

# Community and stakeholder's preferences for alternative schistosomiasis prevention strategies beyond mass drug administration in fishing communities of Mayuge District, Eastern Uganda

**Authors:** Sande Slivesteri<sup>1,2</sup>, Moses Arinaitwe<sup>4</sup>, Lazaaro Mujumbusi<sup>1</sup>, Lucy Pickering<sup>5</sup>, Edith Nalwadda<sup>1</sup>, Agnes Ssali<sup>1</sup>, Keila Meginnis<sup>3</sup>, Janet Seeley<sup>1,6</sup>, Poppy H. L. Lamberton<sup>3</sup>

## Affiliations

<sup>1</sup> Medical Research Council/Uganda Virus Research Institute and London School of Hygiene & Tropical Medicine Uganda Research Unit.

<sup>2</sup> Makerere University School of Public Health, Kampala Uganda

<sup>3</sup> School of Biodiversity, One Health, and Veterinary Medicine, University of Glasgow, UK

<sup>4</sup> Vector Borne and Neglected Tropical Diseases division, Ministry of Health, Uganda.

<sup>5</sup> School of Social & Political Sciences, University of Glasgow, UK

<sup>6</sup>Department of Global Health and Development, London School of Hygiene and Tropical Medicine, UK

## Background

Schistosomiasis remains a significant public-health concern in Uganda, with over 4 million estimated infections and 55% of the population at risk. Mass drug administration (MDA) with praziquantel is the current main control strategy. To reduce schistosomiasis transmission and morbidity, additional interventions are needed. Understanding community preferences for prevention strategies beyond MDA is vital for sustainable control. Previous work conducted by our group between 2017 and 2019 using focus group discussions, in-depth interviews, observations and participations, aimed to understand how people perceive and manage their risk of *Schistosoma mansoni* infection, identifying potential interventions to reduce infections. These data then informed discrete choice experiments which aimed to understand individual's willingness to pay and/or work for different interventions.

## Objectives

The objective of this study, was to disseminate research findings with stakeholders, gather feedback, and elicit stakeholders' preferences in comparison with individual level results. Our overarching aim is to inform tailored interventions aligning with community needs and individual preferences, for different control interventions against schistosomiasis beyond MDA.

## Methods

Between January and March 2021, we held 15 stakeholder workshops in Bugoto (5), Musubi (5), and Bwondha (5), communities on the shores of Lake Victoria in Uganda. Stakeholders included

fisher folk (predominantly man), community opinion leaders, and school-age children. Discussions focused on interventions for reducing Risk to Self (RTS) and Risk to Others (RTO) which had been previously identified in 2017-2019. RTS interventions included sensitization by community healthcare workers, murals, public radio, water filtration, and construction of water taps. RTO interventions comprised constructing latrines at the lake, market, or within a 5-minute walk from homes, enforcing fines for open defecation, and maintaining latrines. Stakeholder groups ranked interventions based on preference and justifications. The order of the rankings were then compared to the rankings from the individual level surveys in 2019. Findings were validated through three larger meetings (one in each community) and four district workshops with the district health team, water engineer, district executive council, and district WASH partners. Facilitators and barriers to each of the top three RTS and RTO interventions were then discussed in more detail.

## **Results**

Constructing public latrines near the lake and/or market, were the most preferred intervention for RTO, in comparison to the discrete choice experiment results when individuals reported preferring latrines within a 5-minute walk from home. Community sensitization and access to safe tap water were favored for prevention of RTS by the stakeholders. The facilitating factors for latrine use included penalties for open defecation, proximity, cleanliness, and education. Appointing and training numerous Village Health Team members, along with providing support, were described as helpful for community sensitization. While NGOs and government were expected to implement interventions, community members in the stakeholder meetings expressed willingness to maintain and cover associated costs, similar to the discrete choice experiment results.

## **Conclusions**

Our findings emphasize the community's preference for tailored interventions in combating schistosomiasis beyond MDA, but also highlighted differences between individual level preferences and ones reported during group meetings. Engaging community stakeholders can help to tailor and contextualize interventions for schistosomiasis prevention. How this approach affects intervention uptake and the true sustainability of these solutions needs to be addressed in future studies.