

Moses Chapa Kiti, PhD

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SUMMARY

I am a strategic public health leader with over 15 years of experience designing and scaling innovative solutions for complex global health challenges. My expertise lies in leveraging data science, disease surveillance, and health informatics to identify transformative opportunities and shape high-impact interventions. I have a proven track record of building and managing multi-country strategic partnerships to co-design and implement novel research studies in low-resource settings. I am adept at translating evidence and complex data into actionable strategy, influencing policy, and managing portfolios to improve health outcomes and address the intersecting challenges of disease and climate change. I am passionate about driving innovations in health, strategic grant-making, building and strengthening capacity to maximize impact on a global scale.

Core expertise Climate change, public health, and health systems research.
Demography and population studies.
Data science.

Languages English (proficient). Swahili (Native). French (Beginner)

SUMMARY OF PROFESSIONAL EXPERIENCE: CORE DUTIES AND RESPONSIBILITIES

1. Research project design, implementation, and management

- Contributing to the development of strategies, initiatives, and research proposals by conceptualizing methodological approaches and preparing technical documents.
- Developing and securing scientific and ethical approvals for >15 research proposals, adapting methodologies to local contexts (language, culture, operational constraints).
- Leading the design, execution, and dissemination of >10 research projects across multiple countries (Kenya, Mozambique, Zimbabwe, South Africa, India, Pakistan, Guatemala, and USA), ensuring methodological rigor and alignment with global partners.
- Designing monitoring systems, impact evaluations, and data collection tools (paper/electronic) used with >10,000 participants.
- Building digital dashboards to track progress, identify bottlenecks, and guide real-time data-driven decision-making.

2. Strategy, operational planning and oversight

- Providing technical and operational support throughout all stages of our research projects.
- Developing innovative research pipelines, implementing funded projects or spearheading grant proposals while ensuring alignment with institutional goals and donor requirements.
- Ensuring rigor in evaluation designs, sampling strategies, and analytical frameworks for cross-country projects.
- Conducting feasibility assessments and risk analyses for new project sites.

3. Stakeholder engagement and communication

- Cultivating and managing strategic relationships and collaborations with local and international partners.
- Published 20 scientific articles in leading global public health journals and presented at >10 international health conferences, tailoring the communication for academic, policy, and lay audiences. I have 797 citations with h-index of 11.

4. Reporting, documentation, and compliance

- Developing, maintaining, and updating country specific research protocols, guidelines, and standard operating procedures.
- Co-authoring technical reports, pre-analysis plans, and policy briefs for stakeholders and funders. Sample digital report available here (<https://tinyurl.com/thinkhealthconsultants>)
- Participating in the scientific review of research proposals in local and international Institution Review Boards (KEMRI-WTRP, Warwick University, Oxford University, Emory University).

5. Human resource and financial management

- Participating in the hiring process, training and mentoring globally distributed teams. This includes developing and validating multilingual training materials training materials.
- Mentoring teams on statistical methods, Stata/R, and field research best practices.

EMPLOYMENT

<u>KEMRI-Wellcome Trust Research Programme (Nairobi, Kenya)</u>	2024 -
Post-Doctoral Researcher: Impact of climate change on public health and health systems. The main objective is to understand the ecological health impacts of climate change, and the vulnerability of populations to changing climate in Kenya (www.newrisk.org).	Current
<u>Emory University (Atlanta, USA)</u>	2020 - 2024
Research Scientist: Understanding human behavior and impacts on infectious disease transmission. The main objective was to comprehensively characterize social contact patterns relevant for infectious disease transmission in four low-and-middle-income countries (Mozambique, India, Pakistan, Guatemala).	
<u>KEMRI-Wellcome Trust Research Programme (Nairobi, Kenya)</u>	2009 - 2019
Research Officer: Understanding human social behavior and its impacts on infectious disease transmission in rural and urban schools, households, and communities in Kenya.	

