

An Overview of Malaria - prepared by Bayo Adeyemi (September 2013)

What is Malaria?

Malaria is a potentially fatal infectious blood disease that is caused by a parasite called *Plasmodium* (LBL 2001; WHO 2013). People that have contracted the disease typically suffer from cycles of shaking chills, fever, and flu-like illness. Other symptoms include nausea, vomiting, and diarrhea. The disease may also cause anemia and jaundice because of the loss of red blood cells. Symptoms usually begin to manifest ten days to four weeks after infection (CDC 2012). Of the five kinds of malaria parasites known to infect humans, *Plasmodium falciparum*, is the most dangerous. There has been literature about the co-morbidity of malaria and acute respiratory infections being more than other co-morbidities, but this still remains unclear (Mulholland 2005).

Transmission of Malaria

Malaria is transmitted to humans via bites from infected female Anopheles mosquitoes (vectors) and is quite prevalent in Africa. Given its existence in the red blood cells of infected humans, the disease can also be transmitted via blood transfusion, organ transplant, the shared use of needles or syringes or from a mother to her unborn child before or during childbirth (LBL 2001; CDC 2012, MNT 2013).

Disease Incidence

There were c. 219 million cases globally, with 80% of estimated cases occurring in 17 countries. The disease resulted in 660,000 deaths in 2010, with 91% of them in Africa, and 86% of them in children under 5 years of age. There are 104 endemic countries; with

six countries (Nigeria, Democratic Republic of Congo, Tanzania, Uganda, Mozambique and Cote d'Ivoire) accounting for 47% of malaria cases (RBM 2013).

Disease Treatment

Early diagnosis and treatment reduces and prevents the disease. The best available treatment, especially for *P. falciparum* malaria is artemisinin-based combination therapy (ACT). Vector control is the main way to reduce malaria transmission, with two forms – the use of insecticide-treated mosquito nets (ITNs) and indoor spraying with residual insecticides – that can reduce malaria transmission to close to zero (WHO 2013).

Economic Cost

Malaria is estimated to result in around US\$12 billion per year in direct losses and a loss of 1.3% of GDP growth per year for Africa (RBM 2013).

Required Intervention

Currently, a number of initiatives, including the Roll Back Malaria Partnership (established in 1998 by the World Health Organization, United Nations Children Fund, United Nations Development Fund and the World Bank), have resulted in over 1.1 million lives being saved over the last decade with 274 million cases being averted between 2001 and 2010. The current gap for malaria control in Africa is US\$3.6 billion is needed between 2013 and 2015 to fund critical interventions like ITNs, diagnostic tests and treatment. 66.66% of this amount is vital in maintaining coverage in 8 priority African countries, currently facing severe shortages (RBM 2013).

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