

2007 Mali Integrated Campaign: Evaluation of LLIN Ownership, Usage and Equity Eight Months Post-campaign

Executive Summary



Figure 1. Map of Mali

In Mali, the entire population is considered to be at risk from malaria, and malaria transmission varies in the five geoclimatic zones of the country. Malaria generally is endemic to the central and southern regions (with >90% of the population) and epidemic in the north. Malaria is one of the major causes of morbidity and mortality among children less than 5 years of age. One-third of all reported deaths are due to malaria, and 76% of these deaths occur in children under 5 years of age. The National Malaria Control Program (PNLP) has adopted several malaria prevention and control strategies, including the distribution of free LLINs during routine services in the public health sector, and through mass campaigns (1).

December 13-19, 2007, the Government of Mali, with partners from around the world, implemented a national integrated health campaign. The goal of this campaign was to reduce morbidity and mortality in children under 5 years of age. The campaign provided vaccinations against measles and polio, vitamin A supplementation, and albendazole for deworming. Long-lasting insecticidal nets (LLINs) were integrated into the campaign in seven of the nation's

nine regions (Bamako, Kayes, Kidal, Koulikoro, Mopti, Sikasso and Ségou). The target beneficiaries of the campaign were 2.8 million children under 5 years of age. Over 2.2 million LLINs were distributed during the campaign, and social mobilization was carried out by the Ministry of Health and the Mali Red Cross, with more than 13,000 volunteers. In June 2007, LLINs were distributed during the Nutrition Week campaign (SIAN) in two regions, Gao and Tombouctou. To reach pregnant women, beginning in 2006, LLINs were distributed free to pregnant women at the time of the prenatal consultations (CPN). Free distribution of LLINs for children under 5 with completed vaccination cards is also provided.

Eight months after the integrated campaign, a national household-based survey was carried out to evaluate ownership and usage of insecticide-treated nets (ITNs) by the three segments of the population indexed by RBM: households, children of less than five years, and pregnant women. Personal digital assistants (PDAs) were used to collect information on all members of the household, all bednets, and on household economic indicators, with specific questions pertaining to children under 5 and women of reproductive age. The survey took place August 9-23, 2007. This report presents the key results of the evaluation¹ for the survey's primary objectives at the national and regional level².

¹ The detailed report is available in French and English at the HealthBridge website

(http://www.healthbridge.ca/malaria_redcross_e.cfm) and at the Canadian Red Cross website.

² Three main categories of mosquito nets are used in this report: ITNs refers to conventional nets treated with insecticide in the past six months; LLINs refers to long-lasting insecticidal nets; and MIIs refers to ITNs + LLINs.

MII Ownership and Hanging

Nationally, 91.0% of all households owned at least one net of any type, and 82% of all households owned at least one MII (Figure 2). More than 77% of households had at least one MII hanging the previous night (Figure 3).

