



Malaria

Scaling up effective, equitable, locally led, and evidence-based interventions

Malaria is a preventable and treatable infectious disease, transmitted by mosquitoes, that kills more than half a million people each year. Malaria cases and deaths are highest in sub-Saharan Africa, where it is the leading cause of childhood mortality. The global community has come together to combat malaria, with the goal of eradicating the disease by 2050.

Impact Numbers



25+ years' experience helping countries prevent and control malaria



Supported **20+ national malaria programs** in Africa, Asia, and Latin America



100+ million people reached with malaria education, prevention, and treatment



14 + million bed nets distributed

RTI International is a global leader in malaria prevention, control, surveillance, and elimination. Since 1998, we have partnered with U.S. and multilateral donors, host country governments, universities, civil society, and the private sector to scale up the fight against malaria. We have worked in Africa, Asia, and Latin America to implement large-scale programs, and partner closely with national malaria programs to strengthen prevention, diagnosis and treatment of cases, vector control, and surveillance systems.

We are at the forefront of efforts to help countries move toward malaria elimination, continuously innovating through our work in cutting-edge technologies. We developed *Coconut Surveillance*, an open-source mobile software application which has significantly enhanced malaria surveillance and response in Zanzibar, and we are closely supporting the governments of Zanzibar and Thailand as they progress toward elimination. In Senegal and Guinea, we are working to deliver preventive medicines to hundreds of thousands of children. Underlying everything we do is a passion for reaching the unreached with life-saving interventions.

DID YOU KNOW?

Coconut Surveillance, our state-of-the-art mobile software app, has helped surveillance officers in Zanzibar respond to more than 70,000 malaria cases since 2012. We are streamlining *Coconut* into the broader national health management information system and strengthening the country's ability to own and manage the technology moving forward..

In **Thailand**, we helped launch and implement the country's "1-3-7" surveillance strategy, whereby health officials report malaria cases within one day, investigate cases within three days, and deploy responses within seven days. Since the introduction of this strategy in 2017, malaria cases have fallen by 81%



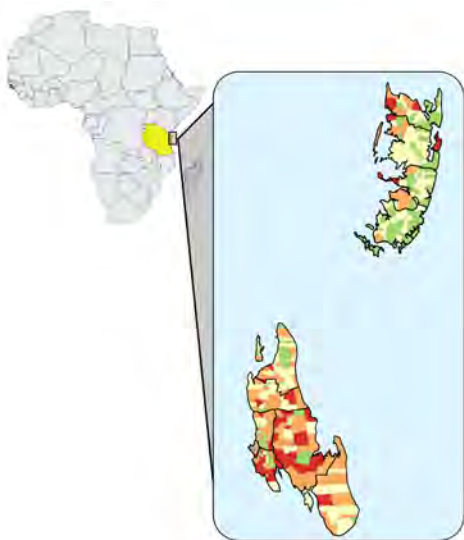
Our Approach

Carefully listening to our clients, partners, and national malaria programs, we advance sustainable, multisectoral, local solutions for malaria prevention, control, surveillance, and elimination. We design and implement interventions in close collaboration with local stakeholders, with the goal of country ownership of malaria activities. Our malaria experts conduct rigorous independent research and advance novel approaches based on local priorities, which allows us to shift our efforts based on what is working, not simply what was planned.

Our Expertise

Surveillance and Data Science. Collecting high-quality data on malaria cases, affected communities, insecticide resistance, and antimalarial drug resistance is essential to reaching elimination. We work closely with governments to strengthen health information systems, including building their capacity in advanced data analytics approaches such as statistical modeling, economic analyses, and geographic information systems (GIS) to improve the targeting of interventions, predict and assess the impact of interventions on morbidity and mortality, and estimate the cost-effectiveness of interventions. Having the systems and skillsets to analyze this important data allows in-country stakeholders to use data to make informed decisions and target the right interventions in the right locations and at the right time.

