

## DR GEOFFREY MANDA

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Global Health Institute

University of Antwerp - Campus Drie Eiken

Gouverneur Kinsbergencentrum

Doornstraat 331

2610 Wilrijk, Belgium

### RESEARCH INTERESTS

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Vaccine preventable diseases.

Mathematical Modelling of infectious disease dynamics (deterministic and stochastic modelling).

Artificial Intelligence and Machine Learning in health.

Health Economics and decision sciences.

Epidemiological research design and analysis.

Computational statistics (traditional and spatial statistics).

Maternal and Child Health issues.

### EDUCATION

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|------------|---|-----------|
| <b>PhD</b> | University of Antwerp, Belgium, Mathematical Modelling and Health Economics   | Present   |
|            | <i>Dissertation:</i> Intermittent preventive treatment of malaria in school children: From research into policy.  |           |
|            | <i>Committee:</i> Prof. Dr. Jean-Pierre Van Geertruyden (Promotor), Prof. Dr. Erika Vlieghe (Member) and Prof. Dr. Over Philippe Beutels (Chair)                              |           |
| <b>MSc</b> | London School of Hygiene and Tropical Medicine, UK, Public Health   | Sept 2021 |
|            | <i>Dissertation:</i> Determinants of neonatal mortality in Malawi, 2019-2020: A spatial analysis of the newborn essential solutions and technologies (NEST)360° project data. |           |
|            | <i>Advisor:</i> Professor Eric Ohuma and Ms. Rebecca Penzias.   |           |
| <b>BSc</b> | University of Malawi, College of Medicine, Malawi, MBBS   | July 2015 |
|            | <i>Dissertation:</i> Cancer Survival in Malawi: A retrospective cohort study.   |           |
|            | <i>Advisor:</i> Dr Kelias Msyamboza.  |           |

### RESEARCH EXPERIENCE

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#### Doctoral Fellow

Global Health Institute, University of Antwerp, Belgium

2022 – Present

Intermittent preventive treatment of malaria in school children: from research into policy.

*Supervisor name:* Professor Dr. Jean-Pierre Van Geertruyden

- Perform project literature reviews.
- Perform statistical data analysis using R (scripting, R-Markdown).
- Build and evaluate integrated infectious disease mathematical models.
- Support the training of masters students.
- Participate in the PhD peer review committee.
- Perform field visits at clinical trial sites in Africa.
- Writing manuscripts for publications.

**Graduate Research Assistant**

London School of Hygiene and tropical Medicine, United Kingdom

2021 – 2022

Health facility Assessment of the NEST360° data

*Supervisor Name:* Professor Eric Ohuma and Ms. Rebecca Penzias.

- Performed data management activities in RedCap.
- statistical analyses of health facility audit data using STATA and R.
- Wrote health facility audit reports for 64 health facilities in Africa.

**Graduate student**

London School of Hygiene and tropical Medicine, UK

2020 – 2021

Determinants of neonatal mortality in Malawi, 2019-2020: A spatial analysis of the newborn essential solutions and technologies (NEST)360° project data.

*Supervisor Name:* Professor Eric Ohuma and Ms. Rebecca Penzias.

- Performed project literature reviews.
- Performed statistical data analysis using R (scripting, R-Markdown, Automation).
- Built and evaluated traditional and spatial statistical models.
- Performed cartographic activities (Map making)
- Prepared and drafted the final project

**Research Medical doctor.**

Baylor College of Medicine Children's Foundation, Malawi

2017 – 2020

*Supervisor Name:* Dr Nmazzuo Ozuah.

- Coordinated multiple clinical research projects.
- Performed research project literature reviews.
- Performed statistical data analysis using R (scripting, R-Markdown, Automation).
- Built and evaluated traditional statistical models.
- Prepared manuscripts for publications.

**Research Fellow**

Kamuzu University of Health Sciences, Malawi

2018 – 2020

*Supervisor Name:* Prof. John Phuka

- Conducted project literature reviews.
- Prepared reports for local and international audiences.
- Developed electronic data collection tools using open data kit (ODK).
- Developed project's work plans and budgets for various projects
- Supported the recruitment and training of research assistants in data collection.
- Performed statistical data analysis using Stata® and SPSS.

**Research Intern**

Mala Malaria Alert Centre, Communicable Disease Action Centre.

