



Successful Practices to Increase Intermittent Preventive Treatment in Ghana

Introduction

The devastating consequences of *Plasmodium falciparum* malaria in pregnancy (MIP) are well-documented, including higher rates of maternal anemia and low birth weight (LBW) babies in areas of stable malaria transmission. In Ghana, MIP accounts for 9.4% of maternal deaths.

MIP Policy

Since 2004, Ghana has supported a multi-pronged approach to control MIP including: 1) intermittent preventive treatment during pregnancy (IPTp) with sulfadoxine-pyrimethamine (SP); 2) consistent use of insecticide-treated bed nets (ITNs); and 3) prompt and effective malaria case management during pregnancy. Ghana's current guidelines¹ promote three doses of IPTp-SP delivered through focused antenatal care (ANC) services. The three-dose policy affords pregnant women multiple opportunities to receive IPTp-SP during the second and third trimesters of pregnancy. Additionally, delivery through focused ANC services allows the health care provider to provide comprehensive services for each woman and directly observe her taking IPTp-SP. However, health workers at the community level can also dispense the subsequent doses of IPTp-SP after the first dose of IPTp-SP, which must be given by a skilled health professional.

Intermittent Preventive Treatment during Pregnancy in Ghana

IPTp-SP policy adopted in 2004 recommends three doses of IPTp-SP for all pregnant women:

- Beginning at 16 weeks of pregnancy
- Given monthly
- Administered through Directly Observed Therapy

Overview

This brief highlights Ghana's efforts to combat MIP from 2007–2010; specifically, its success in dramatically increasing uptake of IPTp. The brief targets policymakers, program managers and health care workers as countries work toward increasing IPTp uptake as a core component of MIP control.

Table 1: IPTp Uptake and ITN Use

Indicator	2008 Demographic and Health Survey (DHS) ^{2‡}	2011 Multiple Indicator Cluster Survey (MICS)
Proportion of pregnant women who slept under an ITN the previous night [‡]	27%	33%
Proportion of women who received two or more doses of IPTp during their last pregnancy in the last two years	44%	65%
Proportion of pregnant women attending 4 or more ANC visits	78%	87%

¹ At the time this brief was developed, Ghana was in the process of updating its Guidelines on MIP, which are expected to promote frequent dosing of IPTp beginning in the second trimester and throughout pregnancy.

² ‡ Reflects the Measure DHS project's corrected figures for ITN coverage in Ghana. Due to a coding error, the DHS 2008 reported usage of 20% for pregnant women

Between 2008 and 2011, IPTp coverage increased from 44% to 65% (see Table 1). This increase begs the question, “What did Ghana do to increase IPTp so substantially in three years?” Ghana’s high rates of ANC attendance provide an effective platform for the delivery of comprehensive services during pregnancy including MIP with frequent dosing of IPTp. Factors contributing to Ghana’s high ANC attendance include: 1) women’s desire to identify the cause of pregnancy-related problems and take correct medicines; 2) perception among pregnant women that ANC is routine or even “mandatory” during pregnancy leads to early initiation of ANC and regular attendance; 3) health workers’ willingness to pay attention to women’s complaints and not turn them away even when they come in very early during the first trimester; and 4) presence of behavior change communication (BCC) interventions to encourage women to attend ANC as soon as they realize they might be pregnant. Women were not sent home when attending ANC during first trimester.³

Leadership

In Ghana, the National Malaria Control Program (NMCP) in partnership with the Reproductive and Child Health Department (RCHD) within the Family Health Division (FHD) took an active role in spearheading efforts to ensure increased outcomes for MIP. Government leadership led to strong coordination of supporting partners, increased awareness and support for comprehensive ANC services including MIP, and strong and unified commitment from partners and donors to ensure comprehensive services for pregnant women including MIP. The NMCP and RCHD/FHD also worked closely together in the development of key national policy documents including guidelines and training materials prior to 2008. These documents set the foundation for proposed coordination and harmonized program rollout. Key roles are highlighted in Table 2.

