



Implementation Guide

Toolkit to Improve Early and Sustained Uptake of Intermittent Treatment of Malaria in Pregnancy

Date:
Venue:



MCSP is a global USAID initiative to introduce and support high-impact health interventions in 25 priority countries to help prevent child and maternal deaths. MCSP supports programming in maternal, newborn, and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment. MCSP will tackle these issues through approaches that also focus on household and community mobilization, gender integration, and digital health, among others.

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Abbreviations

<i>ANC</i>	<i>antenatal care</i>
<i>GA</i>	<i>gestational age</i>
<i>IPTp-SP</i>	<i>intermittent preventive treatment in pregnancy with sulfadoxine-pyrimethamine</i>
<i>LLIN</i>	<i>long-lasting insecticidal net</i>
<i>MCSP</i>	<i>Maternal and Child Survival Program</i>
<i>MIP</i>	<i>malaria in pregnancy</i>
<i>MOH</i>	<i>Ministry of Health</i>
<i>QI</i>	<i>quality improvement</i>
<i>USAID</i>	<i>US Agency for International Development</i>
<i>WHO</i>	<i>World Health Organization</i>

Background

Malaria in pregnancy (MIP) is a leading indirect cause of maternal mortality as well as stillbirth and newborn mortality. MIP is responsible for 400,000 cases of severe maternal anemia, 10,000 maternal deaths, and 200,000 newborn deaths every year (Desai et al. 2007). Eight percent of stillbirths globally and 20% of stillbirths in sub-Saharan Africa are due to malaria infection during pregnancy (Lawn et al. 2016). Uptake of intermittent preventive treatment during pregnancy with sulfadoxine-pyrimethamine (IPTp-SP) is alarmingly low across sub-Saharan Africa, despite relatively high utilization of at least one antenatal care (ANC) contact, which often occurs late in pregnancy (Desai et al. 2007). The gap between ANC attendance in sub-Saharan Africa (71% of women attend at least once [Pell et al. 2013]), and the low proportion of eligible pregnant women receiving at least one dose of IPTp-SP (52%) and three doses of IPTp-SP (17%) indicates untapped potential to provide IPTp-SP during ANC (WHO 2015b). Recent estimates indicate that a full course of IPTp-SP decreases the incidence of low birthweight by 27%, severe maternal anemia by 40%, and newborn mortality by 38% (Roll Back Malaria Partnership 2014, Sicuri et al. 2010). It is also one of the few health interventions with peer-reviewed evidence showing reductions in newborn mortality and is highly cost-effective (WHO 2013).

The World Health Organization's (WHO) 2012 updated recommendations on IPTp-SP (2012) recommend administration of the first dose of IPTp-SP as early as possible in the second trimester (13 weeks) and at every scheduled ANC contact thereafter up to the time of delivery, with at least one month between doses. Increasing IPTp-SP uptake early in the second trimester and during scheduled ANC contacts, in combination with use of long-lasting insecticidal nets (LLIN) and effective case management, is essential to prevent the devastating consequences of MIP (WHO 2013). Initiation of IPTp-SP early in the second trimester requires both early enrollment into ANC and reliable estimation of gestational age (GA).

One key barrier to achieving complete IPTp-SP coverage in pregnancy, including timely initiation of IPTp early in the second trimester, is uncertainty on the part of ANC service providers about when women enter the second trimester. Providers can avoid missed opportunities to initiate IPTp-SP in the early second trimester by learning to take a targeted history and perform an abdominal exam to identify onset of the second trimester. However, knowledge and confidence gaps, as well as service delivery barriers, often impact service providers' consistent and correct calculation of GA (Gomez 2015).

Purpose and Components of the Toolkit

Purpose

This toolkit is designed as an aid for Ministry of Health (MOH) representatives, including the National Malaria Control Program, National Reproductive Health Program, malaria and maternal and newborn health program managers, frontline health workers, and other stakeholders to improve adherence to the WHO's 2012 IPTp-SP recommendations that target pregnant women and fetuses at risk for malaria infection. It is intended for use by managers and providers as part of broader ANC and MIP prevention and treatment program efforts. The toolkit can be flexibly integrated into established pre-service education, in-service training, and supervision, and as part of broader quality improvement (QI) and health system strengthening efforts focused on reducing the burden of MIP and improving the quality of ANC services.