TEACHING, ACADEMIC, AND MENTORSHIP RESPONSIBILITIES

Co-supervision of 1 PhD student, Oxford University	Ongoing
Co-supervision of 2 post-graduate students, KEMRI-WTRP/Pwani University	Ongoing
Member, Scientific organising committee for the Pan-African Conference on Environmrnt, Climate Change and Health, Kenya	2025

Field experiences on data collection in developing countries, Emory University, USA	2022
Infectious disease dynamics, MSc Public Health, Pwani University, Kenya	2019
Population dynamics, MSc Public Health, Pwani University, Kenya	2016

EDUCATION

<ul style="list-style-type: none"> Doctor of Philosophy, Public Health – Life and Biomolecular Science. 	2015 - 2019
The Open University (UK) and the KEMRI-Wellcome Trust Research Programme (Kenya).	
<ul style="list-style-type: none"> Master of Science - Demography and Health. 	2012 - 2013
University of London and London School of Hygiene and Tropical Medicine (UK).	
<ul style="list-style-type: none"> Bachelor of Science – Geomatic Engineering and GIS. 	2003 - 2008
Jomo Kenyatta University of Agriculture and Technology (Kenya).	
<ul style="list-style-type: none"> Selected additional professional trainings 	
Research management, Emory University.	2022
Project Management in Global Health, University of Washington.	2020
Introduction to GIS for health researchers, University of Washington.	2017
Leadership and management in health, University of Washington.	2015

SCIENTIFIC PUBLICATIONS AND PRESENTATIONS AT CONFERENCES

1. Nelson, K.N., Kiti, M.C., Shiiba, M. *et al.* **Characterizing social behavior relevant for infectious disease transmission in four low- and middle-income countries, 2021-2023.** *Nat Commun* **16**, 9586 (2025). <https://doi.org/10.1038/s41467-025-64850-9>
2. Odipo E, Onyango SA, Macharia PM, Kiti MC, Okiro EA. **Defining Methods for Assessing Climate Vulnerability in Africa: A Scoping Review Protocol.** Sept 2025. <https://doi.org/10.17605/OSF.IO/F2DQS>
3. Pischel L, Aguolu OG, Ahmed N, Campbell MN, Borg R, Duckwall C, Willebrand K, Zaleski A, Paintsil EE, Muenker MC, Malik AA, Kiti MC *et al.* **Social mixing patterns of United States healthcare personnel at a quaternary health center: a prospective observational study.** *Infection Control & Hospital Epidemiology* , Volume 46 , Issue 3 , March 2025 , pp. 289 – 297 doi: <https://doi.org/10.1017/ice.2024.234>
4. Kiti MC *et al.* **Social Contact Patterns in Rural and Urban Settings, Mozambique, 2021–2022.** *Emerg Infect Dis.* 2025 Jan;31(1):94–103. doi:[10.3201/eid3101.240875](https://doi.org/10.3201/eid3101.240875)
5. Aguolu OG, Kiti MC, Nelson K, Liu CY, Sundaram M, *et al.* **Comprehensive profiling of social mixing patterns in resource poor countries: A mixed methods research protocol.** *PLOS ONE* 19(6): e0301638. 2024; <https://doi.org/10.1371/journal.pone.0301638>
6. Zissette S, Kiti MC, Bennett BW, Liu CY, Nelson KN, Zelaya A, *et al.* **Social contact patterns among employees in U.S. long-term care facilities during the COVID-19 pandemic, December 2020 to June 2021.** *BMC Research Notes.* 2023;16: 294. doi:[10.1186/s13104-023-06563-0](https://doi.org/10.1186/s13104-023-06563-0)