Table 2: Key Roles in Accelerating IPTp Uptake

National Malaria Control Program	Reproductive and Child Health Department
<ul style="list-style-type: none"> ▪ Development of national malaria policy and guidelines, with support from Global Fund ▪ Development of training materials and job aids, in collaboration with partners ▪ Trained health care staff, especially District Health Management Teams (DHMTs), midwives, doctors and pharmacists ▪ Development and use of BCC materials on IPTp ▪ Designated NMCP staff to work exclusively on IPTp ▪ Led coordination efforts with stakeholders meetings to discuss issues on IPTp ▪ Updated national curriculum of midwifery, public health nursing and rural health training schools with IPTp, in collaboration with Jhpiego ▪ Trained and supervised tutors and preceptors, in collaboration with Jhpiego ▪ Developed sentinel sites to monitor the program and also developed a form for adverse effects and monitored its use 	<ul style="list-style-type: none"> ▪ Inclusion of IPTp in focused ANC activities ▪ Reporting on IPTp 1, 2, 3 in the Midwives Monthly report form ▪ Contributed to the development of the IPTp policy and guidelines and integrated IPTp into most of their training materials

Key Interventions

Ghana adopted an integrated approach for prevention and control of MIP, leading to improved supply, demand and management of MIP. Three key interventions, outlined in Table 2 below, contributed to this integrated approach. While each intervention on its own contributed to Ghana’s success in increasing IPTp uptake, it was the combination of and complementarity between interventions that made the difference in the realization of results. Key interventions

³ Pell C et al. 2013. Factors Affecting Antenatal Care Attendance: Results from Qualitative Studies in Ghana, Kenya and Malawi. *PLOS One* 8(1): e53747.

outlined below were augmented further by strengthened supportive supervision (SS) and monitoring and evaluation.

Table 3: MIP Key Interventions

1. Increasing Demand: Mobilized communities to increase demand for MIP, especially second and third doses of IPTp-SP	
Key Outputs	What made the intervention work?
<ul style="list-style-type: none"> ▪ 11,000 nationwide radio spots reached more than 10 million people with IPTp messages ▪ Social mobilization through 55 NGOs reached 3,176,386 people ▪ Advocacy meetings held with 6,300 opinion leaders ▪ Community dramas reached more than 85,000 ▪ Civil society engagement conducted with organized groups and faith-based organizations 	<ul style="list-style-type: none"> ▪ Use of multi-prong BCC approach that included radio spots, social mobilization, dramas, civil society participation. ▪ Social mobilization activities served as the channel for both conducting advocacy and providing information to communities to gain their commitment to support the campaigns and practice behaviors needed for protection from mosquito bites. ▪ Civil society groups played important roles in supporting DHMTs. These groups were often able to reach populations that the health system could not reach due to a lack of resources.
2. Provider Competency: Training and education	
Key Outputs	What made the intervention work?
<ul style="list-style-type: none"> ▪ Trained 13,087 health workers on MIP and malaria case management ▪ Developed and distributed 29,000 IPTp job aids to facility-based ANC health staff in 7 regions in the public and private sectors ▪ Strengthened MIP content delivered through pre-service education at community health nursing and midwifery schools ▪ Approximately 250 students graduate annually from 10 community health nursing schools and midwifery schools, respectively 	<ul style="list-style-type: none"> ▪ Regional trainers were trained to focus on cadre specific training countrywide ▪ Focus on both in-service training and pre-service education ▪ Training culminated in the launch of grants to the regions to enable regional and district supervisors to carry out SS visits with health workers ▪ Simple guidelines disseminated to frontline providers
3. Addressing Stock-Outs: Supply and distribution	
Key Outputs	What made the intervention work?
<ul style="list-style-type: none"> ▪ Procured and distributed sufficient quantities of SP to be made available at ANC 	<ul style="list-style-type: none"> ▪ NMCP coordinated with program partners to ensure availability of SP at ANC ▪ Program partners supported distribution of SP during ANC ▪ Supported logistic and stock management training for health facilities

Supportive Supervision: While focused efforts to strengthen and standardize supportive supervision did not begin until March 2012, there was a good foundation in place to realize gains quickly once efforts were under way. SS also helped strengthen communication between districts and health facilities to identify and address issues faced by facilities. As one facility head from the Community-Based Health Planning and Services (CHPS) compound

Supportive Supervision Key Outcomes

- 625 district-level supervisors in trained in SS techniques
- SS grants to 5 regions to implement district-led SS of about 15,000 health workers
- Technical support to coach regional and district teams in SS planning and implementation
- Technical support to the Institutional Care Division (ICD) of the Ghana Health Service to monitor SS and continue SS

in the Upper East Region stated, “The supervision has helped us, especially on IPTp monitoring and how to chart monthly.” SS led to regional meetings focused on lessons learned and making mid-course corrections. The action plans developed during these regional meetings were used to identify next steps and the parties responsible for implementation.

