

Evaluating the adaptation of seasonal malaria chemoprevention implementation during COVID-19 in Karamoja, Uganda

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Introduction

Malaria reduction and elimination in Uganda require new interventions.^[1] In 2021, Malaria Consortium and the Ministry of Health conducted research on administering sulfadoxine-pyrimethamine and amodiaquine (SPAQ) over five cycles of seasonal malaria chemoprevention (SMC) in Moroto and Kotido districts, where malaria transmission is highly seasonal. Implementation took place during lockdown and at the peak of the COVID-19 pandemic. Our objective was to evaluate the adaptation of the Sahel's SMC model and assess acceptability of its implementation among Uganda's Karamojong pastoralist community.

Methods

- We conducted a case series study in Moroto and Kotido districts (June–October 2021) using an observational and cross-sectional descriptive design.
- We used qualitative and quantitative data collection methods: key informant interviews at the end of each cycle with districts and Ministry of Health staff; focus group discussions with caregivers; a review of implementation guidelines and reports from the Sahel, and World Health Organization (WHO) documentation; and an end-of-round (EoR) survey.
- Using the Medical Research Council Framework^[2] and Carroll's conceptual frameworks,^[3] we evaluated SMC adaptation and implementation, respectively.

Results

- Qualitative data demonstrated successful adaptation with high acceptability among communities, comparable to programmes in the Sahel.
- In total, 409,495 doses of SPAQ were administered to eligible children over five cycles. An overall administrative coverage rate of 97 percent was achieved in cycle 1, increasing to 120 percent in cycle 5. This increase was due to children under three months becoming eligible for the targeted age group (3–59 months), and children aged 59 months continuing to receive SPAQ until cycle 5 was completed. Nomadism among the population also saw children receive SPAQ on top of the initial target. Coverage was 99.6 percent according to the EoR survey (Figure 1).
- Adherence to the day 3 dose stood at 99.4 percent in cycle 5.
- There were no reports of COVID-19 cases associated with SMC.

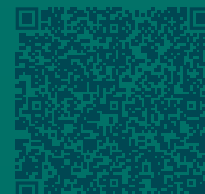
Conclusion

We successfully adapted the SMC implementation model in the Sahel to the Ugandan context, achieving high acceptability and administrative coverage. Using existing health structures has ensured sustainability. The Ministry of Health recommends rollout to other districts in the region in alignment with WHO's criteria^[5] for SMC implementation.

References

1. Uganda National Malaria Control Division (NMCD). National malaria control and elimination strategic plan 2021–2025. Kampala: NMCD; 2020.
2. Hoosman S, Pegah M, Shahrzad G, Mohamad R. *Medical Research Council framework for development and evaluation of complex interventions: A comprehensive guidance*. Journal of Education and Health Promotion, 2020; 9(1):88.
3. Carroll C, Patterson M, Wood S, Booth A, Rick J, Balain S. *A conceptual framework for implementation fidelity*. Implementation Science, 2007; 2(40).
4. Malaria Consortium Uganda: End of Round one survey report for seasonal malaria chemoprevention; 2021.
5. WHO. *Consolidated guidelines for malaria*. Geneva: WHO; 2022.

The Sahel's SMC implementation model is feasible in Uganda. We recommend scale-up in line with WHO guidelines



