



The interaction between Malaria and HIV/AIDS

Questions and Answers

How many people with HIV are at risk from malaria?

We do not know. The World Health Organization estimates, however, that in highburden sub-Saharan African countries (such as the Central African Republic, Malawi, Mozambique, Zambia and Zimbabwe), more than 90% of the population is exposed to malaria, and HIV prevalence among adults ranges between 10-20%. In Africa, it is also estimated that over 400,000 HIV positive pregnant women live in malaria endemic areas and are therefore at high risk of contracting malaria. An estimated two-fold greater risk of malaria in HIV-infected individuals could increase the burden on clinical services in areas where HIV is prevalent.

What is the impact of co-infection with malaria and HIV among adults?

The impact of the interaction of malaria and HIV/AIDS is most apparent in areas with generalized HIV/AIDS epidemics and stable malaria (where malaria is constant and/or seasonal). In areas of stable malaria HIV increases the risk of asymptomatic malaria, clinical malaria and case fatality. In areas of unstable malaria (malaria epidemics, unexpected outbreaks), HIV increases the risk for complicated and severe malaria and death. The risk of severe illness increases with advancing HIV-related suppression of the immune system.

What is the impact of co-infection with malaria and HIV in pregnant women?

Compared to women with either malaria or HIV infection, women who are co-infected have a higher risk of premature birth and intrauterine growth retardation and are therefore more likely to have low birth weight infants. HIV infection impairs malarial immunity in pregnant women and also weakens effectiveness of both intermittent preventive treatment (IPT) and treatment of malaria during pregnancy. Maternal malaria is also associated with a two-fold higher HIV viral concentrations. Some research assessing the impact of malaria during pregnancy on the risk of mother-to-child transmission of HIV has reported an increased risk when there is a higher degree of HIV related suppression of the immune system and severity of the malaria infection.

What is the impact of malaria on children who have AIDS?

- HIV-infected children with advanced suppression of their immune system may have more episodes of clinical malaria and higher malaria parasite densities than those whose immune status is less compromised. In areas of unstable malaria, HIV-infected children may be more likely to experience severe malaria with fatal consequences or coma.

What interactions are there between antimalarial and antiretroviral drugs?

- More research is needed on the clinical and pharmacological interactions between antimalarials and antiretrovirals as interactions may lead to adverse side effects. In addition, medicines used in the management of opportunistic infections in people living with HIV/AIDS may also interact with antimalarials.
- Emphasis should be placed on close monitoring when treatment of malaria and HIV/AIDS are being administered at the same time.

Is malaria a growing issue for HIV/AIDS programmes?

- Yes. People with HIV/AIDS have a two fold risk of developing malaria compared to HIVnegative people.
- Another growing concern is the risk of treatment failure of antimalarial drugs which appear to be less effective in HIV-infected than in uninfected adults because of increase susceptibility to opportunistic infections as a result of a suppressed immune system.

How can communities and people living with HIV combine prevention and treatment of malaria and HIV?

- Home-based treatment could be integrated into similar community-based HIV-related activities. Volunteers and health workers fighting malaria as well as people living with HIV should play a key role in the delivery of integrated services for malaria and HIV at the community level. Areas of integration include: behavioural change communication; communication to promote health seeking, prevention, and compliance to treatment; combined distribution of preventive commodities (insecticide-treated nets + condoms); clinical diagnosis for both diseases (preferably with Rapid Diagnostic Tests for confirmatory testing for



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malaria and referral for HIV); treatment of malaria as part of HIV-related opportunistic infections and ensuring referral to appropriate treatment, care and support services.

Why is more collaborative action on malaria and HIV important?

In order to reduce the lethal consequences of dual infection with HIV and malaria, prevention and treatment of the two diseases must mutually reinforce each other. In areas of malaria transmission, protection by insecticide-treated nets is vital to people living with HIV/AIDS - especially HIV-positive pregnant women who are most vulnerable to malaria. Malaria and HIV/AIDS work can also be better coordinated in the provision of health care services, as malaria accounts for 25-35% of all outpatients visits and 20-45% of hospital admissions in African endemic countries. At the community level, antenatal and family health clinics could offer basic malaria prevention to women at the same time as providing counselling and testing for prevention of mother to child HIV transmission. More collaborative action on malaria and HIV is also needed in the field of research.

How can research address the effect of malaria on HIV and vice versa?

Many questions on the interactions between malaria and HIV have not yet been addressed such as establishing the effect of HIV on malaria in children; measuring the impact of the current HIV epidemic on malaria control programs in Africa; or whether improved clinical management of malaria in HIV-infected people is having a significant impact in the fight against HIV. It is also unknown whether acute malaria episodes accelerate HIV progression and increase transmission. Research on the effects of coadministration of antimalarials and antiretrovirals is also of great interest but unfortunately lacking.

Additional information about malaria and HIV/AIDS FACT SHEETS

Basic Facts on Malaria at <http://www.who.int/malaria/docs/Basicfacts.pdf>

Facts on ACTs at

http://www.rbm.who.int/cmc_upload/0/000/015/364/RBMInfosheet_9.htm

DOCUMENTS/RESOURCES

WHO Guidelines for the Treatment of Malaria, 2006:

<http://www.who.int/malaria/docs/TreatmentGuidelines2006.pdf>

Malaria and HIV interactions and their implications for public health policy. WHO report on the Technical Consultation, Geneva, Switzerland, June 2004.

Malaria and HIV/AIDS Interactions and Implications. Conclusions of the Technical Consultation Convened by WHO, 23-25 June 2004.

Malaria Attributable to the HIV-1 Epidemic, Sub-Saharan Africa

Emerging Infectious Diseases, Eline L. Korenromp et al., Vol. 11, No. 9, September 2005

What is the Roll Back Malaria Partnership

The Roll Back Malaria Partnership (RBM) (www.rollbackmalaria.org) was launched in 1998 on the initiative of the World Health Organization (WHO), jointly with the United Nations Children's Fund (UNICEF), the World Bank and the United Nations Development Programme (UNDP), to provide a coordinated international approach to fighting malaria. Over the years, the RBM partnership has grown into a global movement which now brings a formidable assembly of expertise, infrastructure and funds to the fight against malaria. The partnership is made up of governments of malaria-endemic countries, their bilateral and multilateral development partners, the private sector, non-governmental and community-based organizations, foundations, research and academic institutions and the Global Fund to Fight AIDS, Tuberculosis and Malaria. RBM has been a catalyst for renewed commitment to halve the global burden of malaria by 2010. The RBM Partnership strategic approach encompasses the following priorities:

- a) To support free or highly subsidized access to curative and preventive interventions for the poor and vulnerable, to ensure that costs are not a barrier;
- b) To support countries to implement effective malaria control interventions; c) To make significant investment in monitoring activities, especially to enable tracking of equitable coverage and access;
- d) To actively seek out and engage private sector and civil society groups, including them in all phases of scaled-up malaria control efforts;
- e) To greatly expand investment in research to obtain strong evidence base needed to put in place the most effective and appropriate national policies and practices;
- f) To give greater emphasis to community-based advocacy and social mobilization as a vital process in increasing demand for, and use of, interventions.