Vector Control. We have extensive experience in the management of large-scale indoor residual spraying (IRS) operations, distribution of long-lasting insecticidal nets (LLINs), larviciding, entomological surveillance, and insecticide resistance monitoring. U.S. President's Malaria Initiative-supported IRS operations that we implemented in partnership with ministries of health in Tanzania and Zanzibar have been among the most successful in Africa, reducing malaria prevalence to near zero in some areas and dramatically lowering malaria-related hospital and clinic admissions. We also provide technical assistance in the design, implementation, and monitoring of LLIN distribution efforts, whether at health facility, school, or national levels.



Malaria strata

- High diffuse transm. (>5 case/1,000 people)
- Moderate focal transm. (3-5 case/1,000 people)
- Low focal transm. (>1-<3 case/1,000 people)
- Pre elimination (≤1 case/1,000 people)

Map produced by RTI showing the levels of malaria risk in geographic areas of Zanzibar, a semi-autonomous archipelago in Tanzania. This data will help Zanzibar tailor its malaria interventions to different communities based on their needs.



DID YOU KNOW?

With support from RTI and the U.S. President's Malaria Initiative (PMI), Zanzibar has moved toward malaria elimination, reducing its malaria prevalence from more than 30% in 2005 to less than 1% today..

Under the USAID StopPalu+ project in Guinea, we have distributed more than 4.4 million bednets and protected 300,000+ children annually by delivering 3.7 million doses of preventive malaria medicine.

Malaria Case Management. We strengthen services and systems that improve high-quality diagnostic and treatment services in health facilities and communities. Examples include training and equipping health workers to use microscopy and rapid diagnostic tests to adhere to national protocols for malaria case management, and developing social behavior change messaging to ensure patients adhere to treatment.

Seasonal Malaria Chemoprevention (SMC). RTI plays an integral role in supporting national malaria programs and stakeholders to scale-up SMC in Guinea and Senegal, leveraging community platforms to reach children in hard-to-reach areas. Annual SMC campaigns involve the distribution of preventive medicines during the rainy season when the risk of malaria is greatest—an intervention that has been shown to be highly effective in protecting children from malaria. We support all aspects of annual campaigns, from forecasting medicine and commodity needs to training and supervising health workers and sensitizing communities to the importance of the campaigns. We are also a key member of working groups led by Roll Back Malaria's Partnership to End Malaria and the World Health Organization (WHO) that develop global guidelines for SMC implementation.

Malaria Operational Research and Policy. We actively engage with national malaria programs, donors, and stakeholders interested in operational research to explore policies and strategies that will help countries effectively reach targets for malaria prevention, control, and elimination. Recent examples include evaluating the effectiveness of malaria case detection and response efforts in Zanzibar, piloting a text messaging service intervention to increase access to antenatal care and intermittent preventive therapy for pregnant women in Guinea, and assessing the contribution of active case detection to malaria elimination in Thailand. In addition, our staff regularly participate in numerous malaria research projects around the globe, and since 2010 have authored more than 300 malaria-related articles for publication in peer-reviewed journals.



Engaging Communities in the Fight to End Malaria

Through the USAID StopPalu+ project in Guinea, we have organized more than 2,300 community dialogues and advocacy meetings on malaria and other health issues, such as COVID-19. Community dialogues help community members feel they are part of the solution for malaria control and prevention and build trust in the project and health officials, helping increase sustainability and self-reliance.

Selected Publications

Adams, M. W., et al. (2022). Leaving no one behind: Targeting mobile and migrant populations with health interventions for disease elimination—a descriptive systematic review. *BMC Med* 20: article no. 172. <https://doi.org/10.1186/s12916-022-02365-6>

Ahmed, S., et al. (2020). Travel is a key risk factor for malaria transmission in pre-elimination settings in sub-Saharan Africa: A review of the literature and meta-analysis. *Am J Trop Med Hyg* 103: 1380–1387. <https://doi.org/10.4269/ajtmh.18-0456>

Bisanzio, D., et al. (2023). Spatiotemporal dynamics of malaria in Zanzibar, 2015–2020. *BMJ Glob Health* 8: article no. e009566. <https://doi.org/10.1136/bmjgh-2022-009566>

