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Malaria Factsheet

Key Statistics

- Half the world's population - 3.3 billion people - are at risk of malariaⁱ
- Malaria kills more than one million people a yearⁱⁱ
- A child dies of malaria every 30 secondsⁱⁱⁱ
- There are 212 million cases of malaria in Africa every yearⁱⁱ
- Malaria related-illnesses and mortality cost Africa's economy alone USD 12 billion per yearⁱⁱ

What is Malaria?

Malaria is a complex, life-threatening, infectious disease, caused by parasites of the *Plasmodium* species - *P. falciparum*, *P. vivax*, *P. malariae* and *P. Ovale* - and transmitted by mosquitos. Symptoms include fever, headache, and vomiting. If not treated, malaria can quickly become life-threatening by disrupting the blood supply to vital organs.

Approximately half of the world's population is at risk of malaria within Africa, Asia, Latin America, the Middle East and parts of Europe, and one million people die from the disease every yearⁱⁱ.

African children under 12 months are most at risk of the worst forms of malaria. On average, an African child has between 1.6 and 5.4 episodes of malaria fever each year – what is more, every 30 seconds a child dies from the disease.ⁱⁱⁱ

Global Public Health Burden

Malaria is one of today's most severe global public health problems, disproportionately affecting low to middle income countries. It is a particularly serious problem in Africa: of an estimated 247 million cases of malaria in 2006, 86% of them were in the African Regionⁱ.

The economic impact of this disease is significant. Malaria cuts attendance at schools and workplaces, and causes an average loss of 1.3% annual economic growth in countries with high transmissionⁱⁱⁱ. The disease accounts for around 40% of public health spending in sub-Saharan Africa and malaria related-illnesses and mortality are estimated to cost Africa's economy alone USD 12 billion per yearⁱⁱ.

Malaria Control

There are a number of tools and drugs available to prevent and treat malaria including: long-lasting insecticidal nets (LLIN) and artemisinin-based combination therapy (ACT), supported by indoor residual spraying of insecticide (IRS) and intermittent preventive treatment in pregnancy (IPTp) and infants (IPTi). It is important to

remember however, that no single malaria control strategy is suitable for all contexts. Control efforts need to be tailored for the specific environment in which they will be used and must take into account the local epidemiology of malaria, the level of available resources and political will^{iv}.

LLINs can be used to provide personal protection to vulnerable groups including young children and pregnant women in high transmission areas. LLINs are effective for a number of between three to five years, depending on models and conditions of use. They may also protect communities when coverage is high enough (more than 80% of the community sleeping inside them).ⁱⁱⁱ

According to WHO, indoor residual spraying is the most effective means of rapidly reducing mosquito density. Its full potential is obtained when at least 80% of premises with malaria vectors are sprayed. Indoor spraying is effective for three to six months, depending on the insecticide used and the type of surface on which it is sprayed. (DDT is effective for longer periods, up to 12 months in some cases).ⁱⁱⁱ

There have been substantial increases in the supply of mosquito nets, especially LLINs in Africa, though we still have a long way to go before achieving the level of coverage needed. The same can be said in the procurement of antimalarial medicines through public health services which has also increased sharply, but access to treatment, especially of ACT, remains inadequateⁱ.

Challenges to Treatment

Resistance

Drug resistance to commonly used antimalarials has spread rapidly and is one of the greatest challenges facing malaria control. WHO recommends continuous monitoring and is assisting countries as they work to strengthen drug observation efforts.

Numerous factors have contributed to increasing and worsening drug resistance including human behaviour and population movement, vector and parasite biology, pharmacokinetics, and malaria treatment failure.^{iv}

There are only a limited number of drugs available to treat or prevent the disease, and malaria parasites have demonstrated some level of resistance to almost every antimalarial drug currently available^{iv}.

Many of these drugs are closely related chemically, and development of resistance to one can lead to development of resistance in others. Resistance of *Plasmodium falciparum* to chloroquine, the cheapest and the most used drug is spreading in almost all the endemic countries. Resistance to the combination of sulfadoxine-pyrimethamine which was already present in South America and in South-East Asia is now emerging in East Africa.

There is also an increasing resistance to key insecticides DDT and pyrethroids, particularly in Africa. To date, there are no equally effective and efficient insecticide alternatives to DDT and pyrethroids.

Cost

Global estimates indicate that USD 4.2 billion would be needed each year to fully fund the fight against malariaⁱⁱ.

Malaria disproportionately affects poor people who cannot afford treatment or have limited access to health care. The average cost for potentially life-saving treatments of malaria are estimated to be US\$0.13 for chloroquine, US\$0.13-23 for sulfadoxine-pyrimethamine, and US\$2.68 for a 7-day course of quinine.^v

ⁱ WHO. World Malaria Report 2008. World Health Organisation, 2008.

ⁱⁱ *Key malaria facts*. Roll Back Malaria Partnerships. (<http://www.rollbackmalaria.org/keyfacts.html>, accessed 7 September 2009)

ⁱⁱⁱ *10 Facts on Malaria*. World Health Organisation, March 2009. (<http://www.who.int/features/factfiles/malaria/en/index.html>, accessed 7 September 2009)

^{iv} Bloland Peter B. Drug Resistance in Malaria. Chamblee, GA, United States Malaria Epidemiology Branch Centers for Disease Control and Prevention, and Geneva, Switzerland, World Health Organisation, 2001 (WHO/CDS/CSR/DRS/2001.4)

^v Malaria Facts. Washington DC, Centre for Disease Control and Prevention, United States Department of Health and Human Sciences, April 2007. (<http://www.cdc.gov/Malaria/facts.htm>, accessed 7 September 2009)