Experts warn over silent gap in bid to combat killer malaria in Uganda

Messaging campaigns against the disease have targeted hospitals, schools leaving out most households, communities

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A malaria causing mosquito. File

Uganda and its partners may have made decades of investment in mosquito nets, spraying, and rapid tests to combat Malaria. Yet the country's response is getting undermined by a quieter failure: prevention messaging reach fewer than four in ten women, a communication gap that experts warn is costing lives.

A new study says that just 37–38 per cent of women and caregivers reported receiving any communication about malaria in recent months, whether through radio, community health workers, posters, or local meetings. That means more than 60 per cent of families are essentially flying blind, despite malaria being endemic and Uganda's leading cause of illness and death.

Public health experts say this evidence represents one of the biggest missed opportunities in Uganda's malaria response. The analysis was conducted by Ugandan biostatistician Ronald Mwebesa, whose work focuses on understanding what shapes people's decisions to use insecticide-treated nets (ITNs). For years, messaging campaigns have been deployed in hospitals, schools, and on the airwaves. But a central question lingered: do these messages actually change behaviour?

To answer that, Mwebesa used Propensity Score Matching (PSM)—a robust causal inference method but which had rarely applied in African malaria research until recently. Traditional analyses relied on simple correlations, which could not determine whether nets were used because of exposure to messages, or whether wealthier, more educated households were simply more likely to hear the messages and to use nets. Across Africa, ITNs have consistently prevented more malaria illness and deaths than any other available tool.

By pairing each woman exposed to the messages with a similar woman who was not, PSM is able to isolate the true effect of communication. This is a shift that African data scientists have long lacked the tools or datasets to achieve.

The findings show that simple exposure to messages, even brief radio spots, significantly increases the likelihood that families will sleep under insecticide-treated nets. For women, the chance rises by five percentage points; for young children, by four.

"These are not small numbers," Mwebesa says. "For years, people assumed malaria messages worked, but now we can measure their impact with causal evidence. We can quantify it."

The findings come as malaria remains relentless in Uganda. One in four Ugandan children under five tests positive, and in some districts, incidence reaches 500 cases per 1,000 people within six months—illustrating how quickly the disease spreads in high-transmission settings. Malaria disrupts schooling, drains household finances, and imposes a disproportionate economic burden on poor families—costs that better prevention messaging could help avoid.

The study's implications extend beyond behaviour change. They highlight Africa's evolving statistical capacity. Institutions like SSACAB have trained a new cohort of African biostatisticians capable of applying advanced causal methods to longstanding public-health challenges.

WHAT AILS WAR ON MALARIA

Fewer people are receiving messages about prevention of a disease that is Uganda's leading cause of illness and deaths, something that experts have warned, is costing lives. The current situation is undermining the heavy investments that Uganda and its partners have put in the war against the disease, including the purchase of insecticide-treated mosquito nets, spraying and rapid testing. For years, messaging campaigns have targeted hospitals, schools, and on the airwaves, leaving out communities.