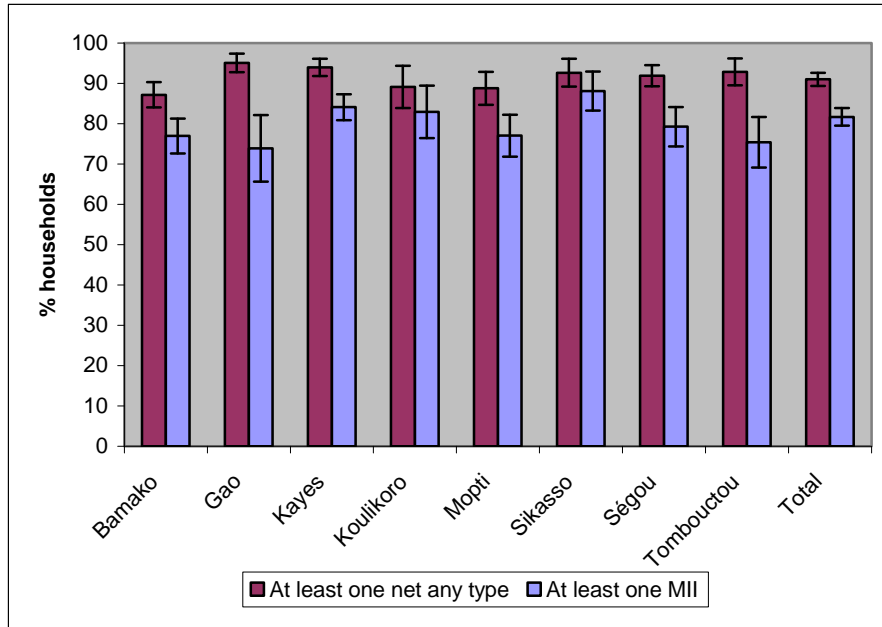


Figure 2. MII ownership rates

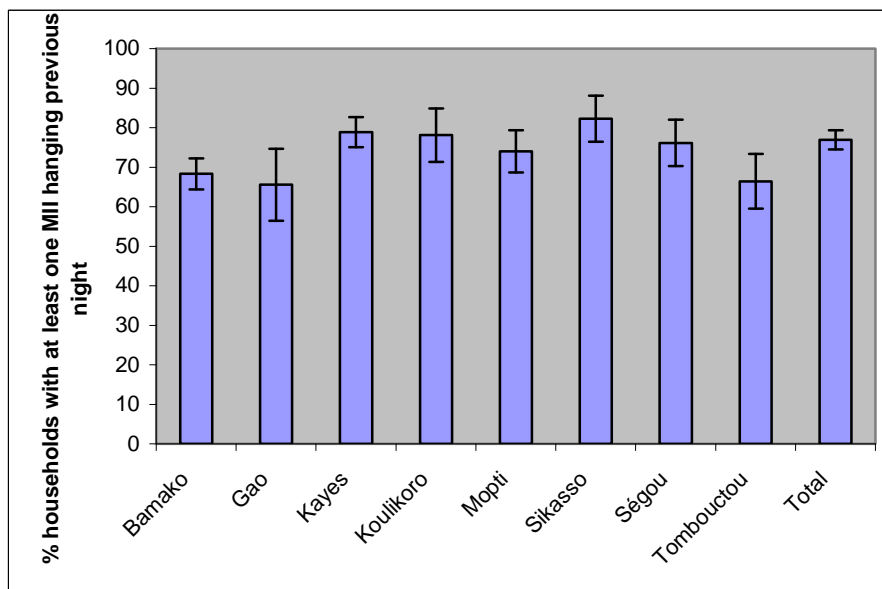


Figure 3. MII hanging rates

Equity of MII Ownership

A high level of ownership of MIIs post-campaign (71-86%) was observed across wealth quintiles, with an equity ratio of 0.88 (Figure 4).

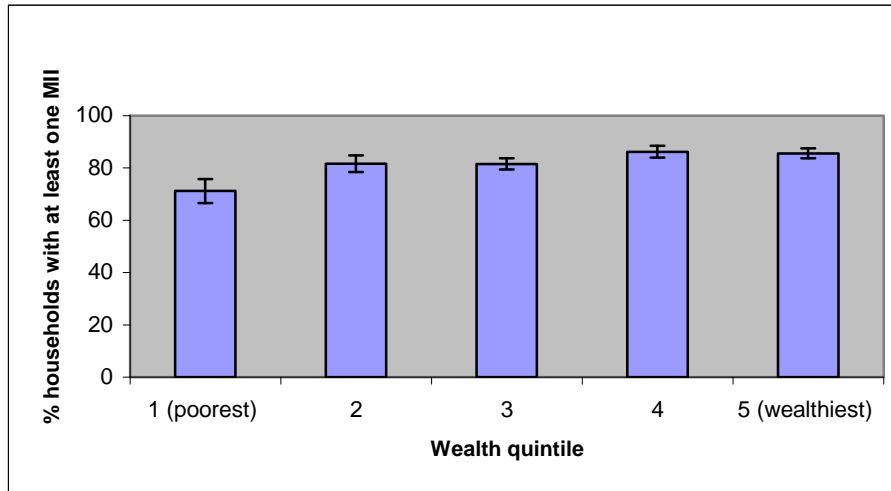


Figure 4. MII ownership across wealth quintiles

Equity of MII Hanging

A high rate of hanging of MIIs in households (65-82%) was observed across wealth quintiles with an equity ratio of 0.81.