7. Kiti MC, Aguolu OG, Zelaya A, Chen HY, Ahmed N, Batross J, et al. **Changing social contact patterns among US workers during the COVID-19 pandemic: April 2020 to December 2021.** *Epidemics*. 2023;45: 100727. doi:[10.1016/j.epidem.2023.100727](https://doi.org/10.1016/j.epidem.2023.100727)
8. Aguolu OG, Willebrand K, Elharake JA, Qureshi HM, Kiti MC, Liu CY, et al. **Factors influencing the decision to receive seasonal influenza vaccination among US corporate non-healthcare workers.** *Human Vaccines & Immunotherapeutics*. 2022; 2122379. <https://doi.org/10.1080/21645515.2022.2122379>
9. Kiti MC, Aguolu OG., Liu CY, Mesa, AR, Regina R, Woody M, Willebrand K, Couzens, C, Bartelsmeyer T, Nelson, K. N., Jenness S, Riley S, Melegaro A, Ahmed F, Malik F, Lopman BA, & Omer SB (2021). **Social contact patterns among employees in 3 U.S. companies during early phases of the COVID- 19 pandemic, April to June 2020.** *Epidemics*, 36(January), 100481. <https://doi.org/10.1016/j.epidem.2021.100481>
10. Liu CY, Berlin J, Kiti MC, Del Fava E, Grow A, Zagheni E, et al. Rapid Review of Social Contact Patterns During the COVID-19 Pandemic. *Epidemiology*. 2021;32: 781–791. <https://doi.org/10.1097/ede.0000000000001412>
11. Mousa A, Winskill P, Watson OJ, Ratmann O, Monod M, Ajelli M, Kiti MC et al. **Social contact patterns and implications for infectious disease transmission: A systematic review and meta-analysis of contact surveys.** *eLife*. 2021;10. <https://doi.org/10.7554/eLife.70294>
12. Del Fava E, Adema I, Kiti MC, Poletti P, Merler S, Nokes DJ, et al. **Individual’s daily behaviour and intergenerational mixing in different social contexts of Kenya.** *Scientific Reports*. 2021;11. <https://doi.org/10.1038/s41598-021-00799-1>
13. Wagner M, Kombe IK, Kiti MC, Aziza R, Barasa E, Nokes DJ. **Using contact data to model the impact of contact tracing and physical distancing to control the SARS-CoV-2 outbreak in Kenya.** *Wellcome Open Research*. 2020;5: 212. <https://doi.org/10.12688/wellcomeopenres.16264.1>
14. Kiti, MC, Melegaro, A., Cattuto, C., & Nokes, D. J. (2019). **Study design and protocol for investigating social network patterns in rural and urban schools and households in a coastal setting in Kenya using wearable proximity sensors** [version 2; peer review: 2 approved]. *Wellcome Open Research*, 4, 84. <https://doi.org/10.12688/wellcomeopenres.15268.2>
15. Pan-Ngum W, Kinyanjui T, Kiti MC, Taylor S, Toussaint JF, Saralamba S, et al. **Predicting the relative impacts of maternal and neonatal respiratory syncytial virus (RSV) vaccine target product profiles: A consensus modelling approach.** *Vaccine*. 2017;35: 403–409. <https://doi.org/10.1016/j.vaccine.2016.10.073>
16. Flasche S, Ojal J, Le Polain de Waroux O, Otiende M, O’Brien KL, Kiti MC, et al. **Assessing the efficiency of catch-up campaigns for the introduction of pneumococcal conjugate vaccine: a modelling study based on data from PCV10 introduction in Kilifi, Kenya.** *BMC Medicine*. 2017;15: 113. <https://doi.org/10.1186/s12916-017-0882-9>
17. Ojal J, Flasche S, Hammitt LL, Akech D, Kiti MC, Kamau T, et al. **Sustained reduction in vaccine-type invasive pneumococcal disease despite waning effects of a catch-up campaign in Kilifi, Kenya: A mathematical model based on pre-vaccination data.** *Vaccine*. 2017;35: 4561–4568. <https://doi.org/10.1016/j.vaccine.2017.07.019>
18. Kiti MC, Tizzoni, M, Kinyanjui, TM, Koech DC, Munywoki PK, Meriac M, Cappa L, Panisson A, Barrat A, Cattuto C, & Nokes DJ (2016). **Quantifying social contacts in a household setting of rural Kenya using wearable proximity sensors.** *EPJ Data Science*, 5(1), 21. <https://doi.org/10.1140/epjds/s13688-016-0084-2>

19. Kinyanjui TM, House TA, Kiti MC, Cane PA, Nokes DJ, Medley GF. **Vaccine induced herd immunity for control of respiratory syncytial virus disease in a low-income country setting**. PLoS ONE. 2015;10: e0138018.
<https://doi:10.1371/journal.pone.0138018>

20. Kiti MC, Kinyanjui, TM, Koech DC, Munywoki PK, Medley GF, & Nokes DJ (2014). **Quantifying age-related rates of social contact using diaries in a rural coastal population of Kenya**. PLoS ONE, 9(8).
<https://doi.org/10.1371/journal.pone.0104786>

Presentations at select scientific conferences:	
The Pan-African Conference on Environment, Climate Change and Health	2025
The 2025 Oxford Tropical Network meeting, Kenya (Panellist and Poster)	2025
9 th EPIDEMICS conference, Italy (Poster)	2023
Ecology and Evolution of Infectious Diseases, USA (Oral)	2022
The American Society for Tropical Medicine and Hygiene conference, USA (Poster)	2021
DELTAS Africa Annual Scientific Meeting, Senegal, Dakar (Oral)	2019
11 th International Respiratory Syncytial Virus Symposium, Asheville, USA. (Poster)	2018
28 th International Population Conference, South Africa. (Oral)	2017
9 th International Respiratory Syncytial Virus Symposium, South Africa. (Oral)	2014

REFEREES

Available upon request