 infection prevalence on repatriation flights from Wuhan City, China. *Journal of Travel Medicine*, 2020

2020 H. Ward, C. J. Atchison, M. Whitaker, **K. E. C. Ainslie**, J. Elliott, L. C. Okell, R. Redd, D. Ashby, C. A. Donnelly, W. Barclay, A. Darzi, G. Cooke, S. Riley, and P. Elliott. SARS-CoV-2 antibody prevalence in England following the first peak of the pandemic. *Nature Communications*, 12:905, 2021. doi: 10.1038/s41467-021-21237-w

2020 H. J. T. Unwin, S. Mishra, V. C. Bradley, A. Gandy, T. A. Mellan, H. Coupland, J. Ish-Horowicz, M. A. C. Vollmer, C. Whittaker, S. L. Filippi, X. Xi, M. Monod, O. Ratmann, M. Hutchinson, F. Valka, H. Zhu, I. Hawryluk, P. Milton, **K. E. C. Ainslie**, M. Baguelin, A. Boonyasiri, N. F. Brazeau, L. Cattarino, Z. M. Cucunubá, G. Cuomo-Dannenburg, I. Dorigatti, O. D. Eales, J. W. Eaton, S. L. van Elsland, R. G. FitzJohn, K. A. M. Gaythorpe, W. Green, W. Hinsley, B. Jeffrey, E. Knock, D. J. Laydon, J. Lees, G. Nedjati-Gilani, P. Nouvellet, L. C. Okell, K. V. Parag, I. Siveroni, H. A. Thompson, P. Walker, C. E. Walters, O. J. Watson, L. K. Whittles, A. Ghani, N. M. Ferguson, S. Riley, C. A. Donnelly, S. Bhatt, and S. Flaxman. State-level tracking of COVID-19 in the united states. *Nature Communications*, 11:6189, 2020. doi: 10.1038/s41467-020-19652-6

2020 E. Lavezzo, E. Franchin, C. Ciavarella, G. Cuomo-Dannenburg, L. Barzon, C. Del Vecchio, L. Rossi, R. Manganelli, A. Loregian, N. Navarin, D. Abate, M. Sciro, S. Merigliano, E. De Canale, M. C. Vanuzzo, V. Besutti, F. Saluzzo, F. Onelia, M. Pacenti, S. Parisi, G. Carretta, D. Donato, L. Flor, S. Cocchio, G. Masi, A. Sperduti, L. Cattarino, R. Salvador, M. Nicoletti, F. Caldart, G. Castelli, E. Nieddu, B. Labella, L. Fava, M. Drigo, K. A. M. Gaythorpe, **Imperial College COVID-19 Response Team***, A. R. Brazzale, S. Toppo, M. Trevisan, V. Baldo, C. A. Donnelly, N. M. Ferguson, I. Dorigatti, and A. Crisanti. Suppression of a SARS-CoV-2 outbreak in the Italian municipality of Vo'. *Nature*, 584:425–429, 2020. doi: 10.1038/s41586-020-2488-1
* as part of the Imperial College COVID-19 Response Team

2020 S. Flaxman, S. Mishra, A. Gandy, H. J. T. Unwin, T. A. Mellan, H. Coupland, C. Whittaker, H. Zhu, T. Berah, J. W. Eaton, M. Monod, P. N. Perez-Guzman, N. Schmit, L. Cilloni, **K. E. C. Ainslie**, M. Baguelin, A. Boonyasiri, O. Boyd, L. Cattarino, L. V. Cooper, Z. Cucunubá, G. Cuomo-Dannenburg, A. Dighe, B. Djaafara, I. Dorigatti, S. L. van Elsland, R. G. FitzJohn, K. A. M. Gaythorpe, L. Geidelberg, N. C. Grassly, W. D. Green, T. Hallett, A. Hamlet, W. Hinsley, B. Jeffrey, E. Knock, D. J. Laydon, G. Nedjati-Gilani, P. Nouvellet, K. V. Parag, I. Siveroni, H. A. Thompson, R. Verity, E. Volz, C. E. Walters, H. Wang, Y. Wang, O. J. Watson, P. Winskill, X. Xi, P. G. T. Walker, A. C. Ghani, C. A. Donnelly, S. Riley, M. A. C. Vollmer, N. M. Ferguson, L. C. Okell, and S. Bhatt. Estimating the effects of non-pharmaceutical interventions on COVID-19 in europe. *Nature*, 584:257–261, 2020. doi: 10.1038/s41586-020-2405-7

