KASIM ALLEL, PhD©, MSc, BSc

PhD© INFECTIOUS AND TROPICAL DISEASES MSc HEALTH ECONOMICS AND DECISION SCIENCE, BSc ENGINEERING

MSC REALTH ECONOR	MICS AND DECISION SCIEN	CE, DSC ENGINEERIN	u
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AREAS OF INTEREST

Human and Global Health, Health Economics, Epidemiology, Infectious Diseases, Modelling, and Health Policy.

EDUCATION

2021 ©	PhD© in Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, UK
2019-2020	MSc in Health Economics and Decision Science, University College London, UK (Hons)
2015 2016	MSa in Farmania Analysis Universidad Diago Pontalas Chila (Hans)

2015-2016 MSc in Economic Analysis, Universidad Diego Portales, Chile (Hons)

2010-2014 BSc in business Engineering and Economics, Universidad Diego Portales, Chile (Hons)

PROFESSIONAL EMPLOYMENT

2021 ©	Honorary research Associate, Institute for Global Health (IGH), Faculty of Population Health Sciences,
	University College London, UK.

—Global health economics including catastrophic spending, healthcare inequalities, and universal health coverage, primarily in low-and-middle income countries—

2022 © Research associate, College of Medicine and Health, Faculty of Health and Life Sciences, University of Exeter, UK.

—Developing a conceptual framework to improve understanding of antimicrobial-resistance in livestock systems: translating research into policy and practice—

2023 © Consultant, Bloomsbury Research Policy Lab Ltd, London, UK

—Evaluating the usage of innovative short treatments for multidrug and rifampicin-resistant tuberculosis in Eastern European countries—

2021-2022 Consultant, Centre for Disease Control and Prevention (CDC), USA.

—International transmission, colonisation, and prevention of antibiotic resistant pathogens; Genomic relatedness among antimicrobial-resistant bacteria colonizing humans in the community and hospital setting in Chile—

2021-2022 Research consultant, World Health Organization (WHO) and UCL-TB Centre for TBSR project.

—Economic impact of novel Mycobacterium tuberculosis specific antigen-based skin tests for detection of

—Economic impact of novel Mycobacterium tuberculosis specific antigen-based skin tests for detection of TB infection compared to currently available tests: A Systematic review and economic modelling study—

Research consultant, Policy Innovation and Evaluation Research Unit (PIRU) of the National Institute for Health Research (NIHR) and the London School of Hygiene and Tropical Medicine, UK.

—NHS COVID-19 app survey and technology uptake among citizens from England and Wales—

2020-2021 Modelling consultant & research analyst, Institute for Global Health (IGH), University College London, UK.

—Modelling tuberculosis infection among vulnerable populations in Italy, Romania and South Africa and

cost-effectiveness of early screening and treatment, and early COVID-19 transmission in Nigeria—

2020 Research assistant at the Centre for Global Health Economics (CGHE), University College London, UK

2020 Research intern at Centre for Disease Dynamics, Economics and Policy (CDDEP), New Delhi, India

2018-2019 Research analyst, School of Government, Pontificia Universidad Católica, Chile

2018 Research intern at Robert N. Butler Aging Centre, School of Public Health, Columbia University, US

2018 Consultant, International Labour Organization (ILO), United Nations, Chile

—The Future of Work in a Context of Technological Change: Implications for Latin America—

- 2016-2017 Macroeconomic analyst for cash-equities and derivatives, JP Morgan Chase, Chile
- 2014-2016 Research assistant, FONDECYT: Causal Effects of Retirement-timing on Health (id:1140107), Chile
- 2012-2013 Macroeconomic analyst, Department of Macroeconomic Statistics, Central Bank of Chile, Chile.

RESEARCH CENTRES AND PROFESSIONAL SOCIETIES

- 2021 © Antimicrobial Resistance Centre (ARC), London School of Hygiene and Tropical Medicine, UK
- 2021 © Centre for Mathematical Modelling for Infectious Diseases (<u>CMMID</u>), London School of Hygiene and Tropical Medicine, UK
- 2021 © Centre for Global Health Economics (CGHE), University College London, UK.

