



THE STATE OF ERITREA



NATIONAL MALARIA PROGRAMME-PERFORMANCE REVIEW

AIDE MEMOIRE

OCTOBER 2013

I. Background

Malaria program-performance review (MPR) is a program development process involving two steps: Assessment of performance of country malaria control programs; and definition of medium term program improvement agenda. The current Eritrea malaria control strategic plan was for the period 2010-2014. It was conceived as a malaria-pre-elimination plan. Since it is nearing the end of its lifespan, the MPR was handy as an end of term evaluation. The other reasons Eritrea launched the MPR were the fact that between 2008 and 2012, the malaria disease burden and death rate had remained stagnant and the bottlenecks were not well understood; and the Ministry of Health and its partners believed that Eritrea was ripe to proceed from control to pre-elimination in the malaria control-elimination continuum, hence the need for an MPR.

The MPR objectives were to: review the malaria epidemiology; review policy and strategic frameworks for planning, programming, management and implementation; review progress towards national, regional and global targets; review performance of malaria services delivery systems by thematic areas at different levels of delivery; and define the future policies, strategies and transformation required to sustain high program performance.

The MPR consisted of three phases: phase I: partnership and planning; phase II: internal thematic desk review; phase III: joint programme field validation; phase IV: final report, follow-up of recommendations; and phase V, updating policies, strategic plans and re-design of programme. Phase III consisted of three steps:

1. Review of program characteristics including review of documents and reports and validation of findings through consultations and field visits;
2. Staging of the program along the malaria control-elimination continuum; this involved review of the level of attainment of performance indicators and standards and analysis of the findings of the program characteristics review;
3. Conceptualization of the program improvement agenda through analysis of the findings of the program characteristics review, consultations on technical, financial and operational feasibility of malaria pre-elimination (the stage anticipated for Eritrea based on its historical performance in malaria control) and application of the WHO template for malaria control-elimination programming.

This aide memoire summarizes the major findings and action points by thematic area and the medium-term program improvement agenda.

II. Key Findings

The MPR documented findings along seven thematic areas: epidemiology; programme management support; vector control; parasite control; surveillance, monitoring and evaluation; epidemic preparedness and response; Information Education and Communication (IEC) and behaviour change communication (BCC).

1. Malaria Epidemiology in Eritrea

The MPR concluded that Eritrea is winning the war against malaria. The following are the evidence in support of this conclusion: declining malaria burden from 110 cases/1000 population in 1998 to 11.9 cases/1000 population in 2012; declining malaria-specific deaths from 0.198 deaths/1000 population in 1998 to 0.0076 deaths/1000 population in 2012; on-going elimination of *Plasmodium falciparum* (P.f.); low parasite prevalence nationwide; possible stratification of the country into two malaria-risk areas - low risk and moderate risk areas.

The MPR also noted that there were key issues: rise in incidence of malaria in the last 3 years; increase of malaria deaths from 2011 to 2012 and occurrence of sporadic outbreaks in many sub zones of the country. Moreover, the Test Positivity Rate (TPR) is higher than the cut-off point (5%) required for transition from control to pre-elimination. In spite of the challenges, the MPR concluded that with the Eritrean spirit of resilience and commitment, it was possible for Eritrea to move towards a malaria-free future.

Action points

- Build capacity for analysis and interpretation of malaria data at health facility, sub-zonal, zonal and national levels to guarantee evidence based actions.
- Stratify and re-stratify the country into moderate-risk and low-risk areas.
- Adapt and strengthen the surveillance system to appropriate epidemiological context.

2. Program Management Support to the National Malaria Control Program

The MPR documented key achievements including development of a series of costed strategic plans with multi-stakeholder involvement, mobilization of adequate funding, introduction of relevant curricula in various health affiliated colleges, training and deployment of Public Health Technicians and Community Health Agents.

