CDC and Malaria

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.

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 world, protecting Americans and saving lives globally.

CDC At Work around the World

CDC scientists provide expertise to develop

- Evidence-based malaria policies and programs
- Critical scientific innovations that result in more effective interventions and guide the agenda for future global efforts, and
- Monitoring and evaluation plans that measure progress toward global malaria goals.

We do this in malaria-endemic countries with ministry of health colleagues, both to inform local policy and to share the information developed with the global malaria community.

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 global alliance is making strong progress in reducing the health burden of malaria.

Designated a center of excellence by the World Health Organization (WHO), CDC serves as the WHO Collaborating Center for Prevention and Control of Malaria to further WHO's global programs.

In addition, CDC 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.

Photo courtesy of Maggie Hallahan Photography

Progress against Malaria

Malaria caused an estimated 207 million cases and 627,000 deaths in 2012, mostly young children in sub-Saharan Africa. It contributes to poverty; in Africa alone, costs of illness, treatment, and premature death from malaria are at least $12 billion per year.

Malaria's toll would be much higher without the efforts of CDC and other global partners. From 2000 through 2012, the massive scale-up of malaria prevention and treatment interventions saved approximately 3.3 million lives globally, and malaria death rates in Africa were cut nearly in half. However, malaria remains a major public health problem, even though it is both preventable and treatable.

Center for Global Health
Division of Parasitic Diseases and Malaria

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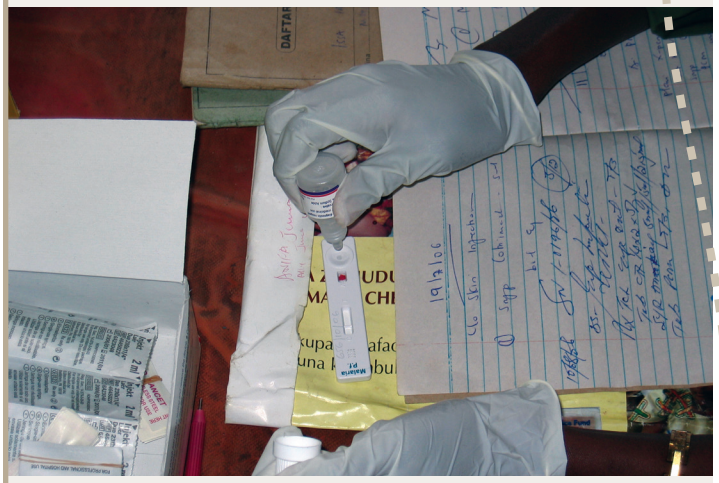
U.S. Government Health Initiatives

U.S. President's Malaria Initiative (PMI).
CDC implements PMI jointly with the U.S. Agency for International Development (USAID). Since 2005, PMI and its global partners have scaled up effective malaria interventions, which have significantly decreased the number of malaria cases and deaths in PMI's 19 target countries in Africa. PMI also supports malaria control programs and monitors antimalarial drug resistance in the Greater Mekong Subregion of Southeast 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.
CDC provides technical expertise in monitoring of 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.

CDC's Mandate.
CDC is specifically directed by the U.S. Congress through the Lantos-Hyde Act to provide leadership in the areas of monitoring, evaluation, surveillance, and operational research for malaria.



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.

Strategic Science

CDC provides scientific leadership in public health efforts to fight malaria. CDC's scientists have

- Increased global understanding and capacity to prevent death and illness from malaria, especially among those most vulnerable to the disease—pregnant women and children.
- Contributed to defining the impact of antimalarial drug resistance and ways to prevent its spread. In collaboration with WHO, CDC has established evidence-based guidelines used by national malaria control programs and their partners worldwide.
- 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
  - Rapid diagnostic tests and 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 is conducting research to refine the use of these proven interventions to maximize their effectiveness and overcome challenges. We also conduct cutting-edge research and development in the laboratory and field on transmission of the malaria parasite, drug resistance, improved diagnostic testing, 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 global investments.

Protecting Individuals at Home in the United States

CDC protects people living in the U.S. from the threat posed by reintroduction of malaria from the approximately 1,500 travelers per year who become infected with malaria abroad and then return to the U.S. As the nation's public health agency, CDC tracks 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.

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