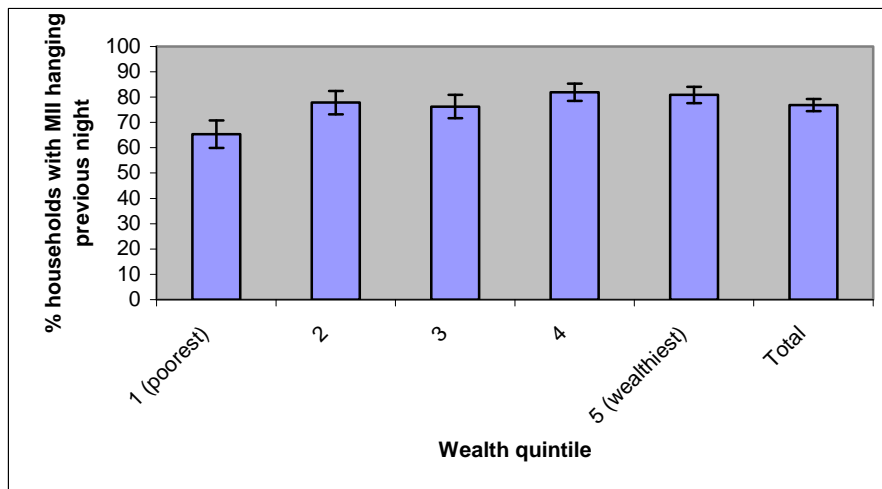


Figure 5. MII hanging rates across wealth quintiles

MII Usage

At the national level, 80% of children under five slept under a MII the previous night (Figure 6). This figure increases to 93% in those households that own an MII. The rates of MII usage by under-fives varied in the regions from a low of 67% in Gao to a high of 80% in Ségou.

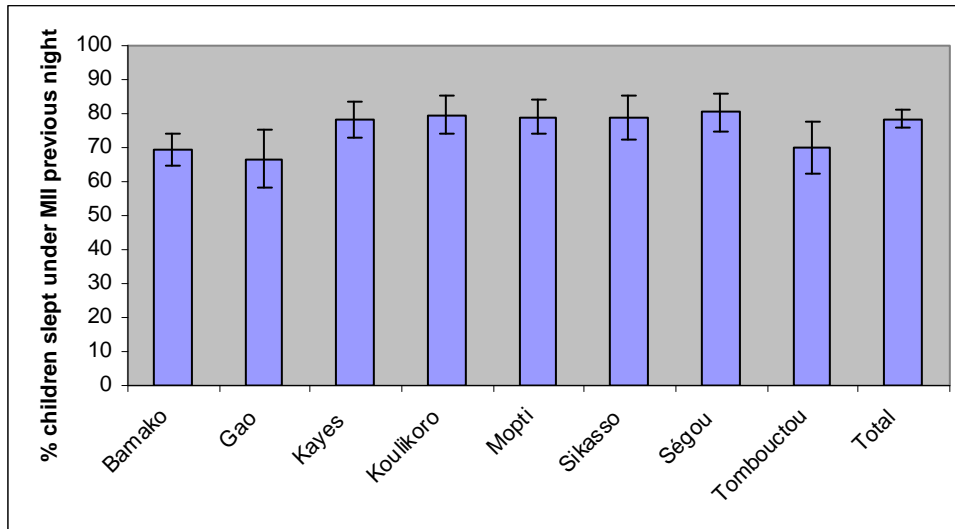


Figure 6. Usage of MIIs by children under 5

At the national level, 74% of pregnant women slept under a MII the previous night. The rate of MII usage by pregnant women varied in the regions from a low of 59% in Gao to a high of 80% in Mopti (Figure 7).

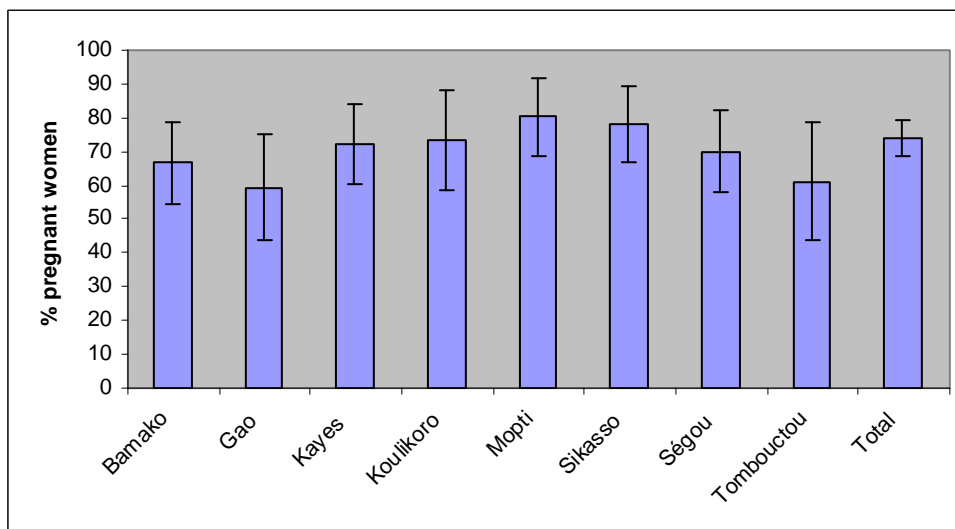


Figure 7. Usage of MIIs by pregnant women

Equity of MII Usage by Children under 5

A high level of usage of MIIs by children under 5 (75-77%) was observed across wealth quintiles (Figure 8), with an equity ration of 0.97

