



SRHR and malaria – Where are the links?

Introduction

Malaria is one of the biggest health threats in the world and particularly on the African continent, being responsible for 10% of the continent's overall disease burden.¹ Being caused by poverty and causing poverty at the same time, malaria can be considered as a major contributor to the vicious circle of low social, human and economic development of highly endemic countries.

Gender inequality and discrimination make women and children more vulnerable to malaria and ill-health. Although decisions on women's healthcare are vital to the health of both women and children, in many households, women have little influence in health-related matters which compromises their ability to care for themselves and their children. With children under 5 and pregnant women being the populations at highest risk, a natural link between reproductive health and malaria can be shown, with clear synergies in the efforts to achieve the MDGs 4, 5 and 6!

What is malaria?

Malaria is a parasitic disease transmitted by mosquitoes. It is one of the leading causes of death and disease in the developing world. Transmission is through the bite of an infected female mosquito and those most at risk of severe illness are people with little or no immunity to malaria, such as young children and pregnant women.

The malaria parasite affects the immune system, and infects liver and red blood cells. Initial symptoms are fever, headaches, shivering, and other influenza-like symptoms. Deaths are mainly caused by severe anaemia (red blood cells get infected and destroyed), kidney failure or brain damage (congestion of the capillaries in the brain – cerebral malaria).

The burden of malaria

Malaria affects 40 percent of the world's population – putting 3.2 billion people at risk in 107 countries.² Africa is the main home to the most severe and life-threatening form of malaria (falciparum malaria, caused by the parasite *Plasmodium falciparum*) which

¹ RBM Infosheet, Malaria in Africa

² RBM, World Malaria Report 2005, p.11. 2005, Geneva



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has, due to a combination of increasing drug resistance and crumbling health systems, actually seen a rise in the number of infections over the last three decades: an estimated 500 million cases of malaria every year lead up to 3 million deaths, of which an estimated 90% occur in Sub-Saharan Africa, and with 75% being children under the age of five.³

The human suffering and loss of life caused by malaria is often matched by the economic burden placed on families who bear the costs from their own pockets for nets, doctors' fees, anti-malarials and transport to health facilities. This can put an unbearable strain on household resources – in Ghana malaria care can cost up to 34% of a poor household's income.⁴

For malaria-endemic countries, public expenditure is also high as they endeavour to maintain health facilities and infrastructure, manage malaria control campaigns and provide education. For those with a high malaria burden, the disease may account for as much as 40% of public health expenditure, with malaria accounting for up to 50% of outpatient visits.⁵

Economic growth in countries with high malaria transmission has also historically been lower than in countries without malaria. Every year malaria is estimated to cost Africa \$US 12 billion in lost Gross Domestic Product (GDP). It is estimated to have slowed economic growth in Africa by 1.3% per year as a result of lost life and lower productivity.⁶

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At least 30 million pregnancies occur in malaria endemic regions in Africa every year. Due to immune deficiency during pregnancy, pregnant women are at a 2-3 times higher risk of suffering from malaria than non-pregnant women (throughout all regions).⁷ As a result, an estimated 10,000 pregnant women die each year from falciparum malaria. For Nigeria, it is reported that around 11% of deaths among pregnant women are caused by malaria.

The effects of contracting malaria during pregnancy are manifold: increased risk of miscarriages, stillbirths, premature births, low birth weight (leading cause of child mortality), malnutrition (no appetite during fevers), anaemia possibly leading to death or causing per

3 WHO & UNICEF, The Africa Malaria Report 2003, p.17. 2003, Geneva

4 WHO & UNICEF, The Africa Malaria Report 2003, p.20, 2003 Geneva

5 RBM Infosheet, Malaria in Africa

6 RBM Infosheet, Malaria in Africa

7 RBM Infosheet, Malaria in pregnancy



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manent neurological harm (speaking disorder, epilepsy, spasticity). Infection during pregnancy is estimated to cause 8-14% of all low birth weight babies and 3-8% of all infant deaths in areas of Africa with stable malaria transmission.

Although early studies failed to demonstrate significant interaction, there is now good evidence for a dual interaction between HIV and malaria. On the one hand, malaria contributes to an increase in viral load among HIV-infected adults not receiving HIV treatment. On the other hand, HIV increases the risk of malaria and death due to malaria. It may compromise the effectiveness of malaria treatment, with an increased risk for those with advancing HIV-related immunosuppression. The effects of interactions between malaria and HIV are particularly deleterious to maternal and infant health. WHO estimates that in 2003 at least 440,000 women had malaria infection during pregnancy attributable to HIV in sub-Saharan Africa.⁸ Co-infection of HIV and malaria in pregnant women increases the likelihood of the severe symptoms in mother and child as mentioned above.

