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Assessing coverage and quality of seasonal malaria chemoprevention in previously untreated areas of Mozambique

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Routinely monitoring SMC coverage and quality can identify areas for improvement, particularly in previously untreated areas.

Introduction

From 2020 to 2021, Malaria Consortium conducted a phased implementation study to assess the effectiveness, feasibility and acceptability of seasonal malaria chemoprevention (SMC) in a previously untreated region of Mozambique. SMC involves the intermittent administration of sulfadoxine-pyrimethamine (SP) and amodiaquine (AQ) to children 3–59 months during seasons with high malaria transmission. Over four monthly cycles between November 2020 and February 2021, approximately 81,000 children received SMC in the districts of Malema and Mecubúri in Nampula province. Routine monitoring, including an end-of-cycle household survey in January 2021, identified areas to improve coverage and quality before the next cycle, aiding SMC optimisation in new intervention contexts.

Methods

- The household survey employed the lot quality assurance sampling method to estimate SMC coverage and assess the quality of delivery.
- Caregivers of SMC-eligible children were surveyed in 23 health facility catchment areas, including 13 in Mecubúri and 10 in Malema.
- In each catchment area, 40 households were randomly selected using a probability proportional to size sampling method.
- District-level estimates for priority coverage and quality indicators were reported and aggregated across catchment areas.
- Estimates were expressed as percentages along with their corresponding 95 percent confidence intervals (95% CI).

Results

- End-of-cycle survey findings were discussed with SMC implementers at provincial, district and health facility levels.
- Subsequent refresher training for community distributors included issues identified by the survey, such as coverage and the importance of completing the full course of SMC medicines.
- Meetings were held with guide leaders to reinforce their role and responsibilities in raising community awareness.

Conclusion

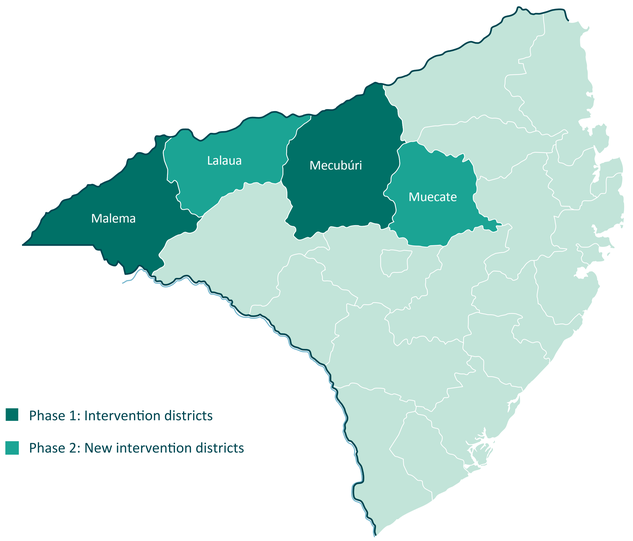
The end-of-cycle survey was instrumental in assessing the coverage and quality of SMC delivery, and produced rapid results that were available in time for actions to be taken before the next cycle. Those actions contributed to improving coverage among eligible children and completion of the full course of SMC medicines. Continuous monitoring of SMC through end-of-cycle surveys, and subsequent actions based on the results, can inform strategies for future SMC cycles and rounds, making SMC implementation more efficient.

Results

Table 1: Indicators by district after actions taken in response to the survey results

Key Indicators	Mecubúri percentage (95% CI)	Malema percentage (95% CI)
Households with eligible children visited by SMC distributors	86.5 (83.2–89.3)	73 (68.3–77.2)
SMC medicines administered to eligible child (day 1)	85.4 (82.0–88.2)	81.7 (77.5–85.3)
Eligible child received complete three-day course of SMC medicines	72.1 (68.0–75.9)	77.7 (73.3–81.7)
Administration of SMC medicines observed by community distributor (day 1)	91.2 (88.1–93.6)	98.2 (95.9–99.3)
Caregiver reported community distributor wore mask	97.1 (95.0–98.4)	97.2 (94.4–98.7)
Information on COVID-19 prevention received	58.9 (54.1–63.5)	41.4 (35.2–47.8)
SMC record card retention	96.4 (94.1–97.9)	96.6 (93.9–98.2)
All doses of SMC medicines received marked on card	94.4 (91.7–96.3)	93.7 (90.2–96.2)
Caregiver accepted SMC administration (not refused)	85.4 (82.0–88.2)	81.7 (77.5–85.3)
SMC awareness (heard of SMC)	95.8 (93.6–97.3)	69.7 (64.9–74.2)
SMC knowledge (purpose of SMC)	85.1 (81.6–88.1)	64.9 (58.9–70.4)
SMC knowledge (age eligibility for SMC)	85.3 (81.9–88.3)	68.5 (62.6–73.8)
SMC knowledge (importance of age eligibility for SMC)	76.1 (72.1–79.7)	59.5 (53.5–65.3)
SMC knowledge (importance of administering complete course of SMC medicines)	86.6 (83.2–89.4)	69.2 (63.3–74.5)
SMC knowledge (adverse events)	88.4 (85.1–91.0)	69.5 (63.7–74.8)
Confidence in SMC efficacy	88.8 (85.6–91.3)	88.5 (84.1–91.9)

Figure 1: Map showing districts where SMC is being researched in Nampula province



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