



*A pregnant woman attending ANC and receiving IPTp at Moyo Hospital, West Nile*

## Assessing and addressing barriers to IPT2 uptake in Uganda

### Introduction

Malaria in pregnancy (MIP) poses substantial risks to mother, foetus and newborn child. The World Health Organization (WHO) recommends intermittent preventive treatment in pregnancy (IPTp) with sulfadoxine-pyrimethamine (SP) in areas of moderate or high transmission as one of three strategies for the prevention and control of MIP<sup>1</sup>. IPTp is typically provided as part of the focused antenatal care model (ANC), which stipulates that pregnant women should have at least four ANC assessments at specified intervals<sup>2</sup>.

The Uganda National Malaria Strategic Plan sets a target of 85 percent of pregnant women receiving two doses of IPTp (IPT2) by 2015<sup>3</sup>. In 2011, the proportion of women in Uganda receiving the recommended two doses was 24.5 percent, despite high ANC attendance with two or more visits for 90 percent of pregnant women<sup>4</sup>, suggesting that many opportunities to administer IPTp are being missed.

A range of obstacles to the effective provision of ANC and IPTp have been identified in the literature, including health care system issues such as commodity stock-outs and user fees, poor organisation at health facilities, poor health worker skills and knowledge, and women's poor ANC attendance<sup>5</sup>. Poor data quality and reporting practices have also been identified as a major challenge to effective monitoring and evaluation of interventions<sup>6</sup>. Support programmes such as the Stop Malaria Project (SMP), have attempted to address many of the barriers using a combination of different approaches including training of health workers, development of job aids and tracking of stock of SP. As a result, IPTp coverage has increased in SMP districts, but coverage gaps remain and the target of 85 percent of women receiving IPT2 is far from being met.

## Methods

In order to explore supply and demand-side barriers that continue to impede uptake of IPT2 in Uganda and recommend potential intervention strategies, Malaria Consortium carried out a series of qualitative interviews with key informants, as well as a document and record review. The research was conducted in two regions of Uganda: Eastern and West Nile. The regions vary in terms of IPT2 uptake from high (32.5 percent in Eastern) to low (20.5 percent in West Nile) compared with the national average. In each region, interviews were conducted in one predominantly urban and one predominantly rural district.

At the district level, in-depth interviews were conducted with officials involved in the coordination of ANC and MIP services, such as malaria focal persons and health educators. At the facility level, health workers involved in the coordination and provision of ANC services, typically midwives and in-charges, were interviewed. In each district, the study team also carried out in-depth interviews with women who were currently pregnant or had given birth in the previous year and had attended ANC at least once. In total, in-depth interviews with seven district-level officials, 15 health workers and 16 pregnant women or mothers were conducted. Documents and records relating to ANC and IPTp were reviewed at four facilities. The document and record review was also informed by ad hoc discussions with health facility, District Health Team and Ministry of Health Resource Centre staff.

## Results

### Supply side

#### Resources

Interviewees frequently mentioned that resources for the provision of ANC and IPTp are scarce. Where supply-side respondents referred to the lack of financial resources, this was frequently linked to the lack of transport or fuel. Supply-side respondents reported that low staff levels and high workload affected the quality of service provision, diminished staff morale, limited health workers' ability to provide sensitisation and influenced women's perceptions of ANC.

#### Policies and guidelines

The guidelines currently in use in Uganda do not yet reflect the latest WHO policy recommendation of monthly IPTp administration starting as soon as possible in the second trimester of gestation<sup>7</sup>, which avoids ambiguity in terms of number of doses required and ideal timing. Concerns were raised over two specific ANC and IPTp-related policies. First, it was pointed out that it is important to reinforce the policy of

reserving SP for IPTp while discontinuing its use as a first-line antimalarial, as this has contributed towards avoiding stock-outs of SP. Second, many supply-side respondents indicated that the policy of involving men in ANC was problematic, as it led some women to delay ANC attendance while they are waiting for their partners, who are often not available or not supportive.

#### Stakeholders

Respondents in Eastern region emphasised implementation partners' positive role, particularly with regard to providing resources, commodities, capacity building and monitoring and evaluation. However, they pointed out that collaboration could be more integrated between different disease programmes and were worried about the effect of support programmes coming to an end without a clear vision for the continuation of support services. Respondents in West Nile reported that there was a lack of support from implementation partners which affected their ability to provide effective ANC and MIP interventions.