The toolkit was developed by the USAID-supported Maternal and Child Survival Program (MCSP), in collaboration with the President's Malaria Initiative.

Components

The toolkit includes:

- 1. A technical summary to orient relevant divisions of the MOH as well as regional and district managers, stakeholders, and other partners to the WHO 2012 IPTp-SP recommendations and common barriers to adherence with these recommendations*
- 2. A slideshow presentation to orient managers and service providers to the updated 2012 WHO IPTp-SP recommendations, and the importance and challenges of accurate assessment of early second-trimester GA for correct initiation of IPTp-SP*
- 3. An in-service training module (four-hour session) to build ANC service providers' knowledge and skills for implementing the WHO 2012 IPTp-SP recommendations*
- 4. A job aid to help ANC service providers adhere to WHO 2012 IPTp-SP recommendations, including accurate assessment of early second-trimester GA for correct initiation of IPTp-SP as part of routine ANC service delivery*

ANC as the Platform for IPTp-SP

IPTp-SP, use of LLINs, and malaria case management are essential components of high-quality ANC services in malaria-endemic areas. To achieve high coverage and be sustainable, MIP prevention and control efforts must be successfully integrated into broader ANC platforms. This toolkit is intended to complement existing ANC program efforts focused on ensuring delivery of a comprehensive package of ANC services.

A full explanation of ANC provisions is beyond the scope of this guide. Further information is available in the WHO's 2016 recommendations on ANC for a positive pregnancy experience (WHO 2016), the WHO's integrated management of pregnancy and childbirth manual (WHO 2015a), and the MIP Learning Resource Package (Jhpiego 2017). Prevention and Control of Malaria in Pregnancy, 3rd Edition.

Table 1 highlights the current essential ANC interventions recommended by the WHO, including IPTp-SP, LLIN use, and case management of MIP.

Table 1. Essential ANC interventions recommended by WHO (WHO 2015a, Campbell et al. 2006)

Cross-Cutting:

- Respectful care
- Assessment of relevant obstetric, medical, and social history
- One ultrasound scan before 24 weeks gestation (early ultrasound) is recommended to estimate gestational age, improve detection of fetal anomalies and multiple pregnancies, reduce induction of labor for post-term pregnancy, and improve a woman's pregnancy experience
- Gestational age assessment at every contact
- Assessment of problems at every contact
- ANC intervention content tailored to women's needs, gestational age, and local context

Health Promotion and Prevention:

- Management of common physiologic problems
- Promotion of safe and healthy practices, tobacco/alcohol avoidance
- Counseling on birth preparedness and complication readiness; danger sign recognition; skilled provider for ANC, birth, and postnatal care; and emergency referral for newborns with problems
- Nutritional counseling; provision of iron and 0.4 mg folic acid daily; (5 mg folic acid dosage is contraindicated with SP treatment)
- Anticipatory counseling for newborn thermal regulation and breastfeeding, and birth spacing (documented method choice and linkages to delivery and postnatal provider)
- Malaria prevention: IPTp (directly observed treatment), and provision of and counseling about LLINs (exploration of barriers to use)
- Anti-helminthics
- Blood pressure screening
- Vaccinations (tetanus; influenza in settings with seasonal influenza vaccination program)
- Screening for anemia, asymptomatic bacteriuria, Rhesus factor, HIV, TB, syphilis, and other sexually transmitted infections
- Prevention of pre-eclampsia/eclampsia for women at risk: low-dose aspirin and calcium supplementation (if low calcium intake area)

Early Identification and Management of Problems Every Encounter:

- Urinary tract infection/pyelonephritis
- Intimate partner violence
- Acute malaria
- HIV, syphilis, or TB
- Anemia
- Elevated blood pressure, pre-eclampsia (including danger signs, urine protein, and other laboratory abnormalities when feasible)
- Threatened preterm birth
- Gestational diabetes
- Malpresentation or fetal heart rate abnormalities
- Abnormal fetal growth
- Inadequate maternal weight gain

Ensuring Availability of Commodities for Prevention of MIP

The WHO-recommended three-pronged approach to prevention and control of MIP includes use of LLINs, which pregnant women should receive at the first ANC contact; IPTp-SP as early as possible in the second trimester and at every scheduled ANC contact thereafter if at least one month since last dose; and prompt case management of confirmed malaria illness with approved medications per global and local guidelines. It is important for the health system to ensure availability of all key ANC commodities at every point of contact, including malaria prevention and treatment commodities: LLINs, SP, rapid diagnostic test kits for malaria, and approved antimalarials. Malaria, maternal health, and other program managers and stakeholders must collaborate to forecast, monitor, and ensure availability of ANC commodities. Useful resources for promoting availability of key ANC commodities are found in Appendix A.