Key issues identified were: inadequate policy and legislation support to NMCP; limited malaria control partnership and funding base; limited multi-sectorial partnership; limited integration of CHA activities with relevant programs; inadequate human resources (HR) capacity especially at the zonal and sub-zonal levels (entomology/epidemiology); lack of value for money (VFM) and risk-based programming for malaria control; and absence of cross-border collaboration for malaria control.

Action Points

- Update malaria policy and technical guidelines and promulgate malaria control and elimination legislation;
- Expand multi-sectoral partnership and resource mobilization for malaria control/pre-elimination;
- Develop comprehensive training program for CHAs including iCCM;
- Strengthen the HR capacity for malaria control and elimination at all levels in collaboration with training/research institutions;
- Adopt VFM and risk-based programming for all malaria control and elimination activities; and
- Initiate inter-zonal and cross-border malaria control/elimination activities.

3. Case Management (Malaria Diagnosis and Treatment)

Diagnosis and treatment for malaria is implemented based on updated national treatment guidelines of 2008. In 2012, 92.8% of malaria cases were treated according to the national guidelines. According to the Health Facility Survey (HFS 2012), over three-quarters of health workers were trained in malaria case management to equip newly recruited staff with necessary knowledge and to update the knowledge of old staff with latest developments. The Ministry of Health conducts therapeutic efficacy studies (TES) regularly to inform policy and anti-malarial drug monitoring and case management committee is in place to oversee the status of case management and drug resistance levels and give guidance. Moreover the country has recently established malaria laboratory quality assurance and quality control (QA/QC) system with the involvement of National Health Laboratory (NHL) at the top of the network hierarchy. Artemisinin based Combination Therapies (ACTs) & Rapid Diagnostic Tests (RDTs) are introduced at community level and based on the HFS of 2012, no stock outs of malaria case management commodities were reported. Currently vibrant pharmacovigilance system is put in place which has already started reporting on adverse drug reaction. In addition, medicines are randomly tested and post-marketing surveillance conducted at certain intervals; .

Main issues were as follows: there are policy gaps in the revised treatment guidelines, for example: chemoprophylaxis and clearance of gametocytes; inadequate implementation of QA and QC for malaria diagnosis; not testing all febrile cases for malaria parasites; inadequate research in the malaria priority areas due to inadequate involvement of the academic institutions.

Action points

- Review the policy and update treatment guidelines;
- Re-orient all health workers to test every febrile case for malaria parasite;
- Strengthen the NHL and zonal laboratories to perform QA/QC system for malaria diagnosis;

4. Vector Control

Integrated Vector Management (IVM) (indoor residual spraying (IRS), Insecticide Treated Nets (ITNs), larviciding, and environmental management) has been one of the strategies of the malaria control in Eritrea. IVM and IRS guidelines were developed in 2010 in order to guide implementation of IVM activities. IRS is implemented in targeted villages of Debub and Gash Barka zones the coverage of which, according to MIS 2012, was 49.4% and 31.5% respectively. There has been active participation of communities in vector control activities as a result of intensive health promotional campaigns and provision of necessary materials. According to the MIS 2012, the percentage of HH with at least one ITN was 86.6%. However, this did not measure universal coverage which is about 76% according to administrative data demonstrating that there is likely to be a rupture unless LLINs gaps are quickly filled.

The key issues were as follows: there are gaps in guidelines with respect to quantification and distribution of LLINs; there is limited adherence to the IRS guidelines and no specific larviciding guidelines exist; there is no regular monitoring of vector bionomics and insecticides resistance and no comprehensive entomological database; the three designated entomological laboratories are not functioning properly;

Action Points

- Review and update IVM guidelines to address all components;
- Establish comprehensive entomological database at national level;
- Develop and implement insecticide resistance management plan;
- Build capacity and systems for basic epidemiological and entomological monitoring;
- Conduct regular insecticide resistance monitoring across a network of sentinel sites;
- Review and operationalize transport logistical arrangements for effective vector control.