CERTIFICATES AND TRAINING

- 2022 Modern Techniques for Modelling Infectious Diseases Dynamics, London School of Hygiene and Tropical Medicine, UK.
- 2021 Medical Research Foundation National PhD Training Programme in Antimicrobial Resistance Research, UK. Annual PhD Training Course: Collaborative processes in AMR research design
- 2021 Specialisation Course on Infectious Disease Modelling, Imperial College London, UK (online).
- 2019 Certificate on Introduction to Spatial Analysis in R. London School of Hygiene and Tropical Medicine, UK.
- 2018 Certificate on Applied machine learning. Executive education, Columbia School of Engineering, US.
- 2019 Certificate on Analysis of time series using R, School of Public Health, Universidad de Chile, Chile.
- 2013 PG Diploma in strategic thinking in management/economics, State University of New York, US.
- 2013 PG Diploma in political science and contemporary thought, Universidad Diego Portales, Chile.

PUBLICATIONS

Journal articles (★; Highly ranked or upper Q1 WOS journal; ₱; lower Q1 or upper Q2 WOS journals)

- (27) Allel, K., Day, L., Hamilton, A., Lin, L., Furuya-Kanamori, L., Moore, C., Laximnarayan, R., Yakob, L. 2023. Global antimicrobial-resistance drivers: An ecological country-level study at the human-animal interface. *The Lancet Planetary Health* 7, 4; 291-303. doi: https://doi.org/10.1016/S2542-5196(23)00026-8
- (26) ★ Allel K., Labarca J., Carvajal C., Garcia P., Cifuentes M., Silva F., Munita JM., Undurraga EA. Trends and socioeconomic, demographic, and environmental factors associated with antimicrobial resistance: a longitudinal analysis in 39 hospitals in Chile 2008–2017. *The Lancet Regional Health–Americas*. 2023 May 1;21. doi: https://doi.org/10.1016/j.lana.2023.100484
- (25) ★ Al-Haboubi M., Exley J., **Allel K.**, Erens B., Mays N. One year of digital contact tracing: Who was more likely to install the NHS COVID-19 app? Results from a tracker survey in England and Wales. *Digital Health*. 2023;9. doi: https://doi.org/10.1177/20552076231159449
- (24) ★ Ikuta KS, Swetschinski LR, Aguilar GR, Sharara F, Mestrovic T, Gray AP, Weaver ND, Wool EE, Han C, Hayoon AG, Aali A., **Allel K.**, *et al.* Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 2022. doi: https://doi.org/10.1016/S0140-6736(22)02185-7
- (23) ★ Mestrovic T., Robles G., Swetschinski L., Ikuta K., Gray A., Davis N., Han C., Wool E., Gershberg A., Hay S., Dolecek C., Sartorius B., Murray C., Yeboah I., Opoku B., Ahmed A., Aldeyab M., Allel K., Moore, C. *et al.* The burden of bacterial antimicrobial resistance in the WHO European region in 2019: a cross-country systematic analysis. *The Lancet Public Health*, 2022. doi: https://doi.org/10.1016/S2468-2667(22)00225-0
- (22) 🖈 Allel, K., Gosce, L., Araos, R., Toro, D., Ferreccio, C., Munita, J., Undurraga, E., Panovska-Griffiths, J.