2017 - 2017

*Supervisor Name:* Dr Atupele Kapito-Tembo

- Analyzed the Malawi demographic health survey malariologic data using Stata®.
- Participated in the National technical working group on the extended programme of immunization.

- Presented at journal clubs and other local academic meetings.
- Supported development of content for the institution's website.

### **Research Intern**

The AIR Study - Malawi Liverpool Wellcome Trust.

2015 – 2016

Supervisor Name: Dr. Hannah Jary

- Conducted literature reviews and meta-analyses for a systematic review.
- Supported the review and editing of the final manuscript for publication.
- Conducted data entry using an electronic data, entry system called TeleForm.
- Performed statistical data analysis using Stata® and SPSS.
- Presented at journal clubs and other local academic meetings.

### **Research Assistant**

Kamuzu University of Health Sciences, Malawi

2015 – 2015

Supervisor Name: Prof. Dr. Victor Mwapasa

- Prepared a list of study participants who completed follow-ups for a Cluster Randomized Trial.
- Monitored study sites to verify the presence of follow-up data from source documents.
- Ensured that all follow-up data was captured on case record files and the study database.

### **CONSULTANCIES**

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**Nutrition evidence synthesis consultant – Systematic reviews.**

2021 – 2022

World Health Organisation

**Baseline assessment of mhealth education platform in Malawi.**

2020 – 2020

AMREF Health Africa, Malawi

**Mid-term assessment of a TB health system strengthening project.**

2019 – 2019

World Bank Group, Malawi

**Assessment of the Iron and folate supplementation in school's project.**

2018 – 2018

UNICEF, Malawi

### **HONOURS AND AWARDS**

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**PhD Scholarchip**

2022 – 2025

University of Antwerp, Belgium

**Commonwealth Masters Scholarship**

2020 – 2021

Foreign Commonwealth and Development Office, UK.

**European School of Oncology travel award**

2018 – 2018

European School of Oncology, Germany.

**Undergraduate Research Grant.**

2014 – 2015

Malawi National Commission of Science and Technology, Malawi.

**Undergraduate medical summer school scholarship.**

2014 – 2014

University of Warwick, Warwick medical school, UK.

**Undergraduate MBBS Scholarship.**

2012 – 2015

Nchima Trust, Malawi.

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**TEACHING EXPERIENCE**

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**University of Antwerp, Belgium**

Present

- Teaching Master students' practical courses on biostatistics.

**Kamuzu Central Hospital /Kamuzu University of Health Sciences, Malawi**

2017 – 2020

- Teaching medical students (Bed side teaching, Problem Based Learning, and paediatrics oncology)

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**PROFESSIONAL SERVICE**

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**University of Antwerp, Antwerp Doctoral School.**

- **Peer-Reviewer**, Peer Review Commission

Present

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**CLINICAL EXPERIENCE**

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**Kamuzu Central Hospital/ Baylor College of Medicine - Malawi**

2017 – 2020

- Medical officer, Department of Paediatrics – General and Hematology and Oncology.

**Queen Elizabeth Central Hospital, Malawi**

2015 – 2017

- Medical officer, Department of Medicine, Paediatrics, Surgery, Obstetrics and Gynecology.

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**PUBLICATIONS**

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***Journal Publications***

1. Palliative Care Services within a Pediatric Hematology-Oncology Program in a Low-Resource Setting. J Pain Symptom Manage. 2022 Jan 12:S0885-3924(22)00006-9. doi: 10.1016/j.jpainsymman.2022.01.006.
2. Complications and Glycaemic Control of Type 1 Diabetes Mellitus amongst Children Aged 5 to 19 Years Attending Diabetic Clinic at Kamuzu Central Hospital in Malawi. Int J Diabetes Clin Res 7:117. doi.org/10.23937/2377-3634/1410117
3. Bacteriology and antibiotic prescription patterns at a Malawian tertiary hospital burn unit. East Cent Afr J Surg [Internet]. 2019 Dec 31 [cited 2020 Oct 9];24(3). <http://journal.cosecsa.org/index.php/ECAJS/article/view/20190003>
4. Risk Factors of Mortality of Hospitalized Adult Burn Patients a Malawian Tertiary Hospital Burns Unit. East and Central African Journal of Surgery.24(2): No 2 124-132.2019. <https://journal.cosecsa.org/index.php/ECAJS/article/view/20190010>
5. Household air pollution and acute lower respiratory infections in adults: a systematic review. PLoS ONE 11(12): e0167656. DOI:10.1371/ journal. pone.0167656.
6. Cancer survival in Malawi: a retrospective cohort study. The Pan-African medical journal.19:234.2014. DOI:10.11604/pamj.2014.19.234.4675.

