



## Ministry of Health

# Mozambique Malaria Programme Performance Review Scaling up for Universal Access to Malaria Control Interventions

December 2010

## Aide Memoire

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### I. Purpose

A strategic and performance review of the Mozambique National Malaria Control Programme was conducted to assess progress and performance of the programme. The review is expected to strengthen planning and resource mobilization for scaling up delivery of malaria control services. The major findings and proposed actions from the review are summarised in this aide memoire. The aide memoire is not legally binding but a consensus statement on the key findings and proposed actions. It expresses the commitment of partners to work together for the implementation of the review findings.

### II. Background

In October 2010, the Ministry of Health Mozambique decided to undertake an in-depth review of the national malaria control program. This decision was made in the context of an observed decline in malaria incidence and deaths in Mozambique as a whole. The overall objective of the review was to assess the current strategies and activities with a view of scaling up implementation. The specific objectives of the review were: a) to review the epidemiology of malaria in Mozambique; b) to review the structure, organization, and management framework for malaria control within the health system and the national development agenda; c) to assess progress toward achievement of national targets; d) to review the current program performance by intervention thematic areas and service delivery levels; and e) to define the next steps for improving program performance.

The review was conducted in three phases. In Phase 1 the NMCP held discussions within the Ministry of Health and partners and gained consensus on conducting the review. A proposal was developed to mobilize funding and technical support. In Phase 2, teams were set up to conduct thematic desk reviews using published and unpublished reports on malaria in Mozambique. This phase was concluded in a national MPR retreat to gain consensus and finalize the thematic reports. These reports were then shared with the external team. In Phase 3, the observations of the national team were validated by a joint internal and external team through document reviews, key

informant interviews at national, provincial and district levels, and rapid field assessment of selected health facilities and focus group discussion at community level.

### **III. Key Objectives and 2006-2009 Malaria Strategic Plan Achievements**

The main objective of the Malaria Strategic Plan 2006-2009 was to reduce morbidity and mortality due to malaria in the population in particular in pregnant women and children under five, including poor population groups. The strategic plan identified four main targets: a) at least 60% of those at risk of malaria infection should benefit from the most appropriate combination of personal and community protection measures by 2010; b) at least 60% of all pregnant women have access to intermittent preventive treatment IPT); c) at least 60% of malaria cases have prompt and correct low-cost treatment within the first 24 hours of onset of symptoms; and, d) improve the quality of malaria diagnosis from 25-30%, to 60% by 2010.

Available data from SIS and BES indicate that the malaria incidence rate has declined from 315 per 1000 population in 2006 to 202 per 1000 population in 2009. Mozambique has also increased the number of districts sprayed by IRS from 34 districts in 2001 to 57 in 2010. The 2008 MICS found that 23% of children under five had slept under an ITN the night before the survey. In 2009 available data shows that 64% of women received IPT 2. Also, 22.7% of children under the age of five who had fever in the preceding two weeks received treatment within twenty-four hours of onset of fever. The MIS 2007 estimated the malaria prevalence to be 38.5% in children under the age of five.

### **IV. Key Findings and Action Points**

#### **1) Malaria Epidemiology**

Malaria is endemic throughout Mozambique and transmission is perennial but with seasonal peaks mainly between December and April. It is still the major cause of morbidity and mortality in Mozambique and accounts for 44% of all outpatient consultations and 29% of hospital deaths. The 2007 Malaria Indicator Survey found that parasitemia prevalence in children 6 to 59 months old was 38.5%. Data from the epidemiological surveillance system indicates that on average there are 5.8 million cases of clinically diagnosed malaria annually with decreasing trends.

The main malaria vectors are *Anopheles gambiae s.s.*, *An. funestus* and *An. arabiensis* whose distribution varies across the country. *Plasmodium falciparum* accounts for more than 90% of all malaria infections, with *P. malariae* (9%) and *P. ovale* (1%). There is no stratification and risk map for malaria in the country apart from the MARA map which was produced about a decade ago.

#### **Action points**

- 1) To conduct a detailed analysis and triangulation of the various data sources to determine the current epidemiological situation in Mozambique from which decisions on scaling up malaria control interventions could be based.

#### **2) Policies, Programme Management and Resource Mobilization**

The NMCP has benefited from high political commitment both within Mozambique and SADC. The programme is well-established with designated officers for most areas of interventions at central level

and malaria managerat provincial level. Office space and computer equipment has been provided at both central and provincial levels. Government has secured funding from partners but has also

invested heavily in procuring IRS chemicals. The human resources situation at the NMCP has improved to 12 staff in 2010 although some 3 positions are supported by partners in the short-term pending establishment of substantive posts by MISAU. Although there is neither a national health policy nor a malaria policy most technical guidelines are available which guide implementation of activities..