Lertpiriyasawat, C., et al. (2021). Implementation and success factors from Thailand's 1-3-7 surveillance strategy for malaria elimination. *Malaria J* 20: 201. <https://doi.org/10.21203/rs.3.rs-295766/v1>

Leuba, S. I., et al. (2022). Predictors of *Plasmodium falciparum* infection in the first trimester among nulliparous women from Kenya, Zambia, and the Democratic Republic of the Congo. *J Infect Dis* 225: 2002–2010. <https://doi.org/10.1093/infdis/jiab588>

Mitchell, C. L., et al. (2022). Evaluating malaria prevalence and land cover across varying transmission intensity in Tanzania using a cross-sectional survey of school-aged children. *Malaria J* 21: 80. <https://doi.org/10.1186/s12936-022-04107-8>

Mkali, H. R., et al. (2021). Risk factors associated with malaria infection identified through reactive case detection in Zanzibar, 2012–2019. *Malaria J* 20: 485. <https://doi.org/10.21203/rs.3.rs-936591/v1>

Nice, J., et al. (2020). Estimating malaria chemoprevention and vector control coverage using program and campaign data: A scoping review of current practices and opportunities. *J Glob Health* 10: 1–16, article no. 020413. <https://doi.org/10.71789/jogh.10.020413>

Sudathip, P., et al. (2021). A foci cohort analysis to monitor successful and persistent foci under Thailand's Malaria Elimination Strategy. *Malaria J* 20: article no. 118. <https://doi.org/10.1186/s12936-021-03648-8>

Sudathip, P., et al. (2021). Progress and challenges of integrated drug efficacy surveillance for uncomplicated malaria in Thailand. *Malaria J* 20: article no. 261. <https://doi.org/10.1186/s12936-021-03791-2>

Selected Projects

USAID *Notre Santé* (USAID, 2022–2027)

RTI supports the Ministry of Health in Guinea to sustainably improve the quality, accessibility, and affordability of integrated health care in the country. Programmatic efforts focus on reproductive, maternal, newborn, child, and adolescent health; malaria; nutrition; and global health security. *Notre Santé* covers the fifteen prefectures (districts) in the regions of Labé, Boké and Kindia, as well as the six communes of the city of Conakry.

USAID *Owod* (USAID, 2021–2026)

RTI supports the government of Senegal to strengthen the capacity of its health system at regional and district levels to improve health outcomes for women and children by providing improved malaria; reproductive, maternal, newborn, child, and adolescent health; nutrition; and water, sanitation, and hygiene services in five priority regions of Senegal: Diourbel, Kolda, Sédhiou, Tambacounda, and Kédougou.

Okoa Maisha Dhibiti Malaria Activity—Save Lives, End Malaria (USAID, 2018–2023)

RTI supports Tanzania's National Malaria Control Program and the Zanzibar Malaria Elimination Program to strengthen malaria surveillance and monitoring and move the country toward malaria elimination.

Inform Asia: USAID's Health Research Program (USAID, 2015–2023)

RTI works with the national malaria programs of Thailand and Lao PDR to strengthen surveillance systems and promote the use of strategic information to accelerate malaria elimination.

StopPalu and StopPalu+ (USAID, 2013–2022)

RTI supported Guinea's Ministry of Health and National Malaria Control Program in reducing childhood malaria prevalence from 44% in 2012 to 17% in 2021 through multiple interventions, including mass LLIN distribution, SMC, prevention of malaria in pregnancy, malaria case management, and disease surveillance.

Governance for Local Development (USAID, 2016–2021)

The project worked with the Government of Senegal, including the National Malaria Control Program, to support decentralization of selected government responsibilities and functions, including budgeting, local stakeholder and community engagement and coordination, oversight, and supervision of malaria programming.

Tanzania Vector Control Scale-Up Project (USAID, 2009–2016)

The project worked with Tanzania's National Malaria Control Program and the Zanzibar Malaria Elimination Program to implement IRS, distribute ITNs, and perform malaria surveillance in mainland Tanzania and Zanzibar.

Partner with us

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