

Policies and actions for more effective malaria in pregnancy efforts

Maternal and newborn health in Kenya

In recent years, the Government of Kenya has prioritized a range of improvements for women's health through enhanced policies and improved service delivery. However, malaria in pregnancy (MiP) continues to contribute to high maternal and newborn morbidity and mortality in the country.

The World Health Organization (WHO) currently recommends a three-tiered approach to prevent MiP—distribution of sulfadoxine-pyrimethamine (IPTp-SP), an antimalarial safe for use in pregnancy; insecticide-treated nets (ITNs); and prompt and appropriate case management.¹ Of these, Kenya has made strong progress in ITN coverage and case management, but widespread distribution of IPTp-SP still lags, threatening overall progress in the prevention of MiP. Recent data and evidence, and Kenya's current policy environment, present opportunities for the malaria and reproductive, maternal, newborn, and child health (RMNCH) communities to jointly tackle this preventable killer of women and newborns.

GLOBAL CONTEXT FOR PREVENTION OF MALARIA IN PREGNANCY

The global health community has made significant progress in the fight against malaria over the last decade, but more than 30 million pregnant women continue to live in malaria-endemic areas of sub-Saharan Africa. MiP is a significant risk factor for mothers and newborns; a malarial episode during pregnancy significantly increases the risk of maternal anemia, miscarriage, stillbirth, prematurity, low birth-weight babies, and maternal and newborn death.² While research has proven the simplicity and cost effectiveness of widespread use of IPTp-SP for preventing maternal and

newborn morbidity and mortality, scale-up has been slow in most of sub-Saharan Africa.³

In October 2013, a diverse group of global leaders, including bilaterals, multilaterals, donors, and civil-society partners came together to produce a Consensus Statement, which recognizes that the delivery of MiP interventions continues to be suboptimal, despite broader malaria control gains. The statement seeks to bridge the gap between the malaria control and RMNCH communities to tackle this challenge, explicitly stating that “RMNCH and malaria control programs should work together to ensure harmonized policies on MiP at the national level and effective and appropriate integration at the service-delivery level.”⁴



PATH / Eric Becker

MALARIA IN PREGNANCY IN KENYA

Kenya has a robust health system, and the government has demonstrated strong commitments to reducing maternal and newborn morbidity and mortality. The Kenya National

¹ WHO. *WHO Policy Brief for the Implementation of IPTp-SP*. Geneva: WHO; 2014.

² Dellicour S, Tatem AJ, Guerra CA, Snow RW, ter Kuile FO. Quantifying the number of pregnancies at risk of malaria in 2007: a demographic study. *PLOS Med*. 2010;7:1, e1000221. doi:10.1371/journal.pmed.1000221

³ Sicuri E. et al. (2010). Cost-effectiveness of intermittent preventive treatment of malaria in pregnancy in southern Mozambique. *Public Library*

of Science PLoS ONE. 2010 Oct 15; 5(10): e13407. doi: 10.1371/journal.pone.0013407.

⁴ Consensus Statement: Optimizing the Delivery of Malaria-In-Pregnancy Interventions. October 2013. Available at : http://www.pmi.gov/docs/default-source/default-document-library/tools-curricula/consensusreport_malariapregnancy.pdf?sfvrsn=4

Malaria Strategy 2009–2017 (NMS) prioritizes preventive treatment for MiP as a key pillar to moving Kenya toward being malaria free. Within the strategy, community health workers (CHWs) are tasked with providing information, education, and communication materials alongside behavior change messages. CHWs are to “refer pregnant women to ANC,” where IPTp-SP is made available through trained health providers.⁵ However, the latest Kenya Malaria Indicator Survey (KMIS 2010) shows that IPTp-SP coverage and uptake is lagging behind other preventive MiP interventions.

Currently, pregnant women in Kenya can only access IPTp-SP through antenatal care (ANC) visits. Although more than 90 percent of women attend one ANC visit, only 47 percent attend the recommended four times.⁶ Both the timing and number of ANC visits is critical to the prevention, early detection, and treatment of MiP, yet distance to facilities, concerns about substandard quality of care, and other challenges often deter women from seeking these services. According to the KMIS 2010, only 24 percent of all pregnant women receive the recommended doses of IPTp-SP beginning in their second trimester.

For Kenya to reach global and country malaria targets—including the Millennium Development Goals and objectives outlined in the NMS—rapid scale-up of IPTp-SP is critical. Access and availability to IPTp-SP through expanded platforms, including community distribution, will better enable the country to achieve the NMS target of 80 percent of pregnant women receiving appropriate preventive malaria interventions.

EMERGING EVIDENCE AND MOMENTUM FOR SCALING UP IPTp-SP IN COMMUNITIES

Increasingly, CHWs provide a crucial link between community-level care and health facilities. Task-shifting, an approach that allows CHWs to be trained in prevention (and some treatment) interventions, symbolizes health services that are focused on improving the five essential elements of the Kenya Essential Package for Health (KEPH), namely equity, access, effectiveness, efficiency, and partnerships. In fact, WHO task-shifting recommendations published in 2012 recommend “lay health workers to deliver” IPTp-SP in malaria endemic areas.⁷

A recent pilot study in West Kisumu sub-county, led by PATH, in collaboration with the Ministry of Health and USAID-funded APHIAplus program, and supported by the Bill and Melinda Gates Foundation, shows that CHWs

bridge a critical gap between women in the communities and ANC visits, and serve as a potential pathway for women to more readily obtain IPTp-SP. The study indicates that CHWs stocked with IPTp-SP have a positive impact on ANC attendance; the percentage of women who attended their fourth ANC visit was actually higher in the pilot health facilities where CHWs were stocked with IPTp-SP than in the control regions where CHWs continued to serve only as a referral mechanism. More than 50 additional doses of IPTp-SP were distributed monthly by CHWs, and distribution of the second IPTp-SP dose increased by 50 percent in the pilot region. Furthermore, the pregnant women reported that they appreciated the knowledge and information the CHWs could provide alongside the prophylaxis, and they worried less about health provider attitudes at an ANC.