There is a marked increase in funding for malaria control by government and partners. The current financial arrangements through the SWAps and other mechanisms have enabled the scale up of malaria interventions. Key partners in malaria control in Mozambique are Global Fund, the United States Government, DFID, UNICEF, WHO, World Bank and Roll Back Partnership, The Global Fund disbursement challenges of 2009 are slowly being addressed with the creation of a support unit in MISAU. Several partners are involved in malaria control in Mozambique. The Terms of Reference, membership and modus operandi of the established malaria advisory and technical working groups are due for review and streamlining.

#### **Action Points**

- 1) Develop a malaria policy that could be incorporated into the National Health Policy once the latter is completed.
- 2) Finalize the proposed PNCM organogram that includes the recommended competencies, with clear roles and responsibilities for all the staff. The linkage between the PNCM and the provincial malaria coordinators should be strengthened.
- 3) Revamp the partnership coordination mechanisms including defining Terms of Reference, frequency of meetings and membership.
- 4) Establish a malaria advisory committee to advise on policy and implementation. The committee will operate with subcommittees in main technical areas as required by the main committee.
- 5) Improve collaboration and communication with other MISAU departments/agencies such as Reproductive Health, Human Resources, the Central Medical Stores (CMAM) and Central Medical Supplies Unit (CA) to enhance efficient delivery of malaria control activities.
- 6) Strengthen the capacity of the provincial malaria coordinators through provision of regular training on their responsibilities, supervision as well as providing resources for supervision of malaria control activities at the district and facility levels.
- 7) Cross border initiatives should be strengthened where they exist and established where appropriate.

### **3) Behavior Change Communication and Community mobilization**

Significant achievements have been made in maintaining malaria high on the political agenda as evidenced by involvement of the Head of State, the First Lady, key government and religious figures. Mozambique also commemorates Malaria Days (SADC and World Malaria Days) where influential figures take part to voice their support for malaria control. The NMCP has a IEC/BCC designated officer and develops and disseminates malaria information through various channels including the radio, television, newspapers and others. There is evidence that malaria awareness is increasing. However, the uptake of some of interventions such as ITN, health seeking behaviours and IRS acceptance remain low. Health education on malaria issues is conducted at health facility level. IEC and social mobilization activities are also conducted prior and after IRS and LLINs distribution.

In an effort to improve delivery of IEC/BCC activities NMCP is developing a national advocacy and communication strategy. The current funding level for behavior change communication activities for malaria is inadequate and earmarked funds are mainly for IEC/BCC activities for IRS. Although KAP surveys have been conducted by the programme and partners there is limited use of the findings to guide and prioritize IEC/BCC interventions.

#### **Action points**

- 1) To finalize, approve and implement the advocacy and communication strategy.
- 2) To ensure that additional financial resources are allocated for malaria information education and communication / behavior change communication.
- 3) Findings from studies conducted should be used to inform IEC/BCC interventions.

#### **4) Entomology and Vector Control**

The main malaria vector control method in Mozambique is indoor residual spraying (IRS) which was introduced in 1946. The NMCP has currently a dedicated IRS focal point and two entomologists at central level. With support from partners such as RTI and LSDI IRS has expanded from 34 districts in 2001 to 57 districts in 2010. IRS guidelines, training manuals, data collection tools are available. In addition, the NMCP and partners distribute LLINs to pregnant women through ANC, children under five years of age and in-patient are provided with LLINs. To monitor entomological indicators and program performance, three sentinel sites and three insectaries were established.

However, the capacity to conduct key entomological activities is inadequate in terms of numbers and skills. This affects program planning, implementation, supervision and monitoring of entomological activities. Furthermore, there is limited collaboration between NMCP and the INS which has capacity to conduct some of the activities. There are no guidelines for LLINs distribution. LLINs are distributed to targeted groups and not to the general population.

#### **Action points**

- 1) The MoH, in collaboration with INS, should develop and strengthen entomology capacity at central and provincial levels
- 2) In collaboration with partners the NMCP should develop integrated vector management (IVM) guidelines. The NMCP should provide guidance on transition from targeted distribution of LLINs to universal coverage. The MoH should consolidate and expand IRS in the country and to sustain the gains in provinces currently supported by partners.
- 3) The NMCP in collaboration with INS should establish provincial entomology teams to monitor entomological indicators at sentinel sites and to monitor quality and efficacy of IRS and LLINs using bioassays.
- 4) The NMCP should consider insecticide residual efficacy and the peak malaria transmission period when determining the timing of IRS operations.
- 5) Data collection tools for IRS need to be standardized to provide accurate data on population coverage. NMCP to conduct geographical reconnaissance to provide information for planning and enhance measuring programme performance.