Orientation of Stakeholders, Partners, and Providers to the Toolkit

The following cascade of events is suggested to ensure that all stakeholders use a consistent approach to increase utilization of IPTp-SP as early as possible in the second trimester of pregnancy:

- 1. **MOH level:** Hold orientation for heads of the divisions of maternal, newborn, and reproductive health; the National Malaria Control Program; infectious diseases; pre-service and in-service education institutions; supply chain/commodities; QI; monitoring and evaluation; donors; and other technical partners and stakeholders. This can occur using the technical summary and slideshow presentation in a two-hour meeting.*
- 2. **Regional and district levels:** Hold orientation for regional and district health managers, malaria and reproductive health representatives, heads of hospitals and facilities offering maternity services, QI teams, health management information system/data officers, and other technical partners. Again, this can occur using the technical summary and slideshow presentation in a two-hour meeting. More time may then be needed for regions and districts to plan the rollout of in-service training and supportive supervision to all health workers providing ANC services as described below.*
- 3. **Health worker level:** Roll out in-service training.*
 - a. Existing trainers updated using the four-hour session on “Determination of Gestational Age for Correct Administration of Intermittent Preventive Treatment of Malaria in Pregnancy with Sulfadoxine-Pyrimethamine (IPTp-SP).”*
 - b. Cascade in-service training by updated trainers implemented, to provide the same four-hour sessions to approximately 20 service providers/session until all ANC service providers are trained.*
 - c. Follow up with trained service providers through the existing supportive supervision system using the skills checklist, and ensuring adequate commodities and correct data collection on indicators at each service delivery level.*

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Appendix A: Supply Chain Management Resources

I. USAID Deliver Project

The Logistics Handbook

This handbook provides an introduction to logistics and practical guidance for managing aspects of a public health supply chain. It is available in multiple languages. It was updated in 2011.

http://deliver.jsi.com/dlvr_content/resources/allpubs/guidelines/LogiHand.pdf.

Supply Chain Management Training Courses: Distance Learning

This is a series of free, computer-based courses in supply chain management. Topics include logistics management information systems, inventory systems, and storage and quantification of health commodities. These courses are continuously updated.

http://deliver.jsi.com/dhome/resources/searchresources?p_search_tok=supply+chain+management+training+course&p_search_type=SITE&btnG=search.

Supply Chain Tools: Tools for Improvement of Public Health Supply Chains

This is a series of tools, guides, and briefs developed on topics critical to the improvement of public health supply chains. It was developed in 2013.

http://scms.pfscm.org/scms/docs/papers/DELIVER_ToolsNewsAugust2013.pdf.

2. USAID Systems for Improved Access to Pharmaceuticals and Services Project

Pharmaceuticals Tools and Guidance

This is a suite of electronic tools that can help pharmaceutical managers develop sound policies and monitor supplies and services. It includes specific tools on medicine dispensing and treatment adherence tracking, medication registration, forecasting and quantification, and inventory management. It is continuously updated.

<http://siapsprogram.org/tools-and-guidance/>.

3. Partnership for Supply Chain Management

Pipeline

These desktop software tools help program managers plan optimal procurement and delivery schedules for health commodities, and monitor orders throughout the supply chain. They are continuously updated.

http://www.scms.pfscm.org/scms/communitycenter/tools#supply_chain_tools.

Partnership for Supply Chain Management Resources

The Partnership for Supply Chain Management organizes a resource portal for supply chain community members to share information and resources, and collaborate on solving supply chain issues. The site is continuously updated.

updated http://www.scms.pfscm.org/scms/communitycenter/tools#supply_chain_tools.