



## Malaria: Prompt Treatment Saves Lives

- *Prompt disease recognition followed without delay by high-quality treatment of malaria shortens the duration of illness, reduces complications, and saves lives.*
- *Programs should help home-based caregivers make key decisions and take action to ensure proper treatment.*
- *Artemisinin-based combination therapy should be considered as the first-line treatment for malaria.*

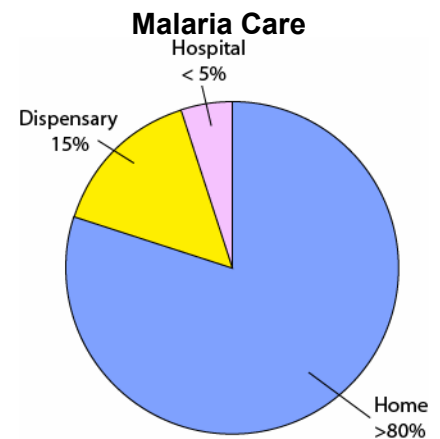
Malaria causes between 300 and 500 million illnesses and kills 1 to 2 million people each year. More than 90% of these illnesses and deaths occur in sub-Saharan Africa, where 1 in every 5 childhood deaths is caused by malaria, making it the number one killer of young children.

Most episodes of malaria are treated outside the formal health care sector. Inappropriate home treatment is a threat to proper management of malaria, however, and may contribute to the development of drug resistance.

### Improve home and community management of malaria

Disease recognition and care-seeking for febrile illnesses in children starts in the home. Caregivers have to make several key decisions and take action to ensure proper treatment. In malaria-endemic areas program interventions should aim to facilitate or improve the following<sup>2</sup>:

- caregiver's recognition of signs and symptoms of malaria;
- caregiver's understanding that malaria requires immediate and complete treatment;
- caregiver's ability to provide adequate home care;
- caregiver's access to outside care and ability to bring a sick child to a skilled provider;
- caregiver's compliance with appropriate treatment guidelines and/or referral.



Fewer than 20% of those acutely ill with malaria receive formal health care services.<sup>1</sup>

### Treat within an Integrated Management of Childhood Illness (IMCI) framework

The clinical presentations of malaria and pneumonia overlap. In addition, infants often have more than one disease. Thus it is important that, at all levels and in all areas where possible, children are treated within an IMCI framework. Formal and informal providers need, at a minimum, to be skilled or trained to be able to diagnose, counsel, treat, and refer when necessary.

**Diagnose:** With the spread of resistance to antimalarial drugs, accurate diagnosis, especially of adults, has become important as a means to avoid presumptive treatment of all febrile patients with antimalarial drugs. Conventional microscopic diagnosis is sensitive, specific, and relatively inexpensive; however, it requires trained staff and an infrastructure that is not always available at the periphery of the health care system. In these settings, especially in areas with lower rates of transmission, where malaria accounts for a small proportion of all fevers, the use of a rapid diagnostic test for malaria diagnosis should be considered.

**Counsel:** Counseling should focus on compliance with treatment and referral guidance; recognition of danger signs at home; and home-care strategies such as continued feeding and



fluids. Health care workers should also discuss the advantages of using an insecticide-treated bednet. (See the Global Health Technical Brief, “Bednets Reduce Malaria.”)

**Treat and refer:** Included in the management of malaria are recognition and management of anemia, including iron supplementation, de-worming, and counseling of caretakers on nutrition. Programs should also ensure that referral facilities can provide good quality care for complicated or severe malaria.

### **Ensure prompt referral of and immediate care for severe cases of malaria**

If children with malaria fail to receive prompt and appropriate treatment, their condition may deteriorate quickly; they may develop severe malaria within a few days. Mothers and health care workers should be aware of the clinical features or danger signs of severe malaria: multiple convulsions, prostration, coma, respiratory distress, and shock. Severely ill children need immediate attention, priority treatment, and/or referral. Referral facilities should be able to provide good quality care for complicated or severe malaria, including resuscitation, treatment of hypoglycemia, and restoration of normal circulating volume, including blood transfusion.

### **Mitigate the spread of drug resistance**

National malaria control programs have in the past relied primarily on single-drug therapy with chloroquine, amodiaquine, or sulfadoxine-pyrimethamine (SP) as their first-line treatment for malaria. The spread of drug resistance, however, has increased mortality and forced many programs to seek alternative and more efficacious drug regimens. The combination of two or more effective antimalarial drugs greatly reduces the probability of resistance to each of the drugs. Thus combination therapy extends the useful therapeutic lifetimes of these drugs.

The World Health Organization recommends that any country facing resistance to its first-line single-drug antimalarial therapy change to combination therapy, ideally with an artemisinin drug. These drugs rapidly reduce malaria symptoms and parasite density in the blood. Four artemisinin-based combination therapy (ACT) regimens are recommended: artemether-lumefantrine (*Coartem*®), amodiaquine-artesunate, SP-artesunate, and mefloquine-artesunate.

Drug policy changes are slow and costly, however. A major drawback to the adoption of ACT as first-line malaria treatment in most countries has been that it costs 8 to 10 times more than chloroquine or SP alone. Also, it can take several months to fill new orders. Since in Africa 50% to 80% of patients with suspected malaria first seek treatment outside the formal health care system, the role of the private sector in drug policy changes also needs consideration.

### **Abuja Declaration Target**

**By the year 2005, at least 60% of those with malaria have prompt access to and are able to use correct, affordable, and appropriate treatment within 24 hours of the onset of symptoms.**

<sup>1</sup> Adapted from: Breman JG. The ears of the hippopotamus: manifestations, determinants and estimates of the malaria burden. *Am J Trop Med Hyg* 2001;64 (Suppl 1-2):1-11. [http://www.ajtmh.org/cgi/reprint/64/1\\_suppl/1-c](http://www.ajtmh.org/cgi/reprint/64/1_suppl/1-c)

<sup>2</sup> Surviving Malaria—Decision Guide: A programming tool for promoting appropriate case management of malaria in infants and young children. [http://www.coregroup.org/working\\_groups/Surviving\\_Malaria\\_Field.pdf](http://www.coregroup.org/working_groups/Surviving_Malaria_Field.pdf)

Where to get more information: [www.maqweb.org](http://www.maqweb.org)

#### References:

USAID Technical Reference Material, [http://www.childsurvival.com/documents/tms/tech/Malaria\\_August\\_2004.doc](http://www.childsurvival.com/documents/tms/tech/Malaria_August_2004.doc).

Roll Back Malaria Web site, <http://www.rbm.who.int>

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