5. Advocacy Communication and Social Mobilization (ACSM)

Health Promotion underpins multi-sectorial collaboration to promote healthy behaviors nationwide. This is supported by high level political will and commitment, strong nationwide partnership such as the community based Women Malaria Action Groups (WMAG), the National Union of Eritrean Women, National Union of Eritrean Youth and Students, Ministry of Labor and Human Welfare) among others. The availability of malaria training tools, IEC/BCC materials translated in local languages and disseminated across the country also added up to the achievements in health promotion activities for malaria.

Key issues were as follows: while Eritrea has an integrated Health Promotion Strategic Plan 2012-2016, this plan has not been costed and it was developed in light of malaria control; some of the IEC/BCC indicators have not been achieved such as malaria early treatment seeking behavior and use of bed nets as highlighted in 2012 MIS; inadequate coordination between the health promotion division and programmes and other in-country stake holders; inadequate in-country research capacity and weak collaboration with international research institutions that made assessment of the impact of the IEC/BCC interventions quite a challenge.

Action points

- Update and cost the national health promotion strategic plan in light of malaria pre-elimination;
- Update the malaria communication strategy in line with RBM communication framework;
- Conduct KAP studies periodically to improve uptake of interventions;
- Establish health promotion technical working group with clear terms of reference;
- Establish network with external research institutions in order to build in-country research capacity.

6. Surveillance, Monitoring and Evaluation and Operations Research (SMEOR)

The Ministry of Health has produced a clear framework for integrated Surveillance, Monitoring and Evaluation (SME) and established a robust Health Management Information System (HMIS) and Integrated Disease Surveillance and Response (IDSR) database at all levels. Multiple data platforms for SME-Routine, sentinel surveillance/surveys and Geographic Information System (GIS) mapping for health facilities exist with good health facility mapping that ideally should be the basis for future malaria stratification. In Epidemic Preparedness and Response (EPR), integrated EPR guidelines are available and there is a regular analysis of IDSR data to detect epidemics;

The key issues identified in SME are: inadequate epidemiological skills to analyze and transform data and provide feedback at all levels; inadequate reporting of malaria related activities - absence of standard, integrated and uniform training of CHAs to enhance this and non-reporting of the number tested by CHAs, and lack of national community HIS that is integrated with HMIS; IDSR standard case definitions for malaria are outdated and not present at several health facilities; the sentinel surveillance system is non-functional except for the parasitological component; inadequate cross border surveillance and response; limited coordination of SMEOR activities;

Key issue in EPR are - malaria epidemic thresholds are not suited to the changed epidemiological context; health workers have not changed their mindset to the changed epidemiology and thus expect huge outbreaks before declaring malaria epidemics.

Action points:

- Conduct detailed analysis of malaria data at sub-national levels (Zoba, sub-Zoba, Health Facilities);
- Reactivate the M&E Technical Working Group and M&E advisory committee;
- Conduct re-orientation of all health workers in view of the changed epidemiology of malaria;
- Review EPR guidelines in view of paradigm shift –a single confirmed case by blood film (BF) is a threshold for outbreak investigation for pre-elimination and elimination zones;
- Implement the parasitological, entomological and meteorological surveillance at all sentinel sites;
- Conduct refresher trainings to improve the management of HMIS data at all levels;
- Build capacity in epidemiological skills in the NMCP at national and zonal levels to facilitate epidemiological analysis;
- Conduct operational research to understand the factors causing the increasing burden of malaria in Gash Barka, Dehub, and Anseba;
- Strengthen the functionality of EPR committees and rapid response teams at the national, Zoba and Sub-Zoba levels

III. Medium-term Program Improvement Agenda

A two-step process was adopted in the definition of the program improvement agenda: program staging; and conceptualization of the medium term program improvement agenda.

