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disease control, better health

SYNOPSIS

Assessing the feasibility, acceptability and impact of seasonal malaria chemoprevention in Mozambique

Background

To prevent malaria in those most vulnerable in areas with highly seasonal malaria transmission, the World Health Organization (WHO) recommends seasonal malaria chemoprevention (SMC). This involves administering four monthly courses of sulfadoxine-pyrimethamine (SP) and amodiaquine (AQ) to children 3–59 months during the peak malaria transmission season. SMC is a safe, cost-effective and feasible intervention that can prevent up to 75 percent of malaria cases in under-fives.[1]

WHO recommends that SMC should not be implemented in areas where the therapeutic efficacy of SP or AQ is below 90 percent.[2] With resistance to SP widespread in east and southern Africa, SMC has so far only been implemented across the Sahel region of west and central Africa. However, some suggest that SP may retain its protective effect even in areas where resistance is high. The mid-term review of Mozambique's 2017–2022 Malaria Strategic Plan identifies SMC as a strategy to accelerate impact in the country's highest burden locations.[3]

Malaria Consortium is a leading global implementer of SMC. In 2020, we will reach over 12 million children in Burkina Faso, Chad, Nigeria and Togo with SMC.

Objectives

This study aims to assess the feasibility, acceptability and protective effect of SMC in Nampula province, Mozambique, where malaria transmission is highly seasonal. We aim to:

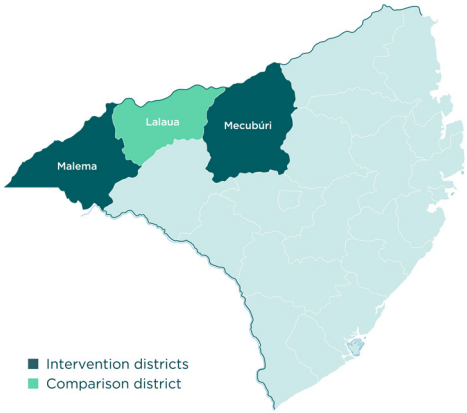
- adapt our SMC implementation model to the local context
- evaluate the process of implementing SMC in Mozambique, especially regarding coverage and quality
- assess the acceptability of SMC to beneficiaries, implementers and policy makers
- determine the effectiveness of SMC in reducing malaria morbidity among children 3–59 months.

Methods

Led by the National Malaria Control Programme (NMCP), the study will take place in three districts in Nampula province and will be implemented in partnership with the Centro de Investigação em Saúde de Manhiça. We will adapt our SMC implementation model to the local context, and will administer SPAQ to approximately 72,000 children 3–59 months in the intervention districts (Malema and Mecubúri) between November 2020 and February 2021 — coinciding with the rainy season. Lalaua will serve as a comparison district.

As the intervention will likely be implemented during the COVID-19 pandemic, we have developed and will apply enhanced safety guidelines.[4]

Figure 1: Map of study sites in Nampula province, Mozambique



To assess feasibility and acceptability, we will:

- document the adaptation process and pre-test intervention tools and materials
- conduct a representative end-of-round household survey (n≈1,800) to determine coverage and quality of SMC implementation
- hold key informant interviews and focus group discussions with beneficiaries, implementers and policy makers (n≈120).

We will gather evidence of the intervention's potential impact on malaria morbidity by:

- analysing Health Management Information System data from all health facilities
- running a non-randomised controlled trial through household surveys establishing confirmed malaria cases in children (n≈800)
- conducting a resistance marker study in children (n≈800).

Results

Results of this SMC pilot will be available by August 2021 and will inform future SMC policy and practice in Mozambique. If successful, subsequent research could provide a more comprehensive assessment of the intervention's effectiveness and sustainability.

References

1. Meremikwu MM, et al. Intermittent preventive treatment for malaria in children living in areas with seasonal transmission. Cochrane Database of Systematic Reviews, 2012; (2).
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3. NMCP. Report of the mid-term review of the Malaria Strategic Plan (2017–2022). Maputo: Ministry of Health; 2020.
4. Malaria Consortium. Steps for using infection prevention and control to deliver SMC during COVID-19 pandemic. London: Malaria Consortium; 2020. Available from: https://www.malariaconsortium.org/gallery-file/06170924-10-smc_covid19jobaid.pdf.

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