Malaria programme reviews: a manual for reviewing the performance of malaria control and elimination programmes

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## ABBREVIATIONS

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<thead>
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<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>Artemisinin-based combination therapy</td>
</tr>
<tr>
<td>GFATM</td>
<td>Global Fund against HIV/AIDS, TB and Malaria</td>
</tr>
<tr>
<td>GMP</td>
<td>Global Malaria Programme</td>
</tr>
<tr>
<td>HMM</td>
<td>Home-based management of malaria</td>
</tr>
<tr>
<td>HDR.</td>
<td>Human Development Report</td>
</tr>
<tr>
<td>ITN.</td>
<td>Insecticide treated mosquito nets</td>
</tr>
<tr>
<td>IRS</td>
<td>Indoor Residual Spraying</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, Education and Communication</td>
</tr>
<tr>
<td>KABP</td>
<td>Knowledge, Attitude, Behavior and Practice</td>
</tr>
<tr>
<td>LFA</td>
<td>Local Fund Agent</td>
</tr>
<tr>
<td>LLINS</td>
<td>Long-lasting insecticidal nets</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MIP</td>
<td>Malaria in pregnancy</td>
</tr>
<tr>
<td>MPR</td>
<td>Malaria Program Performance Review</td>
</tr>
<tr>
<td>NMCP</td>
<td>National Malaria Control Program</td>
</tr>
<tr>
<td>PMI</td>
<td>President's Malaria Initiative</td>
</tr>
<tr>
<td>POA</td>
<td>Plan of Action</td>
</tr>
<tr>
<td>RBM</td>
<td>Roll Back Malaria</td>
</tr>
<tr>
<td>RDT</td>
<td>Rapid Diagnostic Test Kits</td>
</tr>
<tr>
<td>TOR</td>
<td>Terms of reference</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
FOREWORD

As countries and partners move towards the end of the UN Roll Back Malaria Decade (2001-2010), they are evaluating progress and are preparing new strategic plans towards achieving the 2015 Millennium Development Goals and targets. The World Health Organization continues to prioritize strengthening the institutional capacity of national malaria control programs and health systems based on the primary health care approach to consolidate and sustain malaria control and elimination.

This WHO operational manual on malaria program performance reviews (MPR) provides guidance on joint participatory periodic evaluation of country malaria control and elimination programmes within national health systems. This is based on a set of minimum program performance norms or standards with the aim of refocusing the programs strategic directions to improve operational performance in delