

Factors predicting adherence to day 2 and day 3 seasonal malaria chemoprevention administration in four Sahelian countries

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Introduction

Seasonal malaria chemoprevention (SMC) involves monthly administration of sulfadoxine–pyrimethamine (SP) and amodiaquine (AQ) during the peak transmission season to prevent malaria among children 3–59 months.^[1] The treatment regimen comprises administration of one dose each of SP and AQ on the first day (day 1) under the supervision of SMC community distributors, while daily doses of AQ are administered by caregivers on days 2 and 3.^[2] Non-adherence to administration of day 2 and 3 AQ may make children susceptible to infection, and contribute to SP and AQ resistance in circulating parasites.^[3] We investigated predictors of adherence to day 2 and 3 AQ among eligible children in Burkina Faso, Chad, Nigeria and Togo during the last cycle of the 2020 SMC round (October). In Nigeria, these included home visits within the Lead Mothers programme, in which female community members conduct health promotion activities.

Methods

- We extracted data from representative annual end-of-round SMC household surveys and analysed the pooled data from 12,746 respondents using multilevel logistic regression models for binary outcomes (adherence to both day 2 and 3 AQ administration).

Results

- Overall, 95.4 percent of respondents reported administering AQ to their child on days 2 and 3; this proportion was highest in Burkina Faso (98.7 percent) and lowest in Chad (93.6 percent). Model results were expressed as odds ratios (OR) with 95 percent confidence intervals (95% CI).
- Positive predictors of adherence included:
 - lead mother visits (Nigeria only) after day 1 administration of SPAQ (OR: 2.5, 95% CI: 1.89–3.23, $p < 0.001$)
 - caregivers' awareness of the start date of the SMC cycle (OR: 1.4, 95% CI: 1.13–1.78, $p < 0.001$)
 - knowledge of importance of AQ administration (OR: 2.1, 95% CI: 1.64–2.78, $p < 0.001$).
- A child's previous adverse reaction to SPAQ (OR: 0.32, 95% CI: 0.24–0.41, $p < 0.001$) was a negative predictor.
- Factors such as household wealth, age, education and occupation of caregivers were not significant predictors of adherence.

Conclusion

Annual SMC coverage surveys provide an opportunity to evaluate a range of aspects of the quality of SMC delivery. These findings give early indication that approaches such as home visits by lead mothers are effective and valuable for informing the development of interventions and sensitisation initiatives to improve caregivers' adherence to the SMC protocol.

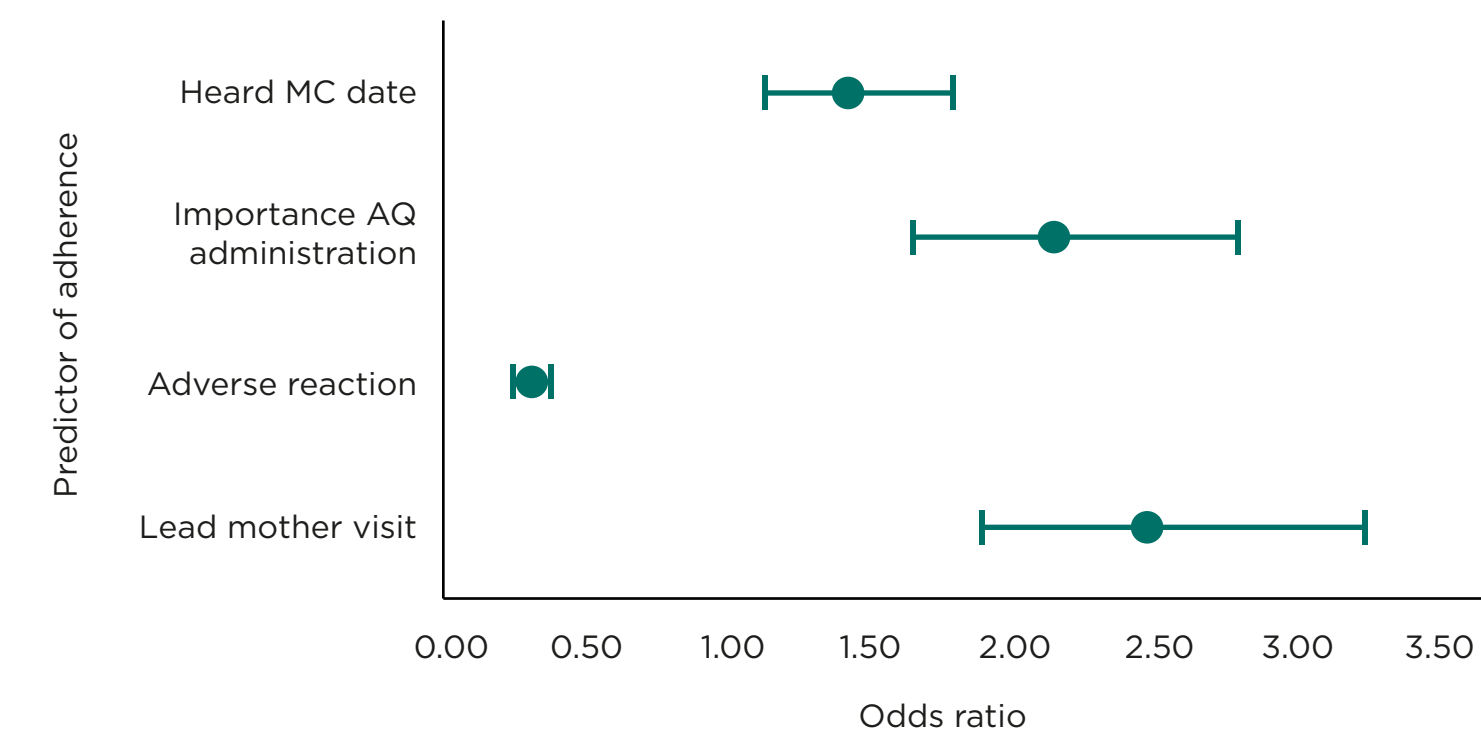
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Home visits by lead mothers and sensitisation about SMC dates and medicines can enhance caregiver adherence to administration of amodiaquine

Supplementary visuals

Figure 1: Odds ratio and 95 percent confidence interval



A caregiver administers SPAQ to her child, supervised by community distributors, Tafawa Balewa local government area, Bauchi state, Nigeria

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