

Philanthropy for Malaria

A Brief Guide

What's Happening with Malaria?

Each year there are between 300 and 500 million clinical cases of malaria. Estimates of those that die from the disease range between one million and 2.5 million annually. A disproportionate number of deaths from malaria occur among the poor, and about half of those who die are children.

Malaria is a blood-borne parasite that is transmitted between humans by infected mosquitoes. While malaria remains a problem in parts of Asia and South America, over 90% of malarial deaths occur in sub-Saharan Africa.

Those who have malaria suffer from fever, fatigue, nausea, and muscular pains. Currently, there is no vaccine for malaria. For those infected with malaria and with access to health care facilities, drugs such as chloroquine and mefloquine can be taken to treat the disease. However, a person taking either drug will remain infectious for up to two months or more after first becoming infected.

The global burden of malaria is growing. Social changes, political situations, and deteriorating environmental conditions are all contributing to the prevalence of the disease. Jeffrey Sachs, director of the Earth Institute at Columbia University, estimates that malaria costs the African economy more than \$12bn a year. Poor families are the most economically at risk. Many of those most vulnerable from malaria can least afford the necessary preventative measures such as insecticides and bednets.

What Can Be Done to Combat Malaria?

The World Bank estimates that 60% of malarial deaths occur among the poorest 20% of the population, a higher ratio than for any other disease. Fighting malaria helps the poor.

The most common efforts to prevent malaria are the spraying of the insecticide DDT and the use of bednets. In some regions, insecticide-treated bednets are available that kill mosquitoes on contact. When accessible, cheap drugs such as chloroquine can also prevent infection.

However, several problems are hindering efforts to combat malaria, including:

- **Cost:** Since poor people are most at risk of malaria, the cost of preventative measures including bednets represents a disproportionate part of their limited income. Furthermore, poor people are more likely to live in sub-standard housing and in areas more endemic to the disease.
- **Access:** Rural populations may have limited access to health clinics and NGOs that distribute not only bednets and medicines, but also information concerning ways to avoid becoming infected.
- **Drug and insecticide resistance:** Since malaria is no longer prevalent in much of the industrialized world, Western pharmaceutical companies have made little progress in developing new drugs and insecticides to combat malaria. The malaria parasite and the mosquito are developing resistance to existing drugs and insecticides, severely compromising their effectiveness.
- **Deteriorating health care systems:** In most of the countries affected by malaria, economic growth has been stagnant. Coupled with rapidly growing populations and other internal funding priorities, health systems have not been able to keep pace. Civil unrest and migration also play a role in undermining adequate health care.

What Should the Goals Be?

- **Improve accessibility**, particularly of the most at-risk populations. Better roads and public transportation, and traveling bednet vendors and healthcare workers, will make it easier for the right resources to get to the people who need them most.
- **Reduce costs** of drugs, insecticides, and bednets. Currently thirty-two countries in Africa maintain taxes on the purchase of insecticide-treated bednets. Foregone revenue from lost taxes and additional outlays to subsidize bednets and insecticides is estimated to be a fraction of the cost incurred through treating infected people and lost productivity (including death).
- **Education** needs to be improved so that at-risk populations fully understand how malaria is transmitted and what steps to take to prevent infection.

- **Better data collection** will allow scientists and healthcare workers to understand which malarial viruses are prevalent in which regions, and which areas are the most at-risk. A recent study in Kenya highlighted that bednet programs were concentrated in areas that had strong links to nongovernmental organizations instead of in areas where malaria was most prevalent. Better information will help avoid the under-serving of populations at highest risk.

- **Improving drugs and insecticides** will help combat the improving resistance of the malaria parasites and of mosquitoes. In October 2002 the genomes of the malaria parasite and of the mosquito that carries the parasite were both published. Scientists are hoping that this information will make possible the rapid development of new drugs that fight the parasite and new insecticides and repellants that are more effective at combating mosquitoes.

How Can Philanthropists Help?

The world spends between \$200m - \$300m a year on malarial control. The recent scientific developments are expected to place new demands on malaria-directed funding as scientists who want to develop new drugs compete with health workers who want to improve the availability of existing counter-measures to the poor.

Philanthropists can help on both of these fronts. First, more laboratory research needs to be conducted so that improved drugs and insecticides, and hopefully a vaccine, can be developed

Several efforts involving private donors and foundations are currently underway. The parasite genome project was completed with funds from both the public and the private sector (the Burroughs Wellcome Fund and the Wellcome Trust). The Bill and Melinda Gates Foundation has committed over \$125 million to malaria research, and an anonymous gift of \$100 million was used to establish the Johns Hopkins Malaria Research Institute.

Improving insecticides and developing new drugs are only part of the answer, however. The second part of the battle against malaria consists of work in the field.

Currently, core preventative measures are well understood but insufficiently implemented. Philanthropists can help by ensuring that drugs and insecticides are affordable and accessible for those

who most need them, and by making certain any new drugs and technologies developed will be made available to everyone cheaply and easily.

Through the funding of improved data collection efforts, programs that offer subsidized or free insecticide-treated bednets, and better education about malaria prevention, philanthropists can ensure that those most at risk from malaria have the necessary resources to combat the disease.

Where Can You Go to Learn More?

Roll Back Malaria Initiative (RBM)

Founded by WHO, UNICEF, the World Bank, and UNDP, RBM's goal is to involve all players (e.g. governments, businesses, NGOs, and communities) and all sectors (e.g. education, health, and infrastructure) in halving malarial infections by 2010.
www.rbm.who.int

The Global Fund to Fight AIDS, Tuberculosis & Malaria

The Global Fund is a public-private partnership that works to reduce infections, illness, and death as a means of promoting economic health and reducing poverty.
www.GlobalFundatm.org

The Bill and Melinda Gates Foundation

The Gates Foundation is funding ambitious research efforts including establishing the Malaria Centre at the London School of Hygiene & Tropical Medicine, and funding the Malaria Vaccine Initiative.
www.gatesfoundation.org

Malaria Vaccine Initiative (MVI)

MVI is dedicated to speeding the development of a malaria vaccine and to ensuring its availability and accessibility in the developing world.
www.MalariaVaccine.org

The GlaxoSmithKline African Malaria Partnership

AMP's goal is to support development of effective malaria control behaviors in Africa. Funding will support bridging the gap from pilot programs to wide-scale implementation.
www.gsk.com/malaria

The Multilateral Initiative on Malaria (MIM)

MIM is an alliance of organizations and individuals that seeks to promote capacity building and facilitate global collaboration and coordination concerning scientific research of malaria.
www.wellcome.ac.uk/mim

The National Institutes of Health Malaria Research Resources

A clearinghouse for information on malaria research.
www.nlm.nih.gov/mim