

Effectiveness of long lasting insecticidal nets and intermittent preventive treatment in pregnancy uptake among pregnant women attending antenatal care in Uganda

Emily Goodwin,¹ Sam Siduda Gudo,¹ Ruth Kigozi,¹ JB Bwanika,² Thomson Ngabirano,² Daniella Busharizi,¹ Badru Gidudu,¹ Harriet Abesiga,¹ Robert Abiriga,¹ Myers Lugerwa,¹ Jane Nabakozas,² Paul Mbaka,³ Joel Kisubi,⁴ Mame K.Niang,⁵ Kassahun Belay,⁴ Gloria Sebikaari,⁴ and James K Tibenderana.⁶

¹ U.S. President's Malaria Initiative (PMI), Malaria Action Program for Districts (MAPD), Uganda

² Uganda National Malaria Control Program

³ Health Information Division, Ministry of Health, Uganda

⁴ PMI, United States Agency for International Development (USAID), Uganda

⁵ PMI, Malaria Branch, Centers for Disease Control and Prevention, United States

⁶ Malaria Consortium

Introduction

Malaria in pregnancy (MiP) remains a preventable cause of adverse maternal, fetal and newborn health outcomes in Uganda. Health management information system (HMIS) data shows that 215,024 facility-based MiP cases were reported in 2018 alone. The USAID MAPD program has supported Uganda's efforts to combat MiP since 2017. This study investigates the relationship between MiP case numbers and the uptake of preventive interventions among pregnant women attending antenatal care (ANC) in Uganda.

Methods

- The study assessed HMIS data from health facilities between January 2017 and December 2019 in five program-supported regions.
- We collected HMIS data on MiP cases, uptake of three or more doses of intermittent preventive treatment in pregnancy (IPTp3+) and women receiving long lasting insecticidal nets (LLINs) as a proportion of those attending the first antenatal care visit (ANC 1).
- Correlation analysis investigated plausible trends between preventive interventions and cases within each region.

Results

- IPTp3+ increased from 5 percent (2017) to 37 percent (2018) to 64 percent (2019).
- Pregnant women receiving LLINs at ANC 1 increased from 48 to 66 to 79 percent in the same period.
- We observed plausible trends between increasing IPTp3+ rates and decreasing MiP cases, and increasing ANC 1 LLIN uptake and decreasing MiP cases, in four out of five regions.
- The West Nile region was an exception, with increases in IPTp3+ and LLIN uptake associated with increased case numbers.

Conclusion

Increasing IPTp3+ and LLIN provision at ANC likely reduces MiP cases. The situation in West Nile could indicate better health-seeking behavior and/or the regional malaria context. Repeating this study once interventions are well established could be valuable in forming stronger relational conclusions. Behavior change communication to drive early and adequate ANC coverage; quality IPTp3+ provision, including directly observed therapy; LLIN use and care; and robust supply chain and data systems should be maintained and scaled up.

Increased uptake of intermittent preventive treatment in pregnancy and long lasting insecticidal nets at antenatal care is contributing to a reduction in malaria in pregnancy cases in Uganda



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Supplementary visuals

Figure 1: Proportion of women receiving IPTp3+ and LLINs at ANC

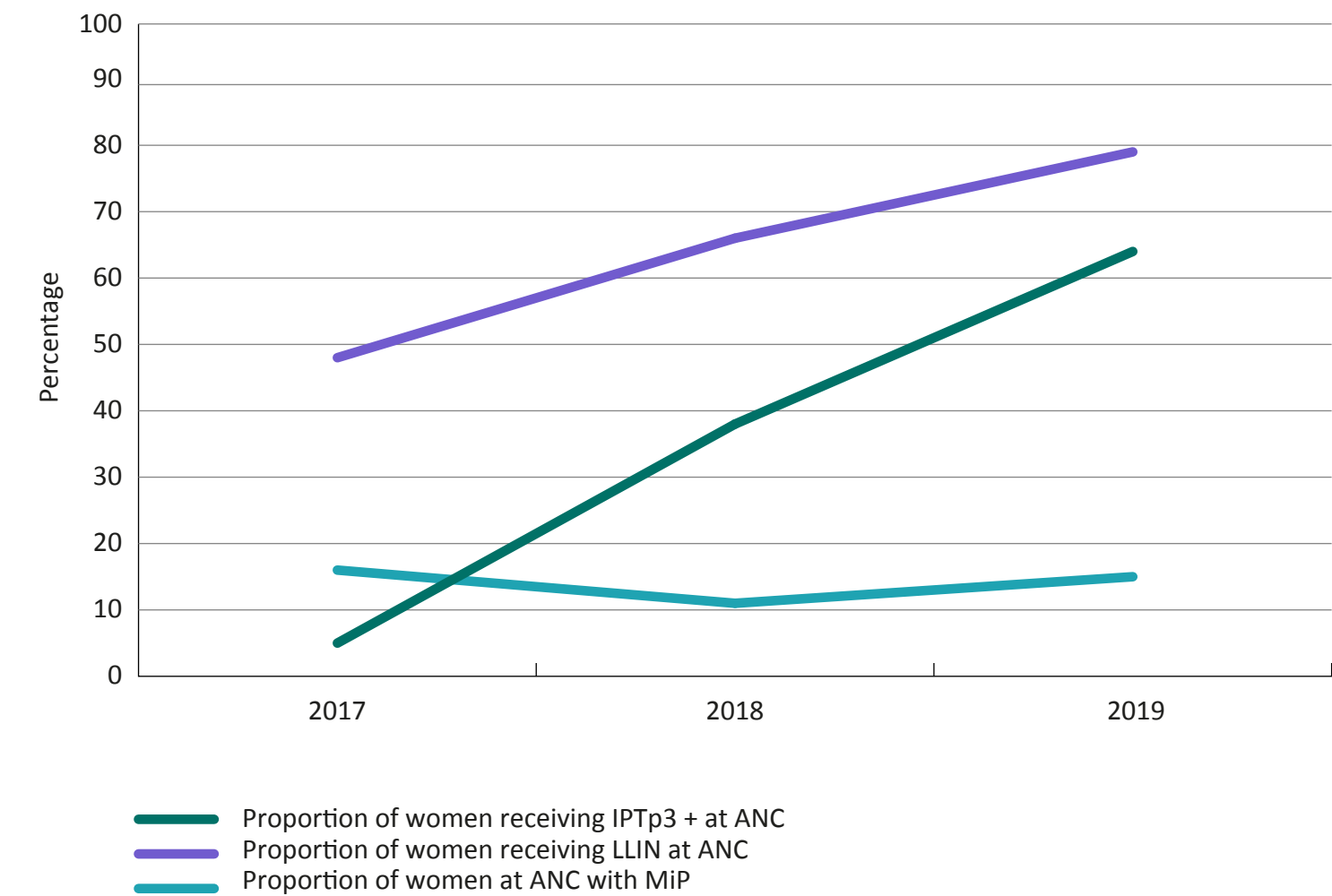


Table 1: Correlation between MiP cases, IPTp3+ and women receiving LLINs as a proportion of those attending ANC 1

Region	IPTp3+ uptake		LLIN uptake	
	r value	p value	r value	p value
Bunyoro	-0.04	0.910	-0.25	0.419
Kampala	-0.13	0.693	-0.28	0.359
Masaka	-0.8	0.002	-0.61	0.034
Rwenzori	-0.25	0.425	-0.37	0.240
West Nile	-0.71	0.009	-0.5	0.097

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