Priorities for Fighting Malaria

“Wiping out malaria would join the eradication of smallpox as one of the greatest accomplishments in human history. It is a goal we can achieve.”

– Melinda Gates, co-founder, Bill & Melinda Gates Foundation

Overview
In wealthy countries, the war against malaria was won nearly a half-century ago. But in poor countries, the disease continues virtually unabated, worsening in many areas. Malaria is a leading cause of death among young children worldwide, and in Africa it accounts for nearly one-fifth of all deaths among children under age 5. The disease is also a major barrier to Africa’s economic development, costing African countries billions of dollars annually.

But there is hope. Effective malaria control tools are available, and can save lives now if made accessible to people at risk. Scientific advances are bringing us closer to powerful new malaria control tools, including more affordable and effective drugs and a preventive vaccine.

Fighting Malaria
One of the Gates Foundation’s core beliefs is that all lives, no matter where they are lived, have equal value. The mission of our Global Health Program is to reduce disparities in health between rich and poor countries. Malaria – a disease that is widespread in the developing world but long eradicated in rich countries – represents one of the greatest health disparities.

To date, the foundation has committed more than $860 million to support malaria programs, and an additional $650 million to support the Global Fund to Fight AIDS, Tuberculosis, and Malaria. We support a comprehensive approach to malaria that includes:

• Expanding malaria control with tools such as insecticide-treated nets, artemisinin-based treatments, and insecticide spraying

Malaria Facts
• Every year, malaria kills more than 1 million people – the majority are young children in sub-Saharan Africa. Millions more suffer debilitating consequences, such as low birth weight in babies, permanent neurological damage, and severe anemia.
• Malaria was eradicated from the U.S. and other developed countries in the 1950s and 1960s. However, eradication has never been tried in Africa, where the most lethal forms of the malaria parasite and the most aggressive mosquitoes are found.
• Malaria deaths in Africa have doubled over the past 20 years, as malaria has grown resistant to standard drugs and insecticides.
• Malaria is both a disease of poverty and a cause of poverty. Malaria accounts for up to half of all hospital admissions in some parts of Africa, and families can spend a quarter of their incomes on the disease.
• Accelerating malaria research, including the development of more affordable and effective drugs, a preventive vaccine, and improved mosquito control
• Advocating for increased attention and resources for malaria

Key foundation grants to expand malaria control include:
• Global malaria control: Initiatives such as the Global Fund to Fight AIDS, Tuberculosis, and Malaria, the U.S. President’s Malaria Initiative, and the World Bank Malaria Control Booster Program are working to strengthen malaria prevention and treatment programs worldwide. The foundation has contributed $650 million to support the Global Fund’s work. Since its inception five years ago, the Global Fund has approved more than $1.6 billion in malaria grants to the world’s poorest countries, and has helped deliver an estimated 100 million nets and 260 million artemisinin-based treatments.
• National scale-up: The foundation has provided $64 million to the Malaria Control and Evaluation Partnership in Africa (MACEPA), a collaboration among developing countries, donors, and other public- and private-sector partners. MACEPA has been working with Zambia for the past two years to strengthen national capacity and document lessons learned, and will begin working with several other African countries to help scale up their malaria control programs in 2007.
• Coordination: To provide a coordinated global approach to fighting malaria, the Roll Back Malaria (RBM) Partnership was formed in 1998 by the World Health Organization, UNICEF, the U.N. Development Program, and the World Bank. The foundation has contributed $7 million to support RBM’s critical work.

Key foundation grants to accelerate malaria research include:
• Malaria drug development: The Medicines for Malaria Venture (MMV), supported by $165 million in foundation grants, works with a broad range of partners in private industry, government, and academia to develop more affordable and effective malaria treatments. MMV has four promising drug candidates in advanced clinical trials, and is supporting 13 other candidates in earlier stages of development—the largest malaria drug pipeline in history.

The foundation has also provided $43 million to the Institute for OneWorld Health, to develop ways to produce large quantities of artemisinin-based treatments at significantly lower costs. A $14 million grant to the University of York is supporting the development of a genetically stable Artemisia plant that will yield higher amounts of artemisinin at lower cost.
• Vaccine development: The PATH Malaria Vaccine Initiative (MVI), with $287 million in foundation grants, is working with public- and private-sector partners to develop the world’s first malaria vaccine. MVI currently supports 10 malaria vaccine development projects, two of which are conducting clinical trials in Africa. In a landmark 2004 study, MVI’s leading vaccine candidate significantly reduced malaria rates in young children, including a 58% reduction in severe malaria.