2020 A. B. Hogan*, B. L. Jewell*, E. Sherrard-Smith*, J. F. Vesga*, O. J. Watson*, C. Whittaker*, A. Hamlet, J. A. Smith, P. Winskill, R. Verity, M. Baguelin, J. A. Lees, L. K. Whittles, **K. E. C. Ainslie**, S. Bhatt, A. Boonyasiri, N. F. Brazeau, L. Cattarino, L. V. Cooper, H. Coupland, G. Cuomo-Dannenburg, A. Dighe, B. A. Djaafara, C. A. Donnelly, J. W. Eaton, S. L. van Elsland, R. G. FitzJohn, H. Fu, K. A. M. Gaythorpe, W. Green, D. J. Haw, S. Hayes, W. Hinsley, N. Imai, D. J. Laydon, T. D. Mangal, T. A. Mellan, S. Mishra, G. Nedjati-Gilani, K. V. Parag, H. A. Thompson, H. J. T. Unwin, M. A. C. Vollmer, C. E. Walters, H. Wang, Y. Wang, X. Xi, N. M. Ferguson, L. C. Okell, T. S. Churcher, N. Arinaminpathy, A. C. Ghani, P. G. T. Walker, and T. B. Hallett. Potential impact of the COVID-19 pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modelling study. *Lancet*, 2020. doi: 10.1016/S2214-109X(20)30288-6
* equal contribution

2020 B. Jeffrey*, C. E. Walters*, **K. E. C. Ainslie***, O. Eales*, C. Ciavarella, S. Bhatia, S. Hayes, M. Baguelin, A. Boonyasiri, N. F. Brazeau, G. Cuomo-Dannenburg, R. G. FitzJohn, K. Gaythorpe, W. Green, N. Imai, T. A. Mellan, S. Mishra, P. Nouvellet, H. J. T. Unwin, R. Verity, M. Vollmer, C. Whittaker, N. M. Ferguson, C. A. Donnelly, and S. Riley. 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 P. G. T. Walker, C. Whittaker, O. J. Watson, M. Baguelin, P. Winskill, A. Hamlet, B. A. Djafaara, Z. Cucunubá, D. O. Mesa, W. Green, H. Thompson, S. Nayagam, **K. E. C. Ainslie**, S. Bhatia, S. Bhatt, A. Boonyasiri, O. Boyd, N. F. Brazeau, L. Cattarino, G. Cuomo-Dannenburg, A. Dighe, C. A. Donnelly, I. Dorigatti, S. L. van Elsland, R. FitzJohn, H. Fu, K. A. M. Gaythorpe, L. G. L, N. Grassly, D. Haw, S. Hayes, W. Hinsley, N. Imai, D. Jorgensen, E. Knock, D. Laydon, S. Mishra, G. Nedjati-Gilani, L. C. Okell, H. J. Unwin, R. Verity, M. Vollmer, C. E. Walters, H. Wang, Y. Wang, X. Xi, D. G. Lalloo, N. M. Ferguson, and A. C. Ghani. The impact of COVID-19 and strategies for mitigation and suppression in low- and middle-income countries [published online ahead of print]. *Science*, page eabc0035, 2020. doi: 10.1126/science.abc0035

2020 **Ainslie, K. E. C.***, C. E. Walters*, H. Fu*, S. Bhatia, H. Wang, X. Xi, M. Baguelin, S. Bhatt, A. Boonyasiri, O. Boyd, L. Cattarino, C. Ciavarella, Z. Cucunuba, G. Cuomo-Dannenburg, A. Dighe, I. Dorigatti, S. L. van Elsland, R. FitzJohn, K. Gaythorpe, A. C. Ghani, W. Green, A. Hamlet, W. Hinsley, N. Imai, D. Jorgensen, E. Knock, D. Laydon, G. Nedjati-Gilani, L. C. Okell, I. Siveroni, H. A. Thompson, H. J. T. Unwin, B. Verity, M. Vollmer, P. G. T. Walker, Y. Wang, O. J. Watson, C. Whittaker, P. Winskill, C. A. Donnelly, N. M. Ferguson, and S. Riley. Evidence of initial success for china exiting COVID-19 social distancing policy after achieving containment. *Wellcome Open Research*, 5: 81, 2020. doi: 10.12688/wellcomeopenres.15843.1
* 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. doi: 10.1371/journal.pcbi.1007840

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

2016 J. Kowalski, B. Dwivedi, S. Newman, J. M. Switchenko, R. Pauly, D. A. Gutman, J. Aurora, K. Ghandi, **K. Ainslie**, G. Doho, Z. Qin, C. S. Moreno, M. R. Rossi, P. M. Vertino, S. Lonial, L. Bernal-Mizrachi, and L. H. Boise. Gene integrated set profile analysis: a context-based approach for inferring biological endpoints. *Nucleic Acids Research*, 44(7):e69, 2016

Reports

2021 **Ainslie, K**, J. Backer, A. J. van Hoek, D. Klinkenberg, S. McDonald, F. Miura, and J. Wallinga. The expected outcome of COVID-19 vaccination strategies. Technical report, Rijksinstituut voor Volksgezondheid en Milieu (RIVM), Aug. 2021