#### Monitoring and evaluation

The use of parallel reporting structures, non-standard or improvised recording tools and inconsistent recording symbols was frequently observed. There was a clear mismatch between respondents' perceptions of data as generally accurate and the widespread inaccuracies uncovered through the document and record review, which found that both under and over-reporting of ANC and IPTp indicators compared with data recorded in facilities' ANC registers were common. High variances in excess of 50 percent tended to be cases where a much higher number was reported compared with what had been recorded in the register. Where respondents acknowledged that data inaccuracies occur, they attributed them to health workers' high workload, lack of training and use of unqualified staff to record and report data, as well as pressure on health workers to report positive coverage figures. At the district level, data accuracy is compromised by the rigid format of the District Health Information System (DHIS II), which has been designed to reject certain entries as implausible, even though they represent entirely realistic scenarios. Discussions with data managers at district level revealed that they resort to adjusting the reported figures to match the data entry system's requirements.

#### Capacity building

While respondents generally agreed that receiving training and refresher training on ANC or IPTp was beneficial in terms of improving health workers' skills and knowledge, improving service quality and information provided to clients, only one-third of the health workers interviewed reported having received training specifically on IPTp. Many indicated that they relied largely on informal capacity building mechanisms, such as discussing challenges with colleagues and drawing on experience.

### ANC provision

Several of the facilities visited only offered ANC on certain days of the week. It was also mentioned that many lower-level health facilities do not offer ANC at all. Many respondents on both the supply and demand side reported that the provision of incentives such as mosquito nets played a decisive role in encouraging women to attend ANC and in making ANC attendance a positive experience.

### Provision of IPTp

Respondents in both study regions agreed that stock-outs of SP were no longer a barrier to IPTp provision in public health facilities. Stock-outs do, however, continue to impact IPTp provision at private not-for-profit (PNFP) facilities, which are required to procure SP from Joint Medical Stores. There was wide variation in terms of health workers' knowledge of when IPTp should be administered. The issue is compounded by a lack of clarity and consistency across the various documents governing the provision of IPTp in-country<sup>8</sup>. While most supply-side respondents were broadly supportive of the concept of IPTp, a few appeared to have reservations in terms of its efficacy and safety. A number of supply-side respondents from West Nile reported that they do not always provide IPTp as directly observed therapy, particularly when pregnant women raise concerns about taking IPTp on an empty stomach.

### Sensitisation

Many respondents emphasised the role of sensitisation in shaping women's and communities' attitudes towards MIP interventions. Health education sessions at facilities and media campaigns were seen as major components of sensitisation efforts. Many respondents pointed out that community engagement, for example, through community outreaches or involving village health teams in sensitisation activities, was another key channel for the dissemination of knowledge.

### Demand side

#### Affordability

Most respondents stated that ANC services were provided free of charge at public health facilities. However, a number of women reported being charged for registration or for receiving ANC cards. At PNFP facilities, respondents are frequently charged for the provision of IPTp, particularly when stocks of SP are running low. Many respondents indicated they found it difficult to find the money required to pay for indirect costs such as transport or food. However, most respondents stated that financial challenges had not affected their ANC attendance.

#### Acceptability

It was suggested by several supply-side respondents that negative attitudes towards modern medical care persist in some communities. Most demand-side respondents, however, saw access to modern care as one of the main advantages of attending ANC. The majority of the women interviewed were frequent and regular ANC attendees. This seemed to

contradict supply-side respondents' concerns with regard to women's infrequent ANC attendance, which was cited as a key barrier to IPT2 uptake. Most women interviewed stated they had initiated ANC at four months. Supply-side respondents, on the other hand, frequently referred to women's late ANC attendance. Health workers also suggested that there was a tendency among women to not seek treatment unless they feel sick. While none of the women interviewed explicitly expressed this opinion, several indicated that the reason for initiating ANC was that they felt unwell.

Women's opinions with regard to IPTp were generally positive. Some reported having experienced mild side effects, but stated that this had not deterred them from accepting to take IPTp. All women who indicated they had been offered IPTp reported they had subsequently accepted and taken the tablets. Supply-side respondents confirmed that refusal to take IPTp was extremely uncommon and even those who had concerns about its safety could be persuaded to take the medication if told about the benefits.

### Conclusions

On the demand side, user fees and persisting negative attitudes towards modern care are likely to impede uptake of ANC services. Even though the evidence is inconclusive, a tendency to attend ANC late or infrequently among some women may hinder the provision of IPT2. Acceptability of IPTp may also be affected by concerns about side effects and a reluctance to take SP on an empty stomach.

However, despite a range of concerns, women tend to have largely positive views of ANC and IPTp and tend to accept IPTp when offered by health workers. It must be acknowledged, however, that all women identified and interviewed for this study had received and accepted IPTp. To obtain a more comprehensive picture of demand-side attitudes, the study team has recently conducted a small number of additional interviews with women who have attended ANC, but have not received IPTp. To test respondents' largely positive statements about community support, the team has also conducted a small number of interviews with community and opinion leaders.