#### **5) Epidemic Preparedness and Response**

Mozambique is susceptible to floods and cyclones which occurred in 2000, 2001, 2007, and 2008 in Inhambane, Tete, Zambézia, Sofala, Manica and Nampula. The floods led to some serious malaria epidemics. The NMCP detected outbreaks using surveillance data from the health information system, sentinel posts, and the weather forecasting system. Timely and effective

response to malaria epidemics in disaster zones includes retaining capacity for timely response to malaria epidemics and working with the National Disaster Management Institute (INGC) established in 2000, to coordinate national and international support and the CENOE that responds to disasters. The response to malaria epidemics includes indoor residual spraying, distribution of LLINs, treatment of malaria cases, and active surveillance. There are no epidemic preparedness and response guidelines and plans at all levels.

#### **Action Points**

- 1) The NMCP should develop malaria epidemic preparedness and response guidelines and ensure development of EPR plans in identified districts
- 2) Strengthen collaboration with INAM and BES in the areas of prediction, forecasting and early detection of disasters and the resultant malaria epidemics.
- 3) Strengthen collaboration with INGC and CENOE with regard to the malaria epidemics arising from natural disasters including joint planning, coordination and pre-positioning emergency malaria control commodities.
- 4) Regularly update health staff responsible for disaster management living in potential 'disaster' zones, on malaria epidemic preparedness and response.

### **6) Malaria Diagnosis and Treatment**

Malaria case management has improved in terms of adequate treatment policy, diagnosis and financial and human resources allocation. Malaria diagnosis and treatment is free of charge. Due to low access to health care by the majority of the population, malaria treatment is also provided through community agents. The NMCP has finalized implementation guidelines on treatment, diagnosis and supervision to be released early next year.

Mozambique has changed the drug policy three times in the last five years leading to poor adherence to treatment policy by health workers. Capacity to confirm all suspected malaria cases remains weak and quality control and quality assurance systems are still not functional. Therapeutic efficacy studies are still irregularly conducted. The weak supply management system has led to frequent stock outs of both medicines and RDTs. There are inadequate skilled human resources and inadequate training and supervision plans to refresh health providers. In addition, there are limited job aids for use at health centre level for decision making. Furthermore, the introduction of ACTs and RDTs at community level has led to increased demand and worsened stock-outs. Use of monotherapy is still predominant in the private sector although this is banned by the Ministry of Health.

#### **Action points**

- 1) Establish adequate training, retraining and supervision systems focused on frontline health workers to improve the quality of care
- 2) Strengthen supervision to ensure adherence to guidelines
- 3) Strengthen quality assurance and quality control systems for malaria diagnosis
- 4) Establish a timetable for regularly conducting drug efficacy tests
- 5) Establish two posts in the NMCP to enhance the capacity of case management within the NMCP: a laboratory focal point and a clinical services focal point.
- 6) MOH should ensure adherence by private practitioners to the monotherapy ban in collaboration with regulatory authorities.

### **7) Malaria in Pregnancy**

Implementation of malaria in pregnancy (MIP) started in 2006 as part of the key intervention of ANC. IPTp and LLINs are the key prevention interventions. The proportion of pregnant women who slept under an LLIN the night before was 42% (INSIDA 2009). The proportion of pregnant women who received at least two doses of IPT increased from 20.3% (MIS 2007) to 64% in 2009. Frequent stock outs of SP and LLINs have seriously constrained MIP activities. Community misconceptions about adverse reactions due to SP and its effect on the child as well as reluctance by pregnant women to be seen at ANC by males or young girls has negatively affected uptake. Inadequate coordination with DRH, CMAM and other partners was noted.

#### **Actions points**

- 1) The NMCP should discuss with SIS to include indicators for malaria in pregnancy
- 2) Use the APE to promote MIP activities at community level aimed at encouraging pregnant women to attend ANC at the nearest health facility.
- 3) NMCP to lobby for inclusion of MIP in training curriculums of health institutions
- 4) Improve coordination between the NMCP, CMAM, Mother-Child Health (MCH) programme and partners on planning and budgeting supplies of SP and distribution of LLINs

#### **8) Logistics, Procurement and Supply Management**

CMAM maintains systems for procurement of drugs and other related commodities for malaria control. There is an emergency supply system for resolution of stock-outs and storage space at all levels. Anti-malarials are supplied to health facilities using a kit system and by ordering required supplies and then picking them up from the provincial stores. AL, due to its presentation in a blister form, is voluminous and does not fit within the PME KIT and is therefore transported separately. In order to improve the product and information management, the central and provincial levels systems have been computerised.

However, there are significant shortcomings with quantification method used for RDTs and guidance on the quantification and ordering of alternate antimalarials and pre-referral drugs. Although these commodities are used at community level, the current monitoring and evaluation systems do not track community implementation of the strategy.

