



## Malaria Diagnostics and Treatment

With decades of experience, MCDI is a technical leader in malaria diagnostics and treatment.

### Diagnostics

*MCDI's expertise lies in enhancing quality of care through technical assistance, microscopy training and supervision.*

#### Setting global standards

MCDI's technical experts have contributed to the development of major WHO guidelines on malaria diagnostics, including the Microscopy Quality Assurance Manual (2009) and the WHO Malaria Diagnostic Testing manual (2011). These key international resources reflect the organization's work providing technical assistance to Ministries of Health and others engaged in on-the-ground implementation.

#### Outreach Training and Support Supervision (OTSS)

To ensure consistent, high-quality malaria diagnostics and treatment, MCDI projects utilize OTSS for tailored supervision and managerial auditing of health facility processes. MCDI's work in Zambia - where it developed a national accreditation course for microscopists, and in Tanzania, where in one year staff visited more than 2,000 clinics to provide OTSS - are examples of how

MCDI strengthens the capacity of health workers.

#### Malaria Diagnostics Refresher Training (MDRT)

MCDI develops and delivers MDRT that builds health workers' ability to quickly and correctly diagnose malaria. Under the IMaD and MalariaCare programs, MCDI has provided refresher training to health workers in nine African countries, many of achieving the highest level of WHO score for both parasite detection and parasite counting.

#### Rapid diagnostic tests

MCDI's initiatives help boost countries' ability to provide rapid diagnostic tests for malaria. Under the IMaD program, MCDI worked at the national level with Ministries of Health to develop diagnostic guidelines, as well as at the community level, where in Madagascar, for example, MCDI trained community mobilizers with no prior clinical training to administer rapid diagnostic tests and anti-malarial medications.

#### Slide archives

In Equatorial Guinea, MCDI developed a malaria slide archive in order to support competency testing and quality improvement of microscopists, the first of its kind in Africa. MCDI has helped to develop similar slide archives in Ethiopia, Ghana, the Democratic Republic of Congo, Malawi and Zambia. The standard



operating procedures for these banks formed the basis for the WHO's guidelines for slide banking and validation.

### MCDI Malaria Programs

(selection)

#### MalariaCare Cooperative Agreement

2012-2017

Donor: USAID/PMI - \$50 million

Location: 13 PMI countries

#### Improving Malaria Diagnostics (IMaD)

2007-2012

Donor: USAID/PMI - \$20 million

Location: 14 PMI countries

#### Bioko Island Malaria Control Project (BIMCP)

2004-2018

Donor: Marathon Oil and the Government of Equatorial Guinea - \$80.7 million

Location: Equatorial Guinea

#### Accelerating the Reduction of Malaria Morbidity and Mortality (ARM3)

2011-2018

Donor: USAID/PMI - \$20 million

Location: Benin





### Malaria treatment

*MCDI specializes in improving the quality of case management of uncomplicated and severe malaria in public and private clinical facilities as well as at the community level.*

#### Development of case management policies and guidelines

MCDI provides input on global malaria treatment guidelines aimed to increase the accessibility and quality of recuperative services. MCDI has supported Ministries of Health in updating their case management guidelines to introduce artemisinin-based combination therapies (ACTs) within their countries.

#### Working with clinicians to improve care

In a five-day course designed by MCDI, clinical supervisors and clinicians can refresh their training in case management practices for malaria. In Benin, for example, MCDI introduced a collaborative improvement approach in twelve of the country's Health Zones, bringing members of health facilities together to share best practices and develop improvement plans. In those same health zones, MCDI introduced a Leadership Development Program approach, working with health facility management teams to strengthen their leadership abilities.

#### Treatment of uncomplicated malaria

MCDI has trained health workers in both the public and private sectors on case management and uncomplicated malaria. Under the ARM3 project in Benin, MCDI trained health workers in ACT treatment, treatment of malaria in pregnancy, health

management information systems and the management of malaria commodities. MCDI has also provided similar trainings in Equatorial Guinea, Malawi and Madagascar.

#### Treatment of severe malaria

In Benin and Equatorial Guinea, MCDI has facilitated and enhanced the treatment of severe malaria by government and private health sector officials. Basic training and equipment have been provided to hospitals, and approaches to strengthening the care for children within hospitals have been introduced.

#### Integrated Community Case Management (iCCM)

iCCM strategies have been implemented by MCDI in South Africa, Benin, Bolivia, Malawi and Madagascar. In Madagascar, MCDI developed the iCCM training manual for Community Health Workers, adopted by the national malaria control program. MCDI has trained countries on how to integrate case management of multiple illnesses, especially in children.

### Monitoring and Evaluation Diagnostics and Treatment

MCDI has extensive monitoring and evaluation (M&E) experience in its malaria programs, and is an essential component of its diagnostics and case management interventions. ARM3 works to strengthen all major health information systems within the country, finding ways to integrate the array of databases using a common platform, the District Health Information Software (DHIS). An iCCM mobile health application has also been developed to collect community health worker data that can instantly be viewed online.



Under the IMaD program and the subsequent MalariaCare program, MCDI supports the improvement of diagnostic data collection systems to facilitate tracking and reporting on progress and to facilitate informed decision making.

### Polymerase Chain Reaction (PCR)

PCR and Loop-mediated Isothermal Amplification (LAMP) are techniques that are critical to achieving malaria elimination goals in pre-elimination and elimination settings, as they are capable of detecting low levels of malaria parasites in blood that are not visible through microscopy.

Under MalariaCare, MCDI has provided policy guidance and assistance to the Ministries of Health of program countries to support PCR capacity building. PCR has also been used by MCDI to validate its slide sets, and as the gold standard for assessing malaria microscopy competency of the microscopists trained by MCDI.



To learn more about MCDI, please visit [www.mcdinternational.org](http://www.mcdinternational.org)

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