The generally low refusal rates for IPTp suggest that supply-side issues are likely to act as key barriers to IPTp uptake. This assumption is supported by a recent systematic review of the literature, which found that a key reason for not receiving IPTp "was that it was not offered by ANC staff"<sup>5</sup>. One likely limiting supply-side factor is health workers' inadequate knowledge of up-to-date IPTp guidelines, particularly with regard to the correct timing and frequency of IPTp administration, and the conflicting information provided in current policies and guidelines. Poor data management is also likely to play an important role. The document and record review found sources of data inaccuracy along the recording and reporting chain, suggesting that available IPTp uptake figures are unreliable.



## Recommendations

As part of the study on barriers to IPT2 uptake in Uganda, Malaria Consortium is planning to develop, implement and evaluate an intervention that addresses some of the key obstacles identified through the formative research summarised in this document. We propose to focus on supply-side barriers and to select a small number of health facilities to pilot an intervention which could include the following components:

1. Implement the new WHO recommendation of monthly IPTp administration starting as soon as possible in the second trimester of gestation, which avoids ambiguity in terms of number of doses required and ideal timing, maximising opportunities for IPT2 uptake.
2. Develop a simple job aid that introduces and reminds health workers of the guidelines.
3. Develop a digital, computer-aided or web-based recording and reporting system for use in higher-level facilities, as these frequently already have access to the required infrastructure in terms of computers, laptops and access to the internet.

In addition, the following steps should be discussed among all stakeholders with an interest in MIP and ANC at the national level:

4. For lower-level facilities, efforts need to be made to ensure availability of the standard recording and reporting tools, as well as clear guidance on how data is to be recorded.

5. To further improve data accuracy at the district level, the Ministry of Health Resource Centre should reformat the DHIS II entry form to allow entry of data scenarios that are plausible but currently automatically rejected by the system.
6. Roll-out of the new WHO guidelines should be complemented with the provision of training for health workers, including the development of pre-service training material.
7. To minimise staff absence for training events, increase training opportunities at the health facility as well as on-the-job training, integrated support supervision and mentoring.
8. To avoid delayed ANC attendance because women are waiting for partners to accompany them or health workers giving preferential treatment to women attending with their partners, the current guidelines with regard to male involvement in ANC should be clarified and communicated to district and facility-level staff.
9. In the interest of equity, the Government should honour its commitment to extend free maternal health services to expectant mothers accessing ANC through private-sector facilities. In particular, this would involve providing SP free of charge to all health units.
10. Continue to encourage health workers to provide health education on the risks of MIP, the rationale behind IPTp and the risks and benefits of SP, including mild side effects. This could include training health workers on health education techniques, developing a rota of health education topics and education material.

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### References

1. World Health Organization. 2004. *A Strategic Framework for Malaria Prevention and Control during Pregnancy in the Africa Region*. Brazzaville, Republic of the Congo: WHO Regional Office for Africa.
2. Lincetto O, Mothebesoane-Anoh S, Gomez P, Munjanja S: Antenatal Care. In *Opportunities for Africa's Newborns: Practical Data, Policy and Programmatic Support for Newborn Care in Africa*. Edited by Lawn J, Kerber K. PMNCH and Save the Children: 51-62.
3. Ministry of Health [Uganda]. 2009. *Uganda National Malaria Strategic Plan: 2010/11 - 2014/15*. Kampala, Uganda.
4. Uganda Bureau of Statistics and ICF International Inc. 2012. *Uganda Demographic and Health Survey 2011*. Kampala, Uganda and Calverton, Maryland, USA.
5. Hill J, Hoyt J, van Eijk A, D'Mello-Guyett L, ter Kuile F, Steketee R, Smith H, Webster J. 2013. 'Factors Affecting the Delivery, Access, and Use of Interventions to Prevent Malaria in Pregnancy in Sub-Saharan Africa: A systematic review and meta-analysis'. *PLoS Med*, 2013, 10:e1001488.
6. Ministry of Health [Uganda]. 2011. *Uganda Malaria Program Review Report [Draft]*.
7. World Health Organization. 2013. WHO Policy Brief for the Implementation of Intermittent Preventive Treatment of Malaria in Pregnancy Using Sulfadoxine-Pyrimethamine (IPTp-SP). Geneva, Switzerland.
8. Gomez P, Dickerson A, Roman E, Maternal and Child Health Integrated Program, President's Malaria Initiative. 2012. *Review of National-Level Malaria in Pregnancy Documents in Five PMI Focus Countries*. Baltimore, Maryland: Jhpiego.

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