# Malaria

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Malaria solutions—developed in partnership, informed by experience

We envision a world where country leaders and partners have the tools, evidence, financial capacity, human resources, and political will to control, eliminate, and eventually eradicate malaria.

### What we do

In partnership with countries and communities, we support a wide breadth of malaria control and elimination efforts rooted in deep technical expertise, ranging from accelerating malaria vaccine development and introduction, advancing vector control, improving diagnostic tests, expanding access to existing and new tools, and developing, evaluating, and scaling digital platforms to inform decision-making.

### Health system resilience

We partner with ministries of health in malaria-endemic countries to support the development of resilient health systems by generating evidence to inform policy, strengthening the capacity of community health workers, and increasing coverage of proven health interventions against malaria and other diseases.

 Since 2005, through PATH's Malaria Control and Elimination Partnership in Africa (MACEPA) funded by the Bill & Melinda Gates Foundation (BMGF), we have generated evidence that informs national strategic plans and operational plans to improve malaria control and elimination efforts in sub-Saharan Africa.

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- In Zambia, through MACEPA, PATH has supported the development of a national program model that focuses on identifying and implementing a package of malaria control interventions, such as quality case management, rapid reporting and surveillance, and vector control. Because of its success, this approach was adopted by the broader RBM Partnership.
- Also, working closely with the government of Zambia, the U.S. President's Malaria Initiative (PMI) PAMO Plus project provides training and mentorship (including in integrated community case management) to health care workers in Zambia, which has resulted in improved completeness, accuracy, and timeliness of data reporting and expanded access to live-saving diagnosis and treatment.
- In Senegal, in partnership with the Ministry of Health and Programme National de Lutte Contre le Paludisme, MACEPA provides programmatic support in areas of data quality and data-driven decision-making, the development of national policies, and collaboration on cross-border issues.
- Partnering with national program managers across a number of African countries, PATH has used mathematical models to estimate the potential impact and cost-effectiveness of malaria interventions to guide national and sub-national strategy decisions. We also provide trainings to strengthen mathematical modeling and analytics skills of staff in malaria-endemic countries.

Angola Benin Burkina Faso Cameroon Côte d'Ivoire DRC Ethiopia The Gambia Ghana Guinea Kenya Liberia Madagascar Malawi Mali Mozambique Niger Nigeria Rwanda Senegal Sierra Leone Tanzania Uganda

Zambia Zimbabwe

# Where we work







Conceptor Mulube, Laboratory Technologist, conducting an experiment in the National Malaria Elimination Centre lab in Zambia. Photo: PATH/Hunter Lengel Isgrig

## Digital and data

We partner with countries and organizations across sectors to support the development of high-quality surveillance systems and provide data expertise to identify and implement tailored and optimized intervention packages.

- Across all 27 countries supported by PMI, PATH is leading the PMI/Digital Square Digital Community Health Initiative to understand the types of digital health technologies being used to support community health programs, share what works in each country, and provide tailored technical assistance.
- PATH is part of the PMI Vector Link consortium (USAID's flagship vector control partnership led by Abt Associates), working with national malaria control programs to compile, analyze, and visualize data to guide vector control decisions and strategies.
- Through the USAID Ethiopia Surveillance for Malaria Elimination (S4ME) activity, PATH and local partners aim to improve the quality of implementation of targeted malaria elimination interventions through the identification, investigation, classification, and management of malaria cases by health facilities and community platforms.

### **Epidemic and pandemic preparedness**

Our investments in malaria—including integrating multiple sources of data and expanding surveillance and laboratory capacities—have been leveraged to effectively prevent, detect, and respond to emerging global health threats.

 We work in the Democratic Republic of the Congo, The Gambia, Senegal, and Vietnam to integrate data and develop data visualization dashboards used by national emergency operations centers and national malaria programs, helping countries with their responses to pandemics and infectious diseases such as malaria.

- Leveraging existing laboratory infrastructure for malaria parasites in Zambia, in partnership with the University of Zambia and with funding from BMGF, we sequenced 1,000+ infections and mapped the rise and fall of different variants during the COVID-19 pandemic—the first African team to identify the Beta variant outside South Africa.
- We have shaped global guidance with partners on safely delivering malaria services while mitigating the spread of COVID-19 through mathematical modeling and data analytics.

#### Innovation and access

We develop, introduce, evaluate, and scale game-changing tools and approaches that make malaria control and elimination more efficient, accessible, and affordable. We conduct complex evaluations and analyses and advance the global research agenda.

- PATH's Malaria Vaccine Initiative supports the
  development of a robust pipeline of malaria vaccine
  candidates, including RTS,S/AS01, the world's first
  malaria vaccine, and works to inform prioritization and
  access where vaccines are needed most.
- In diagnostics, PATH collaborates with partners to develop, evaluate, and commercialize highly sensitive tests to detect low-density infections and point-of-care tests for glucose-6-phosphate dehydrogenase (G6PD) deficiency to guide treatment of patients with Plasmodium vivax malaria.
- To catalyze safer and sustainable access to G6PD diagnostics and drugs for P. vivax, PATH co-leads the Partnership for Vivax Elimination with Medicines for Malaria Venture, funded by Unitaid, BMGF and UK Foreign, Commonwealth and Development Office.
- In vector control, PATH is evaluating new, dual-active ingredient insecticidal nets in Burkina Faso, Mozambique, Nigeria, and Rwanda through observational analyses as part of the News Nets Project, funded by Unitaid and the Global Fund.
- PATH leads the Zambia phase III field trial of a new vector control tool aimed at addressing the twin threats of insecticide resistance and outdoor biting: Attractive Targeted Sugar Baits. Funded by BMGF and led by IVCC, results from trial sites in Zambia, Mali, and Kenya will inform WHO policy recommendations.
- Through PMI Insights, PATH leads a multidisciplinary consortium partnering with countries to generate and use evidence from operational research and program evaluation to guide programmatic decisions for malaria control and elimination.

