

ZIMBABWE UGANDA MALARIA BORDER ANALYSIS (ZUMBA) STUDY



Dr. Emmanuel Arinaitwe MBChB, MPH, PhD

ACADEMIC QUALIFICATIONS

MBChB, MPH, PhD

EXPERIENCE

Dr. Emmanuel Arinaitwe has over 15 years of malaria research and contribution to malaria literature through publications. Emmanuel started his research career by coordinating malaria studies in young children in rural Uganda where most researchers had not been before and publications from those studies influenced malaria treatment guidelines for children.

He then managed projects within the International Centres for Excellence in Malaria Research (ICEMR) for East Africa; as established in 2010. As an epidemiologist and project manager, he contributed to the expansion of the understanding of malaria epidemiology in Uganda and supervised trainees to carry out their academic projects.

As part of his PhD project, he evaluated the associations between recent overnight travel in Uganda and the risk of malaria. Findings from this project provided evidence that residents of Kampala in Uganda should consider malaria prevention measures when they travel to rural parts of the country. The Uganda ministry of health has since proposed malaria prevention during travel within Uganda as an additional measure to control malaria.

WHY ARE YOU PASSIONATE ABOUT THE STUDY?

Zimbabwe Uganda Malaria Border Analysis (ZUMBA) is a prospective observational study measuring imported malaria infections and contributions to local transmission in Uganda and Zimbabwe. The study is carried out in border areas of sub-Saharan Africa: 1) Tororo District, Uganda, where indoor residual spraying (IRS) has dramatically reduced malaria despite bordering Busia district, where IRS has not been implemented and high transmission persists; and 2) Mutasa District, Zimbabwe, where transmission is much lower than in the area directly across the national border with Mozambique. Both sites leverage on malaria surveillance infrastructure of the NIH-funded International Centers of Excellence for Malaria Research (ICEMR) network and employ active (via a longitudinal study) and passive (via health facility surveillance) study designs to capture asymptomatic and symptomatic malaria infections.

The available literature suggests that travel is an underappreciated risk factor for malaria in residents of malaria-endemic countries. In Uganda, malaria transmission is heterogeneous, in part due to expansion of malaria control interventions and increased urbanization. As a result, individuals who travel may be at higher risk of malaria infection.

It is important that we understand better, the association between travel and malaria infection in Uganda, identify risk factors of malaria infection during travel, quantify imported malaria parasites, determine the impact of onward transmission of imported malaria parasites, and explore these issues that could inform the design of malaria control interventions targeted to travelers.

Once the role of imported malaria parasites along with drivers of local malaria transmission in Uganda have been identified, we can appropriately direct resources to a set of integrated interventions to improve malaria control and pave way towards malaria elimination.