- 2022. Transmission of gram-negative antibiotic-resistant bacteria following differing exposure to antibiotic-resistance reservoirs in a rural community: a modelling study for bloodstream infections. *Nature Scientific Reports* 12, 13488. doi:10.1038/s41598-022-17598-x
- (21) ★ Matas G., Furuya-Kanamori, L., **Allel, K.**, Stabler, R., Harris, P., Paterson, D., Yakob, L. β-lactam resistant Streptococcus pneumoniae dynamics following treatment: a dose-response meta-analysis, *Clinical Infectious Diseases*, 2022; ciac293. doi: 10.1093/cid/ciac293
- (20) ★ G. Abou Jaoude, I. Garcia-Baena, P. Nguhiu, A. Siroka, T. Palmer, L. Goscé, **K. Allel**, E. Sinanovic, J. Skordis, H. Haghparast-Bidgoli (2022). National tuberculosis spending efficiency and its associated factors in 121 low-income and middle-income countries, 2010–19: a data envelopment and stochastic frontier analysis. *The Lancet Global Health*, 10:5, e649-e660. doi: 10.1016/S2214-109X(22)00085-7.
- (19) ★ Allel K, Abou Jaoude GJ, Birungi C, Palmer T, Skordis J, et al. (2022) Technical efficiency of national HIV/AIDS spending in 78 countries between 2010 and 2018: A data envelopment analysis. *PLOS Global Public* Health 2(8): e0000463. doi: 10.1371/journal.pgph.0000463
- (18) ★ Allel, K., Hajizadeh, M. & Kiadaliri, A (2022). The gap in life expectancy and lifespan inequality between Iran and neighbour countries: the contributions of avoidable causes of death. *International Journal for Equity in Health* 21, 81. doi:10.1186/s12939-022-01683-8
- (17) ★ Tapia-Muñoz T, Staudinger UM, Allel K, Steptoe A, Miranda-Castillo C, Medina JT, et al. (2022) Income inequality and its relationship with loneliness prevalence: A cross-sectional study among older adults in the US and 16 European countries. *PLoS ONE* 17(12): e0274518. doi: 10.1371/journal.pone.0274518
- (16) ★ Calvo E, Córdova C, Shura R, Allel K, Castillo-Carniglia A, Keyes KM, Mauro C, Mauro PM, Medina JT, Mielenz T, Taramasco C, Martins SS. Global pain and aging: A cross-sectional study on age differences in the intensity of chronic pain among middle-aged and older adults in 20 countries. *Gerontology B Psychol Sci Soc Sci* (2022): gbac199. *doi*: 10.1093/geronb/gbac199.
- (15) ★ Allel, K., Salustri, F., Haghparast-Bidgoli, H., Kiadaliri, A. The contributions of public health policies and healthcare quality to gender gap and country differences in life expectancy in the UK. BMC *Population Health Metrics* 19, 40 (2021). doi: /10.1186/s12963-021-00271-2
- (14) ★ Goscé, L., Girardi, E., Allel, K., Cirillo, D., Barcellini, L., Stancanelli, G., Alberto Mattelli, A., Hagphrast-Bidgoli, H., Abubakar, I. (2021). Tackling TB in migrants arriving at Europe's southern border.

 International Journal of Infectious Diseases 113 (2021): S28-S32. doi: 10.1016/j.ijid.2021.02.103
- Undurraga, E., Millien, M., Allel, K., Etheart, M., Cleaton, J., Ross, Y., Vaccine Evaluation Team, and Wallace, R. 2020. Costs and effectiveness of alternative dog vaccination strategies to improve dog population coverage in rural and urban settings during a rabies outbreak. *Vaccine*, 38(39), 6162-6173. doi: 10.1016/j.vaccine.2020.06.006
- (12) ★ Calvo, E., **Allel, K.**, Staudinger, U.M., Castillo-Carniglia, A., Medina, JT, Keyes, K. 2020. Cross-country differences in age trends in alcohol consumption among older adults: A cross-sectional study of individuals age 50 and older in 22 countries. *Addiction* 116.6 (2021): 1399-1412. *doi:10.1111/add.15292*.
- (11) Allel, K., Narea, M., Undurraga, E. 2020. Centre-based care is a significant predictor of lower body mass index in early childhood: Longitudinal evidence from Chile. *Journal of Global Health*, 10;1.

 doi: 10.7189/jogh.10.010419
- (10) ★ Allel, K., Tapia-Muñoz, T., Morris, W. (2020). Country-level factors associated with the early spread of COVID-19 cases at 5, 10 and 15 days since the onset. *Global Public Health 15-11: 1589-1602.*doi: 10.1080/17441692.2020.1814835
- (9) ▶ Rivera D., Allel K., Dueñas F., Tardone R., Soza P., Hamilton-West C., Moreno-Switt A. (2021). Screening the Presence of Non-Typhoidal Salmonella in Different Animal Systems and the Assessment of Antimicrobial Resistance. *Animals* 11(6):1532. *doi:*10.3390/ani11061532
- (8) Soza-Ossandón, P.; Rivera, D.; Allel, K.; González-Rocha, G.; Quezada-Aguiluz, M.; San Martin, I.; García, P.; Moreno-Switt, A.I. (2022). Mec-Positive Staphylococcus Healthcare-Associated Infections Presenting High Transmission Risks for Antimicrobial-Resistant Strains in an Equine Hospital. *Antibiotics* 2022, 11, 621. *doi:* 10.3390/antibiotics11050621
- (7) Allel K., León AS, Staudinger UM, and Calvo E. 2019. Healthy Retirement Begins at School: Education Predicts Health Outcomes of Early Transitions. *Ageing & Society, 1-21. doi:* 10.1017/S0144686X19000928

