

Health workers' malaria case management practices in south-central Uganda, 2017–2019

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Introduction

The USAID MAPD program supports malaria control in nine districts in south-central Uganda. Interventions include, among others, mentorship for and quarterly performance reviews of healthcare workers' malaria case management. To examine their impact, this study compared trends in health workers' practices in program and non-program areas.

Methods

- Analysis of district health information system (DHIS) data from health facilities in the intervention (n=440) and control areas (n=303).
- Study period: January 2017 to December 2019, comprising
 - pre-intervention (pre-int.)
 - intervention period with no malaria upsurge (post no upsurge)
 - intervention period with malaria upsurge (post upsurge).
- We assessed the proportion of:
 - suspected malaria cases that were tested at outpatient departments (OPDs)
 - suspected cases with a negative test treated with artemisinin-based combination therapy (ACT)
 - total inpatient department (IPD) deaths attributable to malaria.
- We also assessed the availability of ACTs and malaria rapid diagnostic tests (mRDTs).

Results

- In the intervention area the proportion of suspected malaria cases that were tested at OPDs increased from 82 percent (95% confidence interval (CI): 81.9 to 82.1 percent) pre-int. to 92 (95% CI: 92.7 to 93.0 percent) post no upsurge and 68 (95% CI: 68.2 to 68.4 percent) post upsurge. In the control area it declined from 65 percent (95% CI: 65.9 to 66.1 percent) pre-int. and post no upsurge to 37 (95% CI: 37.2 to 37.3 percent) post upsurge.
- In the intervention area the proportion of suspected cases with a negative test treated with ACT decreased from 34 percent (95% CI: 34.7 to 34.9 percent) pre-int. to 21 (95% CI: 21.3 to 21.5 percent) post no upsurge and four (95% CI: 4.5 to 4.6 percent) post upsurge. In the control area it declined from 48 percent (95% CI: 48.8%, 49.1%) pre-int. to 17 (95% CI: 16.6 to 17.0 percent) post no upsurge, but then grew to 32 (95% CI: 31.9 to 32.2 percent) post upsurge.
- In the intervention area the proportion of total IPD deaths attributable to malaria decreased from 18.4 percent (95% CI: 16.6 to 20.4 percent) pre-int. to 3.1 (95% CI: 2.6 to 3.6 percent) post no upsurge and 1.8 (95% CI: 1.4 to 2.4 percent) post upsurge. In the control area it declined from 3.6 percent (95% CI: 3.0 to 4.4 percent) pre-int. to 1.7 (95% CI: 1.3 to 2.0 percent) post no upsurge, but then grew to 3.2 (95% CI: 2.5 to 3.9 percent) post upsurge.
- During the study period, Uganda had a stable supply of policy-recommended ACTs and mRDTs.

Conclusion

This study shows that health workers in MAPD districts can sustain appropriate case management practices, even in periods of increased workload (i.e. during malaria upsurges). The MAPD program's capacity development activities could, therefore, further improve malaria case management nationally if scaled up across the country. However, this study did not explore other factors that may affect health workers' practices (e.g. qualifications, motivation or pay), so our results should be interpreted with that in mind.

Capacity development interventions supported Ugandan health workers to improve their management of malaria, even during upsurges

