

FARISANANI U FHEDZA MALARIA!*

*WORK TOGETHER TO END MALARIA

Researchers and health officials must include communities when planning or implementing malaria control interventions or doing malaria research. Being open to alternative ideas benefits both the community and the research.

Researchers: Professor Riana Bornman and Dr Taneshka Kruger, University of Pretoria Institute for Sustainable Malaria Control

Malaria is recognised as a disease of poverty. However, in a remote corner of South Africa, there is no paucity of ideas on how to fight this global health problem.

As part of the government's National Malaria Control Programme, annual indoor residual spraying is conducted during the first months of malaria season (September to May). While spraying goes a long way to protect against mosquitoes, those living in poor communities are often unable to afford additional preventive measures such as insecticide-treated bed nets or repellents, or do not always have sufficient access to transport in order to reach medical treatment.

Another concern is that there is an increase in the number of people denying spray workers access to their homes, citing theft concerns as a reason. Researchers are also worried about the potential contamination of food when spraying occurs and the possible associated damage to people's health. It is therefore imperative to find other ways to fight malaria. This requires transdisciplinary and translational research to identify novel, innovative interventions.

Children, citizen scientists and researchers from the University of Pretoria Institute for Sustainable Malaria Control (UP ISMC) are working together to reduce the incidences of malaria in the Vhembe District in South Africa's Limpopo province.

Innovative interventions have ranged from a catchy song about malaria and children's books on protection and healthy lifestyles to rural practices to keep mosquitoes at bay.

Hearing unspoken challenges

Since 2003, Professor Riana Bornman has been researching the potential health effects of insecticides used for malaria control on human and environmental health in the Vhembe District, the region with the highest malaria burden in South Africa.

"As the years went by, I started to understand the unspoken challenges that these people face in their daily lives, and really heard what they could not say," she says. "It's not just about the poverty and having this disease that unendingly threatens their lives, but the powerlessness of having no real control over how they are being protected." This has contributed to the way in which she and her fellow UP ISMC researchers approach all of their research in the Vhembe District.

Dr Taneshka Kruger has been working with Prof Bornman in the Vhembe District since 2010. Her research focuses on innovative methods to educate and communicate important malaria health messages to community members, especially young children, thereby ensuring that people remain safe from this deadly, but preventable disease.

"Responsibly informing and educating communities about malaria, preventative measures, current control strategies and the risks involved, as well as new innovative research being trialled and tested in their areas, is crucial," Dr Kruger says. "Knowledge empowers people, allowing for informed decisions that can lead to positive lifestyle changes."

Some of the methods include the development of a song through action participatory research. Focus groups from the community (mothers and grandparents) were asked to help write a song that includes important malaria information, but which is also age and culturally appropriate. Two children's books were also produced: (2014) tells children about the disease, symptoms and how to protect themselves, while (2020) – part of a malaria and epigenetics study – looks at healthy lifestyles and well-being.

A more recent method of information sharing, which can also be used for training purposes, includes the use of virtual reality to show what a typical village in a malaria-endemic region looks like and to educate people on how to safeguard against malaria.



Empowering from within

Citizen scientists have been instrumental in the researchers' work in the Vhembe District. These, predominantly female, community members are recruited from the study area (some as far back as 2003) and trained as interviewers and data capturers. They are even tasked with processing biological and environmental samples and storage. As part of the affected community, they can share what they learn about malaria, control interventions and research with others. They speak the local language and help to prevent "lost-in-translation" situations. They are also liaisons between researchers and the local tribal authority, with the result that community members are more open to the researchers.

"Empowering people and/or communities allows them to think outside the boxes of their health threats amid many physical and financial limitations," says Prof Bornman. "This helps build resilience and creates communities that are not reliant on government efforts, but who are self-supporting partners in the fight against malaria."

Why this research matters

Involving communities in solutions and inviting their input can enhance the benefits of standard malaria prevention techniques. Rural communities need to be informed why their homes are being sprayed, what precautionary measures to take during exposure to insecticides, and given simple hygiene methods to stay safe from malaria and other health challenges, within their limited capability. By working collaboratively with community members, solutions can be developed that are responsive to their needs, thereby having a greater impact on health outcomes.



Good health and well-being

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