PATH / Laura Newman

An additional study conducted in former Greater Nyando district assessed the effectiveness of ANC to deliver both IPTp-SP and ITNs to pregnant women. Results showed that women were less likely to receive IPTp-SP if they had low malaria knowledge, had a child who died, or had their first ANC visit late in the pregnancy. Final conclusions identified ANC as a more effective delivery channel for ITNs than for IPTp-SP, possibly because ITNs require only one ANC visit. Effective IPTp-SP requires multiple follow-up visits, which many women are unable to fulfill. This research suggests that with proper training and safeguards, IPTp-SP could more effectively and consistently happen at the community level under the care of a CHW.⁸

These emerging data are further supported by research from Nigeria and Uganda. In Nigeria, results showed that “the inclusion of community-based programs can substantially increase effective access to malaria prevention, and also

⁵ National Malaria Strategy 2009–2017. Division of Malaria Control, Ministry of Public Health and Sanitation; 2009: 26.

⁶ Kenya Demographic Health Survey 2008–09. Kenya National Bureau of Statistics: 2010.

⁷ WHO. *Optimizing Health Worker Roles to Improve Access to Key Maternal and Newborn Health Interventions through Task Shifting*. Geneva: WHO; 2012.

⁸ Hill J, Dellicour S, Bruce J, Ouma P, Smedley J, et al. (2013) Effectiveness of antenatal clinics to deliver intermittent preventive treatment and insecticide treated nets for the control of malaria in pregnancy in Kenya. *PLoS ONE* 8(6): e64913. doi:10.1371/journal.pone.0064913.

increase access to formal health care in general.”⁹ In Uganda, results recommend a review of MiP policy to “allow the provision of IPTp through ‘new approaches,’” which include CHWs.¹⁰

IDENTIFYING SOLUTIONS AND MOVING FORWARD IN KENYA

To address the challenges and expand access to and availability of IPTp-SP, the Malaria Control Unit and the Reproductive, Maternal Health Services Unit convene regularly through the MiP Technical Working Group (TWG). The MiP TWG provides an existing mechanism to develop policy solutions that institutionally address IPTp-SP barriers and gaps in Kenya. These include:

- 1. Translating research and evidence into policy action.**
Recent research in Kenya has demonstrated that the current distribution of IPTp-SP through ANC is not meeting the needs of pregnant women. The majority of pregnant women continue to miss the full IPTp-SP schedule. As Kenya looks to revise the NMS in 2017 and undertake a new set of Sustainable Development Goals in the post-2015 era, there will need to be a concerted commitment by key decision-makers to end MiP-related morbidity and mortality by allowing CHWs to distribute IPTp-SP to pregnant women at the community level.
- 2. Strengthening MiP and IPTp-SP data capture and utilization to inform policy and resource decisions.**
The continual generation of high-quality data on MiP would ensure that policymakers can monitor reductions in MiP. Although Kenya has included IPTp-SP data elements in the mother-child booklet and in the national Health Management Information System (HMIS), this data collection needs to be scaled-up to accurately assess the counties bearing the highest MiP burden. Kenya has four malaria epidemiological zones, and with full health sector devolution, it is imperative that resources are correctly allocated across counties and that those expenditures, health impact, and results are tracked at the local level.

- 3. Strengthening CHW skills and capacity for increased health impact.** Building capacity of CHWs to provide IPTp-SP as well as comprehensive information about ANC at the community level will increase uptake and use of both IPTp-SP and ANC. Research shows that CHW distribution of IPTp-SP has a positive impact on ANC visits; an increased number of women receiving IPTp-SP at the community level returned for their fourth ANC visit. CHWs require specific training and communications materials relaying information on IPTp-SP to the mothers for whom they provide care. Furthermore, CHWs will need data tools for recording and reporting data generated as they deliver these services at the community level, which can then be used to inform policy reviews and service provision.
- 4. Increasing quality of facility level care.** Health workers should be updated on focused ANC guidelines that include provisions for MiP and IPTp-SP. Currently, the NMS notes that only 40 percent of service providers are able to accurately state the effects of MiP on a woman and her baby. Given that pregnant women are willing to receive IPTp-SP at the community level and still attend four ANC visits, it is imperative that providers are well-versed in the condition, treatment, side effects, and consequences to both mother and baby of not receiving treatment.

CONCLUSION

Although the Government of Kenya has prioritized improvements for women’s health, the full spectrum of platforms for increasing access to MiP interventions, specifically IPTp-SP, is not being effectively leveraged. New evidence and research illuminates the potential of CHWs to ensure universal access to IPTp-SP for pregnant women in Kenya. Action to update Kenya’s policies and guidelines to enable task-shifting, effectively empower CHWs, and support women’s increased access to and utilization of MiP interventions will contribute to safeguarding the health and lives of countless women and newborns and the move toward a malaria-free Kenya.

⁹ Okeibunor J, Orji B, Brieger W, et al. Preventing malaria in pregnancy through community-directed interventions: evidence from Akwa Ibom State, Nigeria. *Malaria Journal*. 2011; 10: 227.

¹⁰ Mbonye A, Bybjerg J, Magnussen P. Intermittent preventive treatment of malaria in pregnancy: a community-based delivery system and its effect on parasitemia, anaemia and low birth weight in Uganda. *International Journal of Infectious Diseases*, 2008: 12, 22-29.



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