Integration of reproductive health and malaria interventions

Integration of malaria and reproductive health programmes offers a high potential in the fight against malaria and vice versa. Antenatal Care (ANC) centres and clinics are a key point of entry for the provision of maternal health services. In areas where ANC attendance is high, ANC facilities can make an excellent conduit for achieving malaria prevention during pregnancy. In areas where ANC attendance is low, malaria prevention services, such as the distribution of bed nets have been shown to act as a powerful incentive to boost ANC attendance. The link between Long Lasting Insecticide Treated Nets (LLINs) and ANC is both mutually beneficial and synergistic. The integration of reproductive health and malaria interventions can thus play a cost-effective and crucial role in reducing the burden of malaria.⁹

⁸ WHO, RBM, Malaria and HIV interactions and their implications for public health policy. 2005.

⁹ WHO, UNICEF 2003. Antenatal care in developing countries : promises, achievements and missed opportunities : an analysis of trends, levels and differentials, 1990-2001. Percentage of women with at least one ANC visit during pregnancy: South Asia - 54%, Middle East and North Africa - 65%, sub-Saharan Africa - 68%.



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WHO recommends that ANC service providers include the following malaria prevention efforts in their portfolio:

Distribution of Insecticide Treated Nets (ITNs)

Most malaria-carrying mosquitoes bite at night and Insecticide-Treated Nets (ITNs), if properly used and maintained, provide an effective protective barrier. A net treated with special insecticides offers about twice the protection of an untreated net, and through its presence can also protect other people in the room, even if outside the net. ITNs have been shown to reduce all-cause mortality by about 20%. They are effective 6-12 months; LLITNs can even be effective up to 5 years. Net coverage reached through distribution campaigns is more likely to be maintained when ANC facilities partner in the fight against the disease.

Intermittent Preventive Treatment (IPT)

Prevention efforts for pregnant women include administering at least two monthly treatment doses of anti-malarials during routine antenatal clinic visits – known as Intermittent Preventive Treatment (IPT). This helps to protect pregnant women from possible death and anaemia and also to prevent low birth weight, which is amongst the most frequent causes for infant deaths in Africa.

IPT involves the administration of a single-treatment dose of sulfadoxine/pyrimethamine (SP) at the beginning of the second and third trimesters. Even in areas where there is moderate resistance to SP this approach significantly reduces the prevalence of anaemia and low birth weight. So far IPT has been adopted as part of national malaria control policy in 24 countries in the Africa region and in many of these countries, efforts are now being made to integrate delivery of IPT more fully into ANC services. Country experiences have shown that IPT can be introduced and scaled up relatively quickly and effectively. Political will and effective integration between malaria and reproductive health programmes are essential prerequisites.

Effective case management of malaria illness and anaemia

Effective case management of malaria illness for all pregnant women in malarious areas must be assured. Iron supplementation for anaemia should be given to pregnant women as part of routine antenatal care. Pregnant women should also be screened for anaemia, and those with moderate to severe anaemia should be managed according to national reproductive health guidelines. Case management is also an important step in the analysis of malaria interventions in order to increase the evidence base and to be able to make better choice and allocations.



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Resources

1. RBM, Malaria Infosheets on various topics:
What Is Malaria?, Malaria in Africa, Malaria in Pregnancy, Insecticide-Treated Mosquito Nets, Children and Malaria, RBM and Complex Emergencies, Epidemic Prediction and Response, Facts on ACTs, Economic Costs of Malaria, Monitoring and Evaluation
http://www.rbm.who.int/cmc_upload/0/000/015/370/RBMInfosheet_3.htm
2. WHO, 2005. Malaria and HIV interactions and their implications for public health policy.
http://www.who.int/malaria/malaria_HIV/MalariaHIVinteractions_report.pdf
3. RBM/WHO/UNICEF, 2005. World Malaria Report 2005.
http://rbm.who.int/wmr2005/pdf/WMReport_lr.pdf
4. WHO/UNICEF 2003. Africa Malaria Report 2003.
http://www.rbm.who.int/amd2003/amr2003/amr_toc.htm
5. WHO/UNICEF 2003. Antenatal care in developing countries: promises, achievements and missed opportunities: an analysis of trends, levels and differentials, 1990-2001.
http://www.who.int/reproductive-health/docs/antenatal_care.pdf
6. IPPF/PAI/Global Aids Alliance/International HIV/AIDS Alliance/Interact Worldwide, 2006. Integration between sexual and reproductive health and HIV and AIDS and Malaria: opportunities and strategic options for the Global Fund to Fight AIDS, TB and malaria.
<http://www.globalaidsalliance.org/docs/Global%20Fund%20SRH%20Integration%20FINAL.pdf>



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