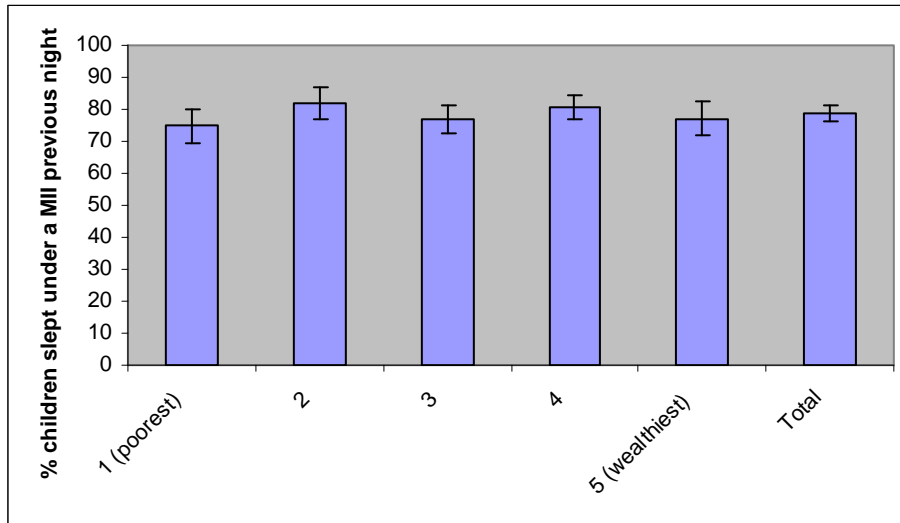


Figure 8. Usage of MIIs by children under 5 across wealth quintiles

Equity of MII Usage by Pregnant Women

Usage of MIIs by pregnant women ranged (from 65-81%) across wealth quintiles (Figure 9), with an equity ration of 0.89.

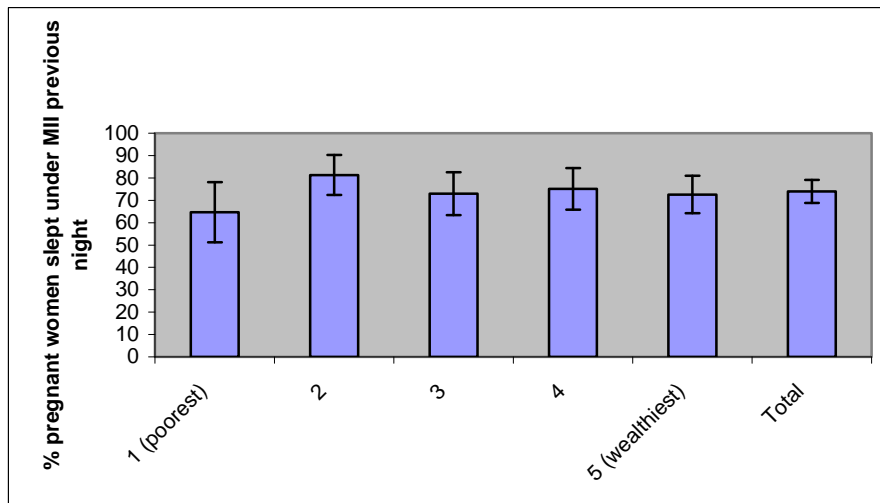


Figure 9. Usage of MIIs by pregnant women across wealth quintiles

Conclusion

The survey results indicate that the routine service delivery of insecticide-treated nets through the public health sector augmented by the free distribution of LLINs during a large-scale integrated health campaign can rapidly increase the ownership and usage of ITNs and help countries move towards attaining the RBM 2010 targets (2).



Surveyor with handheld computer (PDA) conducting an interview (photo: J. Cervinkas)

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References

1. PMI (2008) President's Malaria Initiative. Malaria Operational Plan (MOP), Mali FY 2008.
2. RBM (2008) The Global Malaria Action Plan. The Roll Back Malaria Partnership, Geneva.