

Accelerating Malaria Elimination in Ethiopia

Testing new approaches in Amhara National Regional State

Malaria elimination is an ambitious, but feasible, goal for national health systems and is key to communities realizing optimal health, development, and prosperity. PATH pursues this goal by investing across the spectrum from developmental research to national program strategy development and support, encompassing multiple platforms, and spanning the entire value chain.



In Ethiopia, community health workers use mobile tools for near-real-time malaria monitoring.

In support of the Federal Republic of Ethiopia’s commitment to malaria elimination, one of PATH’s major malaria projects, the Malaria Control and Elimination Partnership in Africa (MACEPA), is collaborating with the Federal Ministry of Health and the Amhara Regional Health Bureau to investigate strategies and approaches for malaria elimination. The work is being carried out in 213 villages in eight selected districts across different eco-epidemiological strata of Amhara National Regional State, with the hope that it eventually will be scaled up across the state, and in other states. Currently, operational research is underway in 35 of the 213 kebeles.

Malaria elimination is a top priority for the Federal Ministry and is important to the government’s efforts to maximize irrigated agriculture and diminish reliance on rain-fed agriculture. Elimination addresses a major health problem and is likely to increase Ethiopia’s ability to attract foreign and local investment, increase tourism, improve education, and maximize agricultural productivity. Initial investments in malaria elimination may be high, but once malaria is eliminated, the associated costs will decrease significantly compared to a malaria control approach.

Project Goal

The overall goal is to evaluate how well different parasitemia-clearing strategies can decrease malaria transmission and to provide necessary information on demographic and spatial patterns of infection to guide elimination strategies in very low to moderate transmission areas.

In very low transmission areas, the goal is to assess how well and how quickly case investigation with reactive focal testing and treatment (FTAT) can contribute to eliminating transmission and, in areas with no transmission, to document and maintain zero transmission.

In low to moderate transmission areas, the goal is to evaluate the combined impact of mass testing and treatment (MTAT) at the beginning of the transmission season, followed by case investigation with reactive FTAT on malaria transmission intensity. The research also will assess how quickly MTAT enables transition to case investigation with reactive FTAT alone, and eventually to elimination.

THE GOAL



PATH Ethiopia

MACEPA is partnering with the government to evaluate strategies that could lead to elimination in very low, low, and moderate malaria environments.



MACEPA partnerships with Ethiopia and three other countries will generate experience and evidence useful across Africa.

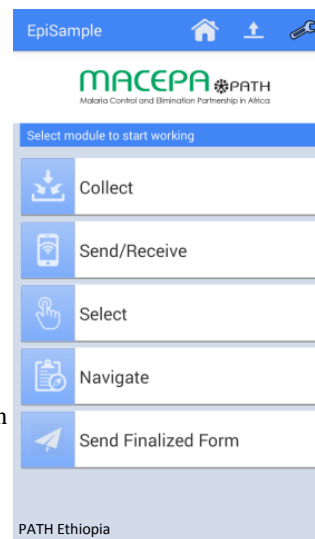


MACEPA's partners in Ethiopia include:

- FEDERAL MINISTRY OF HEALTH
- AMHARA REGIONAL HEALTH BUREAU
- ALL ROLL BACK MALARIA PARTNERS WORKING IN THE COUNTRY

Project Accomplishments

- Generated baseline information using a mini Malaria Indicator Survey in eight project districts and eight additional adjacent districts.
- Developed systems for timely and consistent malaria rapid reporting from 213 kebeles, with mobile phone data entry supported by the web-based DHIS2 platform.
- Conducted a household census in all 213 kebeles & mapped 243,998 (92%) households using GPS.
- Conducted MTAT in six kebeles, visiting 7,974 (87%) households and testing 30,712 (86.8%) people using RDTs. Four hundred twenty-one (1.4%) individuals who tested positive with rapid diagnostic tests (RDTs) were treated with appropriate anti-malaria drugs
- Conducted case investigation with reactive FTAT in ten kebeles. During October 20, 2014 and February 28, 2015, 407 positives were passively detected out of which 220 cases were investigated, leading to visits with 4076 individuals in 914 households. This resulted in testing 3,243 individuals and identification of 127 additional RDT-positive people, who then received appropriate treatment.
- Equipped community-based surveillance assistants with basic malariology training, knowledge, skills, and tools.
- Project survey and surveillance tools have evolved and resulted in EpiSample software, released as open source in the public domain
- Developed and deployed job aids, standard operating procedures, and basic survey tools in project villages.
- Conducted data quality assessments and introduced standardized outpatient registers at the health post level.
- Supported current malaria prevention activities through procurement and distribution of 234,000 LLINs and provision of operational cost for IRS for households in project districts.



EpiSample, a powerful, open-source survey and surveillance tool.

NEXT STEPS IN ETHIOPIA

PATH/MACEPA plans to work with the Ministry of Health and the Amhara Regional Health Bureau to develop:

- New intervention models that push beyond “business as usual” anti-malaria practices
- Plans for elimination-designated districts that span the spectrum of malaria transmission intensity (including districts with marginal transmission and districts which are a source of infection for the Amhara Region).
- Pilot projects that will influence action by the government and in-country partners.
- An investment case for scaling up malaria elimination interventions in Amhara National Regional State and across the country.
- Updated malaria elimination policies and regulatory practices.
- Malaria elimination implementation guidance.
- Costing of interventions to feed into future resourcing plans.

Lessons Learned to Date

- Results confirm that even in low transmission areas, 61% of RDT positive individuals are asymptomatic, consistent with the baseline survey conducted in the dry season.
- Coverage of LLINs and indoor residual spraying varies considerably by kebele.
- Household-level clustering of RDT positives is about 30% (clustering at hamlet level was not assessed).
- Many passively detected malaria cases were linked to travel. Where malaria importation is a threat, it is important to focus efforts on migrants and other high-risk populations.
- However, in one intervention village, no passively detected cases investigated had a history of travel and many secondary cases were identified, suggesting substantial local transmission.

FOR FURTHER INFORMATION

Asefaw Getachew, PATH/Ethiopia
agetachew@path.org

Scott Wittet, PATH/Seattle
swittet@path.org