The foundation has also provided $16 million to the Seattle Biomedical Research Institute, to develop a malaria vaccine.

Expanding Malaria Control
Many effective tools are available today to control malaria, including nets, artemisinin-based treatments, and insecticide spraying. But these tools are out of reach for many in need. For example, although insecticide-treated nets cost only a few dollars each, just 12% of African households have access to one. Expanded malaria control efforts could have a huge impact – increased access to tools such as nets could cut malaria deaths in half by 2010, and in half again by 2015.

Effective tools available today to control malaria include:
• Nets: Insecticide-treated nets provide cheap and effective protection against malaria-transmitting mosquitoes.
• Artemisinin-based treatments: Malaria can be effectively treated with a combination of medicines based on artemisinin, which is derived from a Chinese plant.
• Insecticide spraying: Targeted indoor spraying with insecticides can be an important component of malaria control.

Accelerating Malaria Research
Scientific advances in many fields are bringing us closer to new tools for fighting malaria – including more affordable and effective treatments, a preventive vaccine, and improved mosquito control.
Malaria Research Priorities

- **New treatments:** A major priority in malaria research is developing more affordable and effective treatments. Although current artemisinin-based malaria treatments are highly effective, they are also expensive. In addition, it is critical to stay ahead of drug resistance by continuing to develop new classes of malaria treatments.

- **Preventive vaccine:** A preventive vaccine would provide the best long-term hope to defeat malaria, and would be especially beneficial for those at greatest risk – infants, children, and pregnant women. Scientists have decoded the genome of the malaria parasite and are studying individuals who have a natural ability to resist malaria – developments that provide clues toward an effective vaccine.

- **Improved mosquito control:** Current public health insecticides are more than 25 years old and are losing their effectiveness. There is also a need for insecticides that are safer for humans and the environment, and that are more affordable and longer-lasting.

- **Preventive vaccine:** A vaccine that would be safe for use during pregnancy.

- **Improved mosquito control:** The foundation has provided a $51 million grant to the Innovative Vector Control Consortium, hosted by the Liverpool School of Hygiene and Tropical Medicine, to develop safer, more effective, and longer-lasting insecticides for malaria mosquito control. The consortium will also develop improved nets and other insecticide-treated materials, and help health authorities determine how to deploy insecticides for maximum impact.

The foundation also provided $42 million to the London School of Hygiene and Tropical Medicine to conduct trials of new mosquito control tools and provide training programs to strengthen malaria research capacity in Africa.

- **Innovative prevention for infants:** Drugs used to treat malaria may also help prevent malaria in infants. The foundation has provided $32 million to support research that has found this innovative prevention approach to be safe and effective, and is evaluating the potential for incorporating it into malaria control programs.

- **Grand Challenges:** Fighting malaria is a focus of the Grand Challenges in Global Health initiative, an international effort co-sponsored by the foundation to achieve scientific breakthroughs against the world’s most serious diseases. For example, one Grand Challenges project is developing novel insect repellents to interfere with mosquitoes’ sense of smell, and prevent them from biting humans and transmitting malaria and other diseases.

Malaria Advocacy

To make progress against malaria, greater political commitment, funding, and coordination are critical. The foundation supports groups that advocate for attention and resources for malaria.

**Key foundation grants for malaria advocacy include:**

- **Promoting successes:** The foundation has provided a $9 million grant to the Voices for a Malaria-Free Future network, based at the Johns Hopkins Bloomberg School of Public Health. The network supports advocacy activities in Ghana, Kenya, Mali, and Mozambique; tracks global malaria funding trends; and educates policymakers about successful anti-malaria efforts and evidence-based results.

- **Grassroots campaigns:** In 2006, the U.N. Foundation launched the grassroots Nothing But Nets campaign, which encourages the public to donate funds to purchase nets for Africa. Nothing But Nets is working with diverse groups, including Sports Illustrated magazine, NBA Cares (the foundation of the National Basketball Association), and the United Methodist Church. The foundation has provided a $3 million matching grant to Nothing But Nets. To date, the campaign has raised a total of $9 million from 60,000 individual donors.

“For far too long, malaria has been a forgotten epidemic. If we expand malaria control programs and invest in research, we can stop this tragedy.”

– Bill Gates, co-founder, Bill & Melinda Gates Foundation