

## Fighting malaria today and tomorrow

PATH works with partners and countries to achieve a malaria-free world

PATH is a leader in the battle to control and eliminate malaria. With an unparalleled portfolio of projects, PATH is partnering with countries around the world to make malaria history. PATH-pioneered approaches have contributed to remarkable progress toward eliminating malaria, with 6.2 million lives saved between 2001 and 2015.

Defeating malaria requires a multipronged and staged approach. PATH's strategy includes optimizing the delivery of current tools and approaches while developing new elimination strategies, creating next-generation tools to overcome emerging challenges, and building innovative partnerships and financing models to ensure sustainability and impact. The PATH Center for Malaria Control and Elimination (CMCE) works across PATH's malaria portfolio to align expertise and partnerships with the aim of accelerating the development of strategies and tools for elimination. All our work is intended to empower national governments to pursue the goal of eliminating malaria transmission once and for all.

### INNOVATION IN CONTROL AND ELIMINATION STRATEGIES

PATH partners with national programs to combine the best existing methods for malaria prevention and control and ensure they reach the people who need them most. For example:

- PATH's Malaria Control and Elimination Partnership in Africa (MACEPA) supported Zambia's national malaria program to rapidly deliver insecticide-treated bednets, indoor spraying of insecticides, new diagnostics, and effective medicines. Malaria rates were cut in half in just two years in Southern Province, where efforts were concentrated.
- As the lead for the MalariaCare partnership, PATH is strengthening health systems and improving the quality of malaria case management in 17 countries in Africa and the Mekong Region.
- We are speeding up access to affordable, highly sensitive diagnostics that detect malaria among people without significant symptoms, especially in areas that are close to eliminating malaria.

In addition, we are using data in new and better ways to track transmission patterns, optimize deployment of resources, and eventually eliminate malaria. For instance, MalariaCare's tablet-based quality improvement application is enabling supervisors to provide prompt feedback to health facility staff during supervision visits as well as feeding data into an online information system for better program management. In Senegal, we are helping to scale a mobile phone information system that will generate timely, high-quality data to guide elimination efforts. In Zambia, we are partnering with Tableau Software on use of data visualization tools to help health officials decide how to deploy resources.

### SUCCESS STORY

#### Zambia leads the way



PATH/Laura Newman

For more than a decade, PATH has partnered with the Government of Zambia to fight malaria. Southern Province, in particular, has served as a laboratory for demonstrating how to accelerate impact. Early efforts by PATH's Malaria Control and Elimination Partnership in Africa (MACEPA) and the government reduced the number of malaria parasites in children by half in just two years, and recent efforts have led to a 93 percent decline. PATH is now pushing to stop malaria transmission in Zambia altogether.

To reach this goal, Zambia has targeted people who are infected with the parasite but have no symptoms. In support of the national malaria program, MACEPA conducted a mass drug administration (MDA) study in Southern Province—treating everyone in malaria-endemic areas. Promising

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In developing strategies for elimination, we aim to create a package of interventions that are adoptable and adaptable across geographies. This includes interventions such as community-wide treatment to stop the cycle of transmission of the malaria parasite from humans to mosquitos and back again. For instance, we piloted mass drug administration in Zambia, where nearly 1,000 community health workers and data collectors went house to house, treating hundreds of thousands of people to rid them of hidden parasites.

PATH also works with national governments and partners on policies and guidelines to enable elimination. Senegal, for example, has reduced malaria transmission tenfold, thanks to strong national leadership and use of new tools and approaches, many supported by PATH, such as a rapid reporting platform and systematic case investigation. We have also created a network of community champions and sponsored a nationwide “Zero Malaria Starts with Me” campaign.

## INNOVATION IN TOOLS

PATH is developing the next generation of tools to prevent, detect, and treat malaria. One example is PATH’s Malaria Vaccine Initiative, which manages an extensive portfolio of vaccine candidates and approaches:

- After decades of research and dozens of clinical trials, the world’s most advanced malaria vaccine candidate, RTS,S (Mosquirix™), received a thumbs-up from European regulators and approval by the World Health Organization for pilot introduction in Africa.
- Other candidates in our vaccine pipeline build on progress made with RTS,S, and some pursue different paths for eliminating malaria, such as attempting to block transmission of the malaria parasite from humans to mosquitoes and back again.
- PATH also develops and optimizes technologies to generate reliable data that vaccine developers need to evaluate vaccine candidates, and we then make these resources available to others.

PATH’s pioneering work on diagnostics includes improving access to available tests while advancing development of new tools to improve case management. We are advancing technologies to detect low levels of infection that might otherwise be missed.

To improve access to malaria treatment, PATH worked with partners to develop a new source of artemisinin to supplement the plant-derived supply of this key ingredient for malaria treatments. Semisynthetic artemisinin is now helping to meet market demand for this drug.

## INNOVATION IN PARTNERSHIPS AND FINANCING

PATH partners with governments, global stakeholders, corporations, universities, and donors to sustain momentum and financing for malaria control and elimination. We are a pioneer in cross-sector collaboration. Our critical global collaborators include the World Health Organization, Roll Back Malaria partnership, President’s Malaria Initiative, and Global Fund to Fight AIDS, Tuberculosis, and Malaria. In addition, many of our product development initiatives hinge on public-private partnerships.

Our innovative approach to financing includes harnessing the influence, resources, and expertise of the private sector. PATH also engages individual donors and foundations as allies and supporters. We work with national governments and partners to evaluate the most efficient and effective allocation of resources and develop novel strategies to cultivate new resources.

Through all of our work to advance innovation in strategies, tools, and partnerships and financing, PATH is helping to achieve a malaria-free world.

results have led to expansion of MDA. Once transmission drops to low levels, health workers follow up on any malaria cases to clear infections. Zambia will soon carve out whole malaria-free zones.

The Program for the Advancement of Malaria Outcomes (PAMO) is working in remaining areas with high transmission of the disease. Funded by the US Agency for International Development and the President’s Malaria Initiative, PAMO is reducing the malaria burden through strategic interventions, community engagement, and improved data collection and management.

### For more information

PATH’s work in malaria: <http://www.path.org/our-work/malaria.php>

Diagnostic technologies: [sites.path.org/dx/malaria/](http://sites.path.org/dx/malaria/)

Drug development: [sites.path.org/drugdevelopment/](http://sites.path.org/drugdevelopment/)

MACEPA: <http://www.makingmalariahistory.org/>

Vaccine development: [www.malariavaccine.org](http://www.malariavaccine.org)

MalariaCare: [www.malariacare.org](http://www.malariacare.org)

Insecticide spraying: [www.ngenirs.org](http://www.ngenirs.org)



PATH is the leader in global health innovation. An international nonprofit organization, we save lives and improve health, especially among women and children. We accelerate innovation across five platforms—vaccines, drugs, diagnostics, devices, and system and service innovations—that harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity. By mobilizing partners around the world, we take innovation to scale, working alongside countries primarily in Africa and Asia to tackle their greatest health needs. Together, we deliver measurable results that disrupt the cycle of poor health. Learn more at [www.path.org](http://www.path.org).

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