Supplementary visuals

Figure 1: Map of study areas, 2017–2019

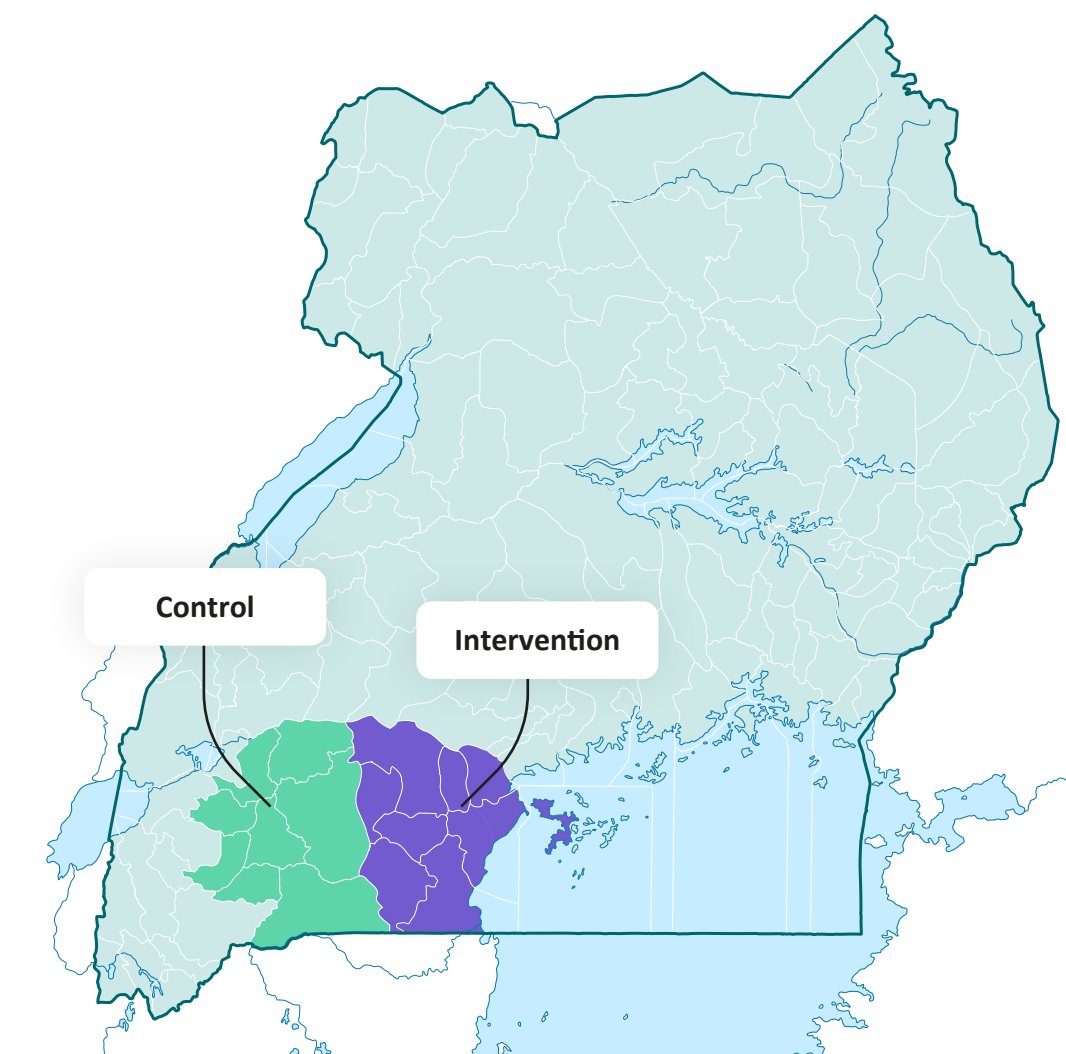


Table 1: Trends in performance on outcome indicators by intervention area

Outcome indicators	Intervention area (n=440 health facilities)			Control area (n= 303 health facilities)		
	Pre-int.	Post no upsurge	Post upsurge	Pre-int.	Post no upsurge	Post upsurge
Proportion of suspected malaria cases tested in OPDs	895,072/ 1,090,776 82%	1,456,929/ 1,570,818 92%	886,099/ 1,177,791 75%	756,441/ 1,146,156 65%	911,642/ 1,132,2932 69%	631,731/ 1,693,818 37%
Proportion of suspected cases with a negative test treated with ACTs	156,489/ 449,119 34%	161,445/ 754,076 21%	20,702/ 452,718 4%	188,719/ 385,165 48%	92,618/ 553,831 17%	131,428/ 409,374 32%
Proportion of total IPD deaths attributable to malaria	305/ 1,649 18.4%	167/ 5,348 3.1%	54/,847 1.8%	108/ 2,944 3.6%	93/ 5,461 1.7%	78/ 2,424 3.2%



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<http://bit.ly/MC-ASTMH-MAPD>

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