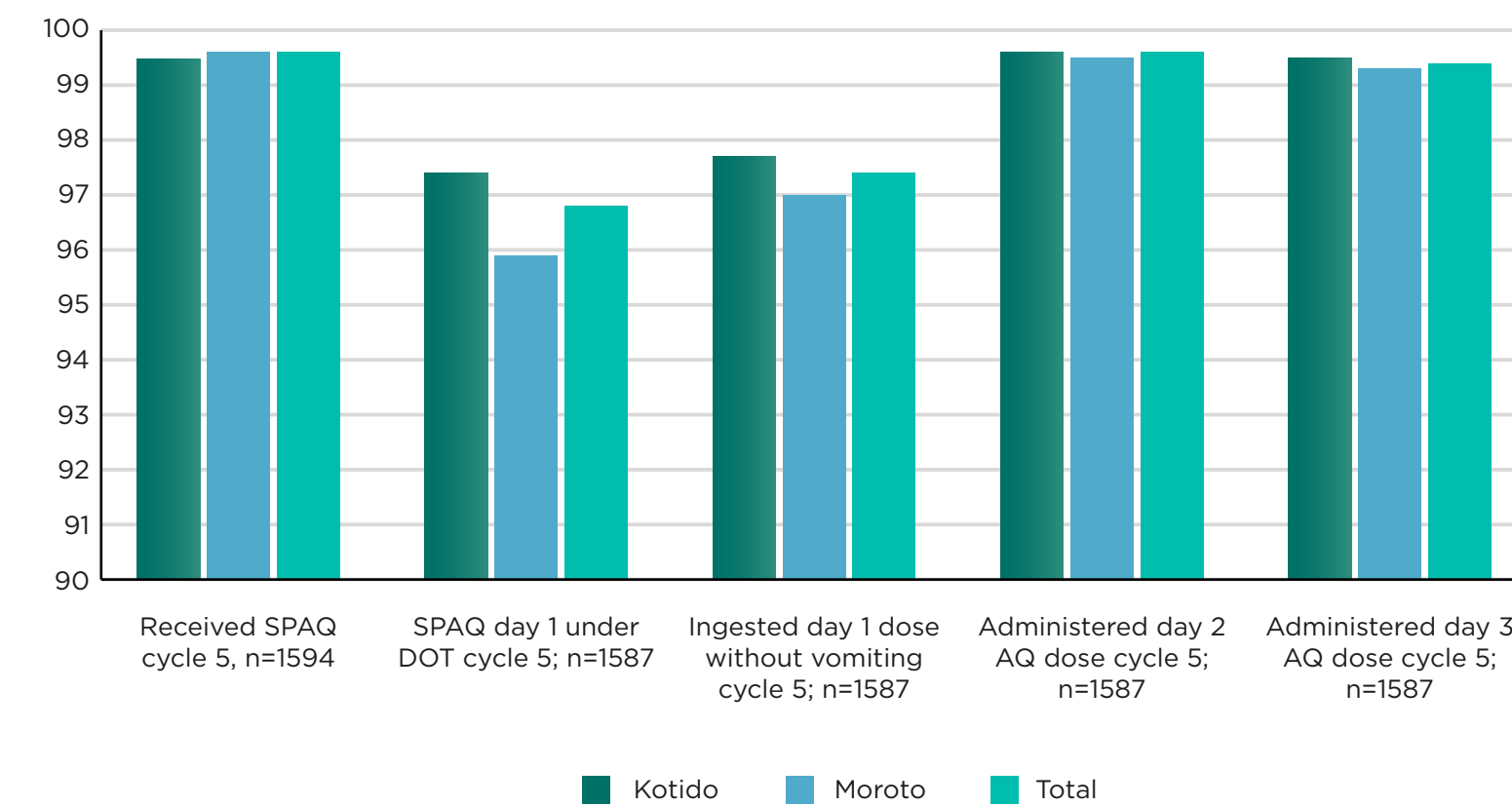
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Supplementary visual

Figure 1: End-of-round survey results (round 1) on coverage, acceptability and adherence to SMC protocol, Uganda^[4]



“The community is very grateful. They rush whenever they hear about the supply of SPAQ...[They have] responded very well and they love the programme.”

Community leader, Moroto district

“The district leadership looks at this programme as being very helpful to the community in the fight against malaria, and that's why we are solely behind the programme.”

Political leader, Kotido district

“I accepted [SMC] because I knew my children were going to benefit.”

Caregiver, Moroto district

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