#### **Action points**

- 1) Improve logistics and supply chain management systems for malaria commodities and tracking of these commodities by the NMCP
- 2) Provide guidelines on the ordering and quantification of the alternate anti-malarials both for treating uncomplicated malaria and severe malaria.
- 3) Improve coordination between the clinical and logistics areas for quantification of commodities based on data to avoid expiry/accumulated medicines or stock-outs.
- 4) To improve on submission of progress reports to ensure continued funding from the Global Fund by including the required indicators such as tests performed and resulting positives and treatments administered.

#### **9) Surveillance, Monitoring and Evaluation and operational research**

The NMCP has developed a draft Malaria Monitoring and Evaluation Plan in line with the draft National Malaria Strategic Plan 2010-2014 based on “The Three Ones”. The NMCP has a Monitoring and Evaluation focal point supported by FHI while awaiting permanent recruitment of the M&E officer. Mozambique has two systems for collecting malaria morbidity and mortality data from health facilities. The BES has been designed to collect data on 11 priority diseases

including malaria. It records out-patient cases and deaths from the health posts, health centers and districts hospitals. The information is then sent from the health post to the health center and to the district level before being sent to the provincial level where it is captured electronically and sent to the central level. The Health Information System (SIS) collects data on inpatient conditions at all rural hospitals, provincial hospitals and general hospitals in the country. It also collects management information including logistics and drug supplies on a monthly basis, however drug consumption data is not readily available. Mozambique has a few sentinel sites which collect information on morbidity and mortality due to malaria for monitoring of impact of malaria interventions. Mozambique also conducts community, facility surveys and other surveys on a regular basis for collection of coverage and delivery of care data information. Provincial malaria focal points are in place in all provinces for follow up of malaria control implementation including collection and use of malaria data. Other malaria information such as on IRS and LLINs is collected using the NMCP system..

The review noted that there is inadequate regular updating of malaria epidemiology using available data by district. It was also noted that there is capacity that can be used in malaria operational research in collaboration with the NMCP. The BES and SIS function in parallel and generate data of variable quality that is hardly used. Surveillance data are aggregated by province, not district nor health facility. There is weak linkage between the NMCP and research institutions resulting into limited operational research on malaria. In addition, there is no forum for research findings dissemination. At lower levels national guidelines are not available and feedback is inadequate. In general, data collection, analysis and use are inadequate resulting in data of variable quality, completeness and timeliness. Community level malaria control and treatment are expanding, however, data at this level is not captured by the NMCP.

### **Actions**

- 1) NMCP needs to lead the coordination of malaria monitoring and evaluation efforts in the country. There is need to fill up the posts of monitoring and evaluation unit and retain them. Meanwhile, partners should complement the effort of NMCP in this transition period to ensure the activities of monitoring and evaluation.
- 2) Staff working in malaria control at national and provincial levels needs to be trained in surveillance, monitoring and evaluation including use of the data for decision making and supervision.
- 3) There is a need to define the operational research agenda, strengthen partnership with research institutions and establish a regular forum for dissemination of results for use as needed
- 4) Given the inadequacies of BES and SIS the NMCP needs to work with partners to establish a short term system for data collection, analysis and use while BES and SIS are being strengthened.
- 5) The NMCP needs to establish a malaria database at national and provincial levels which should be regularly shared with stakeholders.
- 6) Data reports should be sent disaggregated by health facilities from district to provincial level rather than consolidated.
- 7) NMCP should avail key guidelines to staff at lower levels in order to standardize procedures and analysis in M&E. There is need to design and implement Standard Operating Procedures for data collection, transmission, analysis and use. Find ways of transmission and use of community data in reporting and decision making.

### **V. Conclusion**

The Mozambique National Malaria Control Programme has made good progress in implementing most malaria control interventions and achieving targets. Data from the routine surveillance systems and other sources indicate that morbidity and mortality is declining. This trend varies from one province to the other. This review concludes that Mozambique needs to strengthen its delivery of interventions in order to achieve universal coverage of all malaria interventions. In addition, there is need to improve data collection and use to inform programme decision making.

## **VI. Commitment**

We, the Ministry of Health and partners, commit ourselves to the implementation of the action points recommended by this review and the scaling up of malaria control interventions for universal access and continued reduction of morbidity and mortality due to malaria in Mozambique.



Signed on behalf of the Government of Mozambique and Development Partners:

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name  
Minister  
Ministry of Health

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Name  
World Health Organization Representative  
Mozambique

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Name  
Director  
USAID Mozambique

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UNICEF Representative  
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Name  
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In Maputo, Mozambique Friday 10<sup>th</sup> December 2010