Staging

The following program characteristics were reviewed in order to know where the Eritrea Malaria Control Program falls into in the malaria control-elimination continuum: Transmission pattern; parasite prevalence; test positivity rate; incidence; and parasite predominance. For each of these Eritrea fell within the range for malaria elimination except Incidence and Test Positivity Rate (TPR) in which the Eritrean value fell within the range of control program. It was therefore decided to classify the Eritrea malaria control program as pre-elimination as justified by the following: low parasite prevalence of 1.9% by RDT (range, 0.4 in Northern Red Sea (NRS) and Anseba to 3.8% in Gash Barka (GB)); a declining incidence (11.9 per 1000 in 2012) (Range NRS 1.2, SRS 1.9, Maekel 3, Anseba 4.7, Dehub 8.4, and GB 40.6); Low number of deaths (12 in 2011; 31 in 2012); ongoing elimination of plasmodium falciparum - % Pf declining in all Zones between 2004 and 2012: e.g., from 96% to 47% in NRS Zone; limitation of malaria to certain villages/areas in some

sub-zones. The high TPR is the result of clinicians testing suspected malaria cases rather than all fever cases, a problem that can be fixed in 12-24 months.

Program Improvement Agenda, 2014-2018

Based on the justifications for the classification of the Eritrea NMCP as a pre-elimination program, it was proposed that Eritrea proceeds to pre-elimination through a 2 - 3 year period of consolidation. Programming should be based on the fact that malaria is not just a health problem but a developmental challenge. Without doubt, poverty eradication and complete self-reliance will be impossible without Malaria Elimination. In order to win against malaria, therefore, a cross sectorial platform for malaria elimination is mandatory including mobilizing a community of people, a community of sectors and a community of stakeholders coordinating and working together.

The two to three year of consolidation period is a time to implement the following:

1. **Establishment of a Presidential Taskforce on Malaria Elimination:** in line with the need to have a coordinating body for malaria elimination and knowing that malaria elimination will lead to a threefold increase over the cost of malaria control (Swaziland spent USD 4.51 per head at risk per year during control stage and USD 12.72 per head at risk per year at elimination stage), it is proposed that a Presidential Task Force on Malaria Elimination be established. This will serve as cross-sectorial platform for mobilization and leadership for malaria elimination. The work of the taskforce should be supplemented by an independent technical advisory committee.
2. **Establishment of a nationwide partnership for malaria elimination at all levels:** This broad coalition for malaria elimination is required to serve as platform for stakeholder participation in malaria elimination. This partnership should therefore include among others and as equal partners the following constituencies: the ministries (Agriculture, Energy and Mines, Defence, Education, National Development, Finance, Public works and Health), Local Administration, faith based organizations, national associations (Professional Associations, National Confederation of Eritrean Workers, National Confederation of Eritrean Employers, Eritrean Social Marketing Group, National Union of Eritrean Youth and Students, National Union of Eritrean Women), academia and research institutions as well as health development partners in Eritrea.
3. **Setting up of program development and performance management systems at all levels:** this system will include revitalization of the thematic area technical working groups (TWGs); semi-annual review and planning meetings with stakeholder participation and annual malaria conference. These will serve as avenues for technical policy and strategy debate and dialogue.
4. **Development of a malaria elimination long-term Strategic plan:** this should be a 15 year strategic plan that will guide the journey to a malaria-free future, a useful tool for resource mobilization. Initial focus should be on *Plasmodium falciparum* elimination.
5. **Development of a three year costed operational plan:** This is the tool for program implementation and should focus on the following:
 - i. Systems and capacities strengthening for malaria diagnosis and treatment at health facility and community levels to enable the following: testing, documentation and reporting of every fever case; strengthen the medical laboratory unit and NHL; strengthen malaria diagnosis QA/QC system for all levels, and integrate community management of malaria with integrated community case management (iCCM) for enhanced synergy;
 - ii. Strengthening systems for developing the required human resource for malaria elimination including the following: training program for postgraduate diploma in epidemiology and postgraduate diploma in entomology; optimal human resource support to malaria elimination in each Zone (an epidemiologist and an Entomologist per zone; improve technical skills of serving health workers with focus on updates on program performance management (national, zonal and sub-zonal program managers); on malaria elimination strategies and management and operational imperatives and on thematic technical issues related to malaria elimination;