- (6) T. Tapia-Muñoz, A. González-Santa Cruz, H. Clarke, W. Morris, Y. Palmeiro-Silva & K. Allel (2021): COVID-19 attributed mortality and ambient temperature: a global ecological study using a two-stage regression model. *Pathogens and Global Health*, 1:11 doi: 10.1080/20477724.2021.2007336
- (5) Narea, M., Arriagada, V., and Allel, K. 2019. Center-Based Care in Toddlerhood and Child Cognitive Outcomes in Chile: The Moderating Role of Family Socio-economic Status. *Early Education and Development*, 1-16. doi: 10.1080/10409289.2019.1626191
- (4) Narea, M., Cumsille, P., & Allel, K. (2022). The impact of time of entrance to center-based care on children's general, language, and behavioral development. *International Journal of Behavioral Development* 46.4 (2022): 278-285. doi:10.1177/01650254221089610
- (3) Allel K, Abou Jaoude G, Poupakis S, Batura N, Skordis J, Haghparast-Bidgoli H. Exploring the Associations between Early Childhood Development Outcomes and Ecological Country-Level Factors across Low- and Middle-Income Countries. *International Journal of Environmental Research and Public Health*. 2021; 18(7):3340. *doi:* 10.3390/ijerph18073340
- (2) Allel, K., García P, Labarca J, Munita JM, Rendic M, Undurraga E. 2020. Socioeconomic factors associated with antimicrobial resistance of *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *Escherichia coli* in Chilean hospitals (2008-2017). *Pan American Journal of Public Health*, 2020;44:e30. doi:10.26633/RPSP.2020.30
- (1) Keyes, KM., **Allel, K.,** Staudinger, U. M., Ornstein, K. A., and Calvo, E. 2019. Alcohol consumption predicts incidence of depressive episodes across 10 years among older adults in 19 countries. *International Review of Neurobiology, 148, 1. doi: 10.1016/bs.irn.2019.09.001*

Research chapters, book chapters or consultancy

- Goscé, L., Parkinson, F., **Allel, K.**, Surkova, E., Kontsevaya, I., Wang, T.T., Liu, V., Hamada, Y., White, P., Rangaka, M.X. and Abubakar, I. Web Annex D. Cost—effectiveness of Mycobacterium tuberculosis antigenbased skin tests: a systematic review. WHO consolidated guidelines on tuberculosis: Module 3: Diagnosis—Tests for tuberculosis infection. Geneva: World Health Organization; 2022. Licence: CC BY-NC- SA 3.0 IGO. (https://www.ncbi.nlm.nih.gov/books/NBK586679/pdf/Bookshelf_NBK586679.pdf)
- Goscé L, Parkinson F, **Allel K**, Surkova E, Kontsevaya I, Wang TT, Liu V, Hamada Y, White PJ, Molebogeng RX. Web Annex E. Modelling for economic evidence for the use of Mycobacterium tuberculosis antigen-based skin tests. In: WHO consolidated guidelines on tuberculosis. Module 3: Diagnosis-Tests for tuberculosis infection. Geneva: World Health Organization; 2022. Licence: CC BY-NC- SA 3.0 IGO. (https://apps.who.int/iris/bitstream/handle/10665/361841/9789240056633-eng.pdf)
- Chindelevitch, L., Jauneikaitea, E., Wheeler, N.E., Allel, K., Ansiri-Asafoakaa, B.Y., Awuah, W.A., Bauer, D.C., Beisken, S., Fan, K., Grant, G. and Graz, M., 2022. Applying data technologies to combat antimicrobial resistance: current status, challenges, and opportunities on the way forward. <u>ArXiv preprint arXiv:2208.04683</u>.

Work in progress (under review or at initial stage)

Allel, K., Stone, J., Undurraga, E., Day, L., Moore, C., Lin, L., Furuya-Kanamori, L., Yakob, L. 2022. The impact of inpatient bloodstream infections caused by antibiotic resistant bacteria in low- and middle-income countries: A systematic review and meta-analysis {accepted PLOS Medicine, release date: 22 June, 2023}

PROFESSIONAL SERVICE

Journal referee

• Lancet Regional Health: Americas • PLOS One • International Journal of Public Health, Springer • PLOS Global Public Health • Ageing and Society, Cambridge University Press • Environmental Science and Pollution Research, Springer. • Frontiers Public Health

Editorial services

• Review Editor on the Editorial Board of Frontiers in Medicine, Infectious Diseases: Pathogenesis and Therapy.

Advisory boards and commissions member

Commission member COVID-19: Evidence to Inform Policy & Mitigate the Impact in Nigeria, Nigerian Centre for Disease Control (NCDC) and UCL, 2020-2021(W₃).