***Case Reports***

1. Successful open surgical repair of an infrarenal, abdominal aortic aneurysm in a young Malawian female: a case report. Malawi Medical Journal.30 (3):215-217.2018. DOI: 10.4314/mmj.v30i3.15.
2. Pyoderma gangrenosum associated with Crohn's disease in a Malawian teenage male: case report and review of literature. Tropical Doctor. Sage UK: London, England. 2017. DOI:10.1177/0049475517724972.

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## PRESENTATIONS AND INVITED LECTURES

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### Conference Presentations

1. Treating Wilms tumour in central Malawi: lessons learned. Oral Presentation at the 1st Kamuzu Central Hospital Research Symposium, Lilongwe, Malawi. 11-12 Sept 2019.
2. Synchronous bilateral Wilms tumour: Cases from Lilongwe, Malawi. Oral Presentation at the 7th ESO-SIOP Europe Masterclass In Paediatric Oncology, Berlin, Germany. 16- 21 June 2018.
3. Bacteriology and antibiotic prescription patterns in a Malawian tertiary hospital burn unit. Oral Presentation at the 1st National Quality Management Conference, Lilongwe, Malawi. 22- 24 October 2018.
4. Risk factors of mortality of hospitalized adult burn patients a Malawian tertiary hospital burns unit. Oral Presentation at the 1st National Quality Management Conference, Lilongwe, Malawi. 22- 24 October 2018.

### Webinar Presentations

1. Wilms Tumour treatment outcomes using the SIOP approach in Lilongwe. Zoom Presentation. The first Global HOPE Multi-country protocol meeting 19th May 2020.

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## PROFESSIONAL DEVELOPMENT TRAINING

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### Workshop

1. Missing data - Using R packages to manage missing data, Antwerp, Belgium,. March 12 - 14, 2022.
2. ESO-SIOP Europe Masterclass in Paediatric Oncology, Berlin, Germany. 16- 21 June 2018.
3. Good clinical practice, London School of Hygiene and Tropical Medicine, UK. 16- 21 June 2021.
4. Protecting Human Research Participants, National Institute for Health, 22 – 25 September 2017.
5. Writing and publishing a study protocol, British Medical Journal, Online 14 -16 July 2016.
6. Data analysis using Stata®, The University of Malawi, College of Medicine 22 – 25 Sept 2016.
7. Basics of Health Economics, World Bank Group Open Learning Campus, Aug to Oct 2015.

### Seminars/Webinars

UNICEF/LSHTM Newborn Webinar Series- Meeting the SGD for newborn health by 2030. November 17, 2021

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## PROFESSIONAL AFFILIATIONS

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Member, New England Statistical Symposium	2022 – Present
Member, International Statistical Institute	2021 – Present
Member, Public Health Society	2021 – Present
Member, Medical Association of Malawi, Scientific committee	2020 – Present
Member, Society of Medical doctors	2017 – Present
Member, Medical Council of Malawi	2015 – Present

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## COMMUNITY SERVICE AND VOLUNTARY WORK

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Blood donor, Malawi Blood Transfusion Service, Malawi	2017 – Present
Member, Loins Club International, Malawi	2018 – Present
Undergraduate career / professional mentorship and coaching	2018 – Present
Co-Founder: Frontier Innovators Global, Malawi	2021 – Present

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## LANGUAGES

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**English:** Native Language, Distinguished levels in Listening, Speaking, Reading, and Writing.

**Dutch:** Intermediate levels in in Listening, Speaking, Reading, and Writing.

**German, French, portuguese and Spanish:** Basic levels in in Listening, Speaking, Reading, and Writing.

#### OTHER SKILLS AND COMPETENCES

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**Computational Statistics:** Python, R programming languages and STATA.

**Data management and Mobile data collection:** Open data kit, RedCap, Microsoft Excel and Access

**Mathematical Modelling:** Berkley Madonna and EMOD.

`geoffreymanda.github.io`