2020 N. Ferguson, D. Laydon, G. Nedjati Gilani, N. Imai, **Ainslie, K**, M. Baguelin, S. Bhatia, A. Boonyasiri, Z. Cucunuba Perez, G. Cuomo-Dannenburg, A. Dighe, I. Dorigatti, H. Fu, K. Gaythorpe, W. Green, A. Hamlet, W. Hinsley, L. Okell, S. Van Elsland, H. Thompson, R. Verity, E. Volz, H. Wang, Y. Wang, P. Walker, P. Winskill, C. Whittaker, C. Donnelly, S. Riley, and A. Ghani. Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID19 mortality and healthcare demand. Technical report, MRC Centre for Global Infectious Disease Analysis, Imperial College London, 2020

Presentations

Invited

2024 "On the epidemiological characteristics of scabies."
Applied Mathematics Seminar, Department of Mathematical Sciences
University of Liverpool, Liverpool, UK

2023 Keynote: "COVID-19 modelling for policy makers: Reflections of 3 years of COVID response."
SPARK/SPECTRUM Annual Meeting, Cape Schanck, Victoria, Australia

2023 "COVID-19 modelling for policy makers: Reflections of 3 years of COVID response."
University of Melbourne, Melbourne, Victoria, Australia

2022 "COVID-19 modelling for policy makers."
TRS Seminar, School of Public Health, University of Hong Kong, Hong Kong SAR

2020 "Is annual vaccination best?: A modeling study of influenza vaccination strategies in children."
MRC Seminar, MRC Centre for Global Infectious Disease Analysis
School of Public Health, Imperial College London, London, UK

2019 "Using longitudinal models of serological data to optimise repeated influenza vaccination."
MRC Vaccine Symposium, MRC Centre for Global Infectious Disease Analysis
School of Public Health, Imperial College London, London, UK

2017 "A dynamic model for evaluation of bias of estimates of influenza vaccine effectiveness from observational studies."
School of Public Health, Hong Kong University, Hong Kong

2016 "Comparing estimates of influenza vaccine effectiveness from case-control studies under non-random vaccination."
WHO Collaborating Centre for Reference and Research on Influenza
Peter Doherty Institute, Melbourne, Victoria, Australia

2016 "Estimation of effectiveness of influenza vaccination in household studies."
Biology Seminar, Ripon College, Ripon, WI

Contributed

2023 "A scenario modelling analysis to anticipate the impact of COVID-19 vaccination in adolescents and children on disease outcomes in the Netherlands, summer 2021."
Australia and New Zealand Industrial and Applied Mathematics (ANZIAM) Conference 2023, Cairns, Queensland, Australia

2023 "Determining the trade-offs between different COVID-19 control strategies in the Netherlands: A counterfactual analysis."
Australia and New Zealand Industrial and Applied Mathematics (ANZIAM) Conference 2023, Cairns, Queensland, Australia

2020 "Overview of the test-negative design and how to control for bias and confounding."
Society for Epidemiological Research Annual Meeting, Boston, MA

2019 "Potential public health benefits from reduced delay in the production of pandemic influenza vaccine."
Epidemics 7, Charleston, SC

2018 "A dynamic model for evaluation of bias of estimates of influenza vaccine effectiveness from observational studies."
Eastern North American Region Spring Meeting, Atlanta, GA

2016 "Estimation of effectiveness of influenza vaccination in household studies."
International Biometric Conference, Victoria, Canada

2016 "Estimation of effectiveness of influenza vaccination in household studies."
Eastern North American Region Spring Meeting, Austin, TX

2014 "A robust statistical framework to whole-genome outlier identification for characterizing structural variants."
Joint Statistical Meeting, Boston, MA

2010 "The exact distribution of the clustered Wilcoxon test."
Mathematics Association of America – WI Conference, Oshkosh, WI

Posters

2022 "A scenario modelling analysis to anticipate the impact of COVID-19 vaccination in adolescents and children on disease outcomes in the Netherlands, summer 2021"
Options XI, Belfast, UK

2021 "The impact of vaccinating adolescents and children on SARS-CoV-2 transmission"
Epidemics 8, Online

2019 "Is annual vaccination best?: Evaluating influenza vaccination strategies in children"
Epidemics 7, Charleston, SC, USA

2019 "Deaths averted from reduced delay in pandemic influenza vaccine production"
Options X for the Control of Influenza, Singapore

2019 "Is annual vaccination best?: Evaluating influenza vaccination strategies in children"
Options X for the Control of Influenza, Singapore

2019 "The bias of estimates of influenza vaccine effectiveness from test-negative studies during a pandemic"
40th Annual Conference of the International Society for Clinical Biostatistics, Leuven, Belgium

2017 "Bias of influenza vaccine effectiveness estimates from case-control studies"
European Scientific Working Group on Influenza, Riga, Latvia

2016 "Estimation of effectiveness of influenza vaccination in household studies"
Georgia Statistics Day, Atlanta, GA

2015 "A robust statistical framework for whole genome outlier identification"
Winship Symposium, Emory University, Atlanta, GA, USA

2012 "Outlier analysis to filter translocations from next generation sequence data"
IEEE International Conference on Bioinformatics and Biomedicine, Philadelphia, PA, USA