- iii. Systems and capacities strengthening for optimal logistical support in each zone for targeted malaria elimination interventions including transport, equipment, supplies and funding;
- iv. Stratification and re-stratification of the country into moderate-risk and low-risk areas regularly: the risk classification can be done at subzonal or zonal levels. For instance, based on 2012 zonal incidence map, moderate malaria risk area consists of Gash Barka and Debub zones; and low risk area consists of Southern Red Sea, Northern Red Sea, Anseba and Maekel zones;
- v. Adaptation of surveillance approach to the risk classification: moderate risk areas to continue control surveillance approach; low risk areas with TPR > 5% to adopt line-listing with mapping of cases by village (to start delineation of malaria foci); and low risk areas with TPR<5%, Annual Blood Examination Rate (ABER) >10% and annual malaria parasite incidence (API) <5 per 1000 population at risk, adopt case-based surveillance including mapping of cases by village;
- vi. Consolidation of a decentralized malaria control operations through the following: enhanced capacity at Zonal level through provision of elimination compliant policies, strategies and guidelines; provision of skilled human resource (epidemiologist, entomologist and laboratory specialist); in-service training of health workers and logistics (transport, equipment and supplies);
- vii. Strengthen capacities at sub-zonal level for evidence-based action: optimal human resource capacities - emplace two officers, one with postgraduate diploma in epidemiology and the other with postgraduate diploma in entomology; appropriately skilled human resource to collect, analyse and transform epidemiological and entomological data to knowledge and define the programmatic implications of the new knowledge; and appropriate logistical capacity (transport, equipment, supplies and finance) for timely malaria elimination action based on the local epidemiological and entomological evidence; and
- viii. Maintain quality assured universal coverage with vector and parasite control interventions based on national policies and strategies such as ITs, IRS, larviciding, environmental management, diagnosis and treatment including radical cure.

6. Validate the TPR and proportion of fever tested through a government request to WHO:

The criteria for official move into pre-elimination is monthly TPR less than 5% for twelve consecutive months in all sub-zones, provided that at least 90% of all fever cases are tested for malaria parasite in each of the said subzones. The validation should be for all subzones and should take place whenever Eritrea is ready. The technical support will be requested from WHO in order to ensure that the attainment of the vital criteria for transitioning from control to pre-elimination is independently validated and documented.

7. Resource Mobilization

Malaria Elimination Operational Plan will be used as a tool for resource mobilization. Resource mobilization activities should include strategic actions like having a budget line item where government funds will be allocated for malaria elimination and expanding the Eritrea malaria elimination donor-base by approaching UN Country team and the non-traditional bilateral embassies.

IV. Conclusion

The MPR has provided evidence that Eritrea has reduced the burden of malaria substantially as a result of aggressive control measures. This has been achieved through the commitment of government and the involvement of communities in delivery of interventions. Financial and technical support received from development partners also contributed to this achievement. It also highlights the need for increased focus on evidence-based programming and medium term program development agenda.

The major conclusion, therefore, is that the country is well positioned to transition to pre-elimination. The fulcrum of this will be focus at zonal, sub-zonal, local area and health facilities in data analysis, interpretation and local action.

V. Commitment

We, the Ministry of Health and partners in Eritrea, commit ourselves to implementation of the MPR medium term program improvement agenda and action points towards a malaria-free future.

Signed on behalf of the Government of Eritrea and Partners:

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Ms. Amina Nurhussien
Minister of Health

22/10/2013

Date

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Mr. Yemane Ghebremeskel
Director, Office of the President

22/10/2013

Date

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Mr. Berhane Habtemariam
Minister of Finance

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Mr. Arefaine Berhe
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Dr. Ghergis Teklemichael
Minister of National Development

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Mr. Semere Russom
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Ms. Christine N. Umutoni
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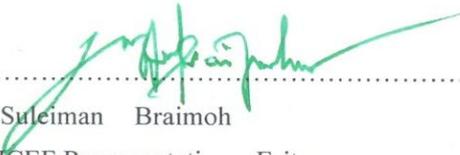
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