

CDC's Malaria Program



Malaria is spread by the bite of a female *Anopheles* mosquito. The disease can cause fever, chills, and flu-like illness. If it is not treated, it may cause severe complications and death.

CDC and Malaria

The Centers for Disease Control and Prevention (CDC) played a critical role in eliminating malaria from the United States by 1951. Now CDC provides scientific leadership in fighting malaria at home and around the globe.

CDC At Work Around the World

CDC is a member of the Roll Back Malaria partnership, which consists of more than 500 partners, including malaria-endemic countries, bilateral and multilateral development partners, private sector, nongovernmental and community-based organizations, foundations, and research and academic institutions. This strong global alliance is making progress in reducing the health burden of malaria.

CDC scientists provide expertise to develop evidence-based policies and programs, critical scientific innovations to help guide the agenda for future public health efforts, and monitoring and evaluation of progress toward global malaria goals. These activities are conducted in the field in endemic countries with Ministry of Health colleagues, both to inform local policy and to share the information developed with the global malaria community.

CDC also works to keep malaria from resurging in the U.S. by monitoring imported cases, responding to infrequent outbreaks in the United States, and providing guidance to protect U.S. travelers.



Malaria's Burden

The World Health Organization estimates that malaria caused approximately 655,000 deaths in 2010. Most are in young children in sub-Saharan Africa. Malaria can also cause dangerously low birth weights and permanent disability. In Africa alone, costs of illness, treatment, and premature death from malaria are at least \$12 billion per year.

U.S. Government Health Initiatives

CDC's Mandate. CDC is specifically directed by the U.S. Congress through 2008's Lantos-Hyde Act to provide leadership in the areas of monitoring, evaluation, surveillance, and operational research for malaria. We work to track malaria transmission so that public health officials can treat cases and prevent new ones, to understand a changing malaria situation and adapt interventions accordingly, and to measure our progress towards achieving our goals of control, elimination, and ultimately eradication.

President's Malaria Initiative. CDC implements the U.S. President's Malaria Initiative (PMI) jointly with the U.S. Agency for International Development (USAID). Effective malaria interventions have been massively scaled up, and PMI's goal of halving the malaria burden in 70% of at-risk populations in sub-Saharan Africa by 2014 has already been achieved in several of its 19 target countries. PMI also monitors antimalarial drug resistance in the Greater Mekong subregion in Asia and works to prevent and control the spread of multidrug-resistant malaria so that successes achieved in global malaria efforts are not reversed.

Amazon Malaria Initiative (AMI). CDC provides technical expertise in monitoring antimalarial drug resistance, molecular biology, and entomology to countries in Central and South America. By working with other partners, such as USAID, CDC helps strengthen data-based decision making in malaria control programs in the region.

Global Health Initiative (GHI), announced by President Obama in May 2009, represents an expanded approach to U.S. Government-supported malaria control efforts, underscoring current activities and emphasizing strategies to coordinate malaria and other disease control efforts to prevent avoidable deaths and illnesses.

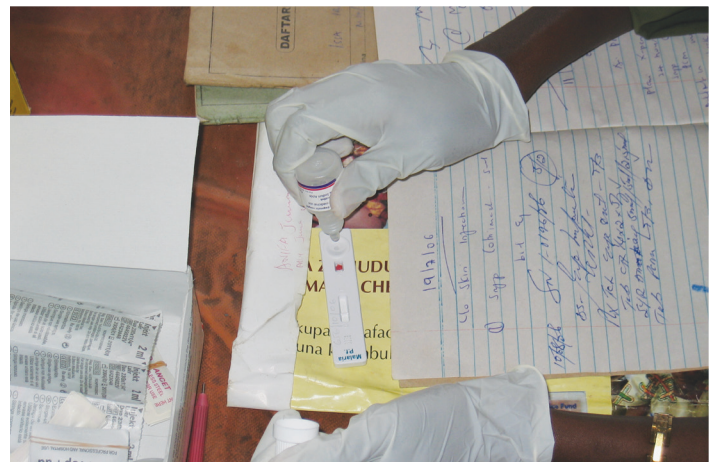
Conducting Strategic Research

CDC provides scientific leadership in public health efforts to fight malaria, increasing global understanding and capacity to prevent death and illness from malaria, especially among those most vulnerable—pregnant women and children. CDC science has also made critical contributions to understanding the impact of antimalarial drug resistance and ways to prevent its spread.

CDC has worked with the World Health Organization (WHO) to establish evidence-based guidelines used by national malaria control programs worldwide. In addition, CDC has helped develop and evaluate all four of the key prevention and control interventions recommended by WHO and used by programs worldwide to fight malaria:

- Insecticide-treated bed nets (ITNs) to protect people from mosquitoes
- Treatment with effective high-quality drugs: artemisinin-containing combination therapies (ACTs)
- Treatment to protect pregnant women and their newborn children: intermittent preventive treatment (IPTp) for pregnant women.
- Indoor spraying of homes to protect people from mosquitoes (IRS)

CDC continues to refine the use of these proven interventions to maximize their effectiveness and overcome any challenges. The agency also conducts cutting-edge research and development in the laboratory and field on transmission of the malaria parasite, drug resistance, and human immunological and pathologic responses to malaria. Having informed the current generation of malaria control interventions through its strong science and research, CDC is working to refine malaria interventions and develop new tools to stay ahead of the curve and ensure continued success of investments.



CDC provided technical expertise to a President's Malaria Initiative study in Tanzania designed to determine how best to introduce malaria rapid diagnostic tests to improve diagnostic capability and prescribing practices.

Protecting Individuals at Home in the United States

CDC also protects people living in the U.S. from the threat posed by reintroduction of malaria from the approximately 1,500 travelers per year who develop malaria abroad and then arrive in or return to the U.S. As the nation's public health agency, CDC monitors rates of reported malaria cases to detect increases of concern, provides guidance to U.S. international travelers to prevent them from becoming infected abroad, and advises physicians on the accurate diagnosis and treatment of malaria in the U.S.

For more information, see www.cdc.gov/malaria or email malaria@cdc.gov

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