Malaria Elimination Toolkit: An Overview

The Malaria Elimination Toolkit, developed by the Malaria Elimination Initiative (MEI) at the UCSF Global Health Group, provides national malaria programs and implementing partners with evidence-based, user-friendly tools to strengthen and accelerate malaria elimination efforts worldwide. The toolkit offers approaches that address challenges confronting national malaria programs in low-transmission settings. The MEI has built the toolkit around key areas that enable successful malaria elimination and prevention of reintroduction: advocacy, financing, regional collaboration, surveillance and response, and vector control.

Each tool specifies the target user, from surveillance officers and national malaria program managers to healthcare providers.

Many of these tools have been used successfully in malaria-eliminating countries, such as China, Eswatini, Indonesia, and Thailand—leading to policy and programmatic changes that are accelerating elimination efforts. By supplementing global malaria policy and guidance, these tools aim to accelerate efforts in the countries that will pave the way for malaria eradication.

Advocacy	Economics & Financing	Regional Initiatives	Response	Surveillance	Vector Control
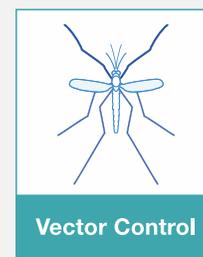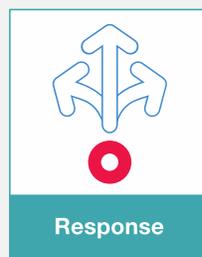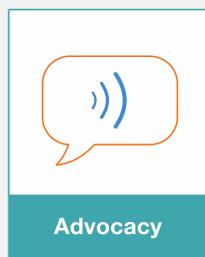
Elimination planning

The Elimination Scenario Planning (ESP) Tool guides malaria programs in evaluating the operational, technical, and financial requirements for malaria elimination against available program capacity, technical challenges, and available funding to determine when and how elimination is an appropriate goal. With this tool, malaria programs can make evidence-based decisions about the feasibility of long-term goals and plan strategic approaches accordingly. The ESP tool was developed in close partnership with CHAI and Imperial College London, and has been published by the World Health Organization. ESP has been piloted in The Gambia, Rwanda, Senegal, and Zanzibar.

Financial transitions

The Transition Readiness Assessment for Malaria (TRA-M) Tool helps national malaria programs, their donors, and their partners prepare to transition from donor financing to domestic funding and management. Malaria programs can use the tool to generate evidence on financing, health system, and program changes anticipated with the transition. This evidence helps malaria programs identify priority challenges related to transition, as well as strategies and actions for a transition plan. The TRA-M has been piloted in the Philippines, Sri Lanka, and Thailand.

Targeting interventions

The Disease Surveillance And Risk Monitoring (DiSARM) Tool is a spatial intelligence platform built to enable disease control programs to deliver more effective field campaigns. The platform combines a data visualization interface with powerful analytics to convert raw data into actionable information. Programs can generate risk maps using climate and satellite data, estimate the number of sprayable structures in an area, and identify clusters of buildings for more optimal intervention planning. This helps to identify the specific locations where interventions, particularly indoor residual spraying, will have greatest impact and to gain accurate estimates of coverage. DiSARM is being used in Namibia and Botswana.

Optimizing efficiencies

The Malaria Program Efficiency Analysis Tool (MPEAT) helps malaria program managers collect, organize, and track data points related to the technical efficiency of a malaria program. MPEAT allows users to compare specific epidemiological, financial, and operational indicators between two years and against performance targets set by the national program. MPEAT is a flexible tool that can be used for national and subnational level programs. Most of the data required are aggregated from subnational or health facility reports. MPEAT has been piloted in Papua New Guinea, Bangladesh, and Indonesia.

Pharmacovigilance monitoring

The Primaquine Roll Out Monitoring Pharmacovigilance Tool (PROMPT) is an active surveillance data collection tool to monitor the safety of WHO-recommended single low-dose (0.25 mg/kg) primaquine for the treatment of *Plasmodium falciparum* malaria. PROMPT supports the roll out of primaquine in malaria eliminating countries by providing national malaria programs and healthcare providers with the methods to track and respond to hematologic response to the drug. The tool has been successfully piloted in Eswatini.

High risk populations

The Malaria Elimination Guide to Targeted Surveillance and Response in High-Risk Populations (HRP) provides guidance to design and implement data-driven and targeted surveillance and response activities in populations at highest risk of malaria. This guide is designed to be used by national malaria program managers and their implementing partners, including non-governmental organizations and researchers, in countries with low malaria transmission. These approaches have been piloted in Namibia, Nepal, Lao PDR, and Indonesia, and further evaluations are planned in Asia and Africa.

Reactive case detection

Reactive case detection (RACD) is a strategy used to identify malaria infections as early as possible, through the screening and treating of household members and neighbors of an individual whose infection was passively identified at a health facility. *The RACD Monitoring & Evaluation Tool* helps national malaria programs assess key components and indicators of RACD, identifies and evaluates the strengths and gaps of RACD activities, and estimates the costs of conducting RACD. The RACD tool has been piloted in China, Indonesia, Thailand, and Zanzibar.

Assessing district-level readiness

Malaria elimination programs are logistically demanding. Every case must be investigated and managed to prevent onward transmission. Active foci must be investigated and managed, with effective vector control and drug-based interventions deployed to quickly halt transmission. To deliver on these demands, malaria programs need a broad range of operational capabilities. The District-level Readiness for Malaria Elimination Tool (DREAM-IT) was designed by MEI to systematically collect district-level information on a range of operational capabilities, which can then be used to inform malaria operational planning.

Vector control*

The Entomological Surveillance Planning Tool (ESPT) is being collaboratively developed to support country decision-making on vector control strategy and vector control tool selection based on entomological and epidemiology data. The ESPT guides users through priority entomological indicators, sampling methods, and surveillance activities to improve understanding of local vector species and effectiveness of interventions. The ESPT is being piloted in Mozambique, Myanmar, Namibia, and Panama in 2018 and may be piloted in additional countries in 2019. The ESPT will be available in 2019.

National investment case*

The Framework for Developing a National Investment Case proposes a methodology for developing investment cases for malaria elimination at the country level. When properly adapted to local contexts, this Framework can help to build a case for sustaining investments for malaria elimination and prevention of reintroduction and present the rationale for investing in clear and concise terms. Malaria programs can use the framework to gather data and generate evidence on the costs, benefits, and financial viability of malaria elimination in a specific setting. The national investment case created at the end of this process can then be used to advocate for sustained or greater political and financial commitment for malaria elimination. The tool will be available in 2019.

Organizational development*

The Organization Development for Malaria Elimination (ODME) Tool improves service delivery in elimination settings. The tool can be used by any level of a malaria program to apply change management. ODME supports the identification of operational challenges and the development, implementation, and measurement of solutions to address them. ODME has been piloted in Eswatini and Zimbabwe and will also be piloted in Namibia. The tool will be available in 2019.

*indicates tools currently in development

Malaria Elimination
Initiative

UCSF

University of California
San Francisco