Monitoring and Evaluation: Joint coaching visits to health facilities conducted with regional and district health officers revealed a lack of understanding of the calculation of IPTp coverage, particularly related to the denominator. With support from the President’s Malaria Initiative, a job aid on how to calculate the IPTp coverage rate was developed. The job aid, disseminated in all seven regions, enabled health workers to track the number of women receiving IPTp 1–3, determine the number of women eligible for each dose and plot the results monthly on a bar or line graph. The graphs were posted on facility walls and served as a reminder of the importance of IPTp.

Coverage: Historically, most women in Ghana attend ANC during pregnancy and the vast majority attends ANC at least four or more times. This creates an opportune platform to deliver MIP services. To help achieve high ANC utilization, Ghana has prioritized improving access to care by increasing the number of health facilities and providing free health care for pregnant women since 2008. A component of Ghana’s health system is the district hospital. In each district, between three and seven sub-districts may have a clinic and CHPS compound, providing basic services, including ANC, and serving clusters of communities below the sub-district. Most health care workers have been trained in focused ANC and when SP is available they administer the drug to pregnant women who come to their clinics. The provision of these services has contributed to helping Ghana achieve nationwide coverage for IPTp-SP.

A number of challenges and mitigation strategies were reviewed and are presented in Table 4 below.

Table 4: Addressing MIP Challenges in Ghana

Challenges	Mitigation Strategy
Stock-outs of SP	Partner coordination and distribution management
Recurrent postponement of training and other activities agreed upon by regions due to implementation of other national and partners’ program activities	Maintained flexible schedules and planned in advance with District and Regional Health Directorates for mutually acceptable dates to undertake activities
Delays from the regions in providing program and financial reports for SS	Intensified follow-up to collect reports and provided regular feedback to management and supervisors on outstanding reports
Delayed availability of ITNs for piloting of continuous distribution at ANC	Continuous communication at national level and to districts as well as throughout supervision visits to ensure that ITN shortages were addressed

Lessons learned from Ghana’s MIP implementation include:

- Sharing proposed plans for MIP and case management training, supervision and other activities with regions and districts well before activities begin allowed them to be incorporated into regional and district scopes of work and minimized delays in implementation.
- Collaboration with the ICD and RCHD in implementation of SS has resulted in new skills and knowledge that have increased national and regional capacity for routine supervisory activities to improve the quality of services in health facilities.
- Health workers and supervisors should share the action plans that result from SS visits with managers and other major stakeholders. Supervisors should actively follow up and

facilitate progress in resolving concerns that the plans address. This approach will build trust in SS as a quality improvement method and help to institutionalize its practice.

- Strengthening pre-service education will change the focus of future in-service training. For example, strong pre-service training will allow future in-service training efforts to be focused on important evidence-based updates and maintenance of relevant and important malaria competencies.

Conclusions

Contributing factors that influenced significant gains in IPTp uptake in Ghana over the past few years yield important insights to help other countries in the region realize increased coverage of IPTp. A “perfect storm” that combined the government’s leadership provided by two national programs, coordinated donor and partner support, and key programming elements resulted in the realization of high levels of IPTp uptake in a three-year period. This success was thanks to the strategic direction of the NMCP and the RCHD, as well as major support from the President’s Malaria Initiative and the Global Fund for AIDS, Tuberculosis and Malaria. In addition, the high proportion of women attending four or more ANC visits and benefiting from the three-dose IPTp-SP policy provided an effective platform to build in key interventions and help Ghana realize high IPTp uptake in a relatively short period of time.

Way Forward

Although this brief focuses primarily on IPTp uptake, ITN use and effective case management are also critical components of MIP control that will lead to improved outcomes in maternal and newborn health. ITN coverage for pregnant women in Ghana still remains alarmingly low. ITN use among pregnant women increased from 27% to 33% between 2008 and 2011, respectively. Further, little to no information is available about the case management of pregnant women. To sustain and expand gains in MIP, it will be important to: continue fostering the partnership between reproductive health and malaria control to effectively coordinate implementation; address MIP comprehensively by building on the successes in IPTp uptake and applying these to ITN use; and ensure effective case management and continued support for implementation of effective program approaches, including a multi-pronged BCC approach, capacity development, SS and routine monitoring. Additionally, to expand coverage further to all pregnant women, consideration should be given to innovative approaches that focus on community mobilization, IPTp distribution at the community level and targeted BCC efforts.