Co-supervisor of a MSc dissertation (Lucy Day, MSc Control of Infectious Diseases, 2020-2021), London School of Hygiene and Tropical Medicine. Topic: Global One Health drivers of antimicrobial-resistance.

Co-supervisor of two MSc dissertations (Priyanka Bhandari and Ellen Flanagan, MSc Health Policy, Planning and Financing, 2021-2022), London School of Economics. Topic: Economic impact of pharmacological and non-pharmacological interventions for reducing AMR levels.

Co-supervisor, Characterising cochlear implant users' sociodemographic characteristics (2021), Chilean Ministry of Health, Subsecretary of Public Health (ID:757-35-L120).

FUNDING AND AWARDS

Research grants (PI: primary investigator, Co-I: co-investigator)



Social Science Plus (£10,000), University College London 2022 [Co-I and Early Career Researcher]

"The Guarani-Mbyá case study: understanding the socio-cultural and epidemiological factors related to high immunodeficiency prevalence among Indigenous communities in Argentina and Brazil"



Early Career Researcher Small Grant (£5,000), Royal Society of Tropical Medicine and Hygiene 2021 [P1]

"The burden of bloodstream infections caused by antimicrobial resistant bacteria in Chile"



Public Policy Contest (USD15,000), Pontificia Universidad Católica, Chile, 2019 [Co-I]

"Proposals for the control and prevention of antimicrobial resistance: a longitudinal analysis of the socioeconomic and demographic factors in Chilean hospitals"

Scholarships and awards

Award-winning scientific poster (People's Prize) at London School of Hygiene and Tropical Medicine (LSHTM) Poster Day, 2023 (£100). The study was titled "The impact of inpatient bloodstream infections caused by antibiotic resistant bacteria in low- and middle-income countries".

Full International-PhD Scholarship at London School of Hygiene and Tropical Medicine (UK), <u>ANID</u>, Chilean Ministry of Sciences (USD 240,000), 2020-2024.

Full International-Master Scholarship at University College London (UK), <u>ANID</u>, Chilean Ministry of Sciences (USD 60,000), 2019-2020.

PRESENTATIONS

Lau, C., Mills D., Mayfield, H., Gyawali, N., Johnson, B., Lu, H., Allel, K, et al. 2023. Conference of the International Society for Travel Medicine (CISTM18), 2023.

Allel, K., Stone J., et al. 2022. American Society of Tropical Medicine and Hygiene (ASTMH), 2022.

Allel, K., Abou Jaoude G, et al. 2021. The International Health Economics Association (iHEA), 2021.

Allel, K., Salustri, et al. 2021. The Health Economics Study Group (HESG), Cambridge, 2021.

Allel, K., Munita, et al. 2020. The 19th International Conference of Infectious Diseases (ICID), Kuala Lumpur.

Abufhele, A.; Waldfogel, J.; Narea, M., and Allel, K. 2019. <u>Society for Longitudinal and Life Course Studies</u> (SLLS). Physical health section, Germany.

Allel, K.; Staudinger, U.; Calvo, E., and León, AS. 2018. The <u>International Sociological Association</u>, Epidemiology, Canada. (2) <u>Chilean Society of Economists</u>, *Chairman* at Health I section.

Allel, K; Narea, M; and Undurraga, E. 2018. (1) <u>Association of Public Policy and Management (APPAM)</u>, Mexico. (2) <u>International Congress of Behavioural Medicine</u>, Chile.

SELECTED MEDIA RECOGNITION OF PUBLISHED RESEARCH

Written press

Antibiotic consumption and resistance is a 'two-way street' between animals and humans. *Lancet Planetary Health*, April 2023. The Independent, Evening Standard, Daily mail, Public News Time, IRISH

News, London School of Hygiene and Tropical Medicine (LSHTM), n-TV, Yahoo, News
Medical.net, Centre for Infectious Disease Research and Policy (CIDRAP).

Interviews and podcasts

Superbugs Everywhere All at Once – The not-so-simple fight to control drug-resistant bacteria. <u>The One Health Trust (OHT) and Center for Disease Dynamics Economics and Policy (CDDEP)</u>, Washington DC, USA.

SPECIAL SKILLS

Statistical software: Proficiency in Stata, R, Python, MATLAB, Microsoft Office.

Languages: Spanish (native), English (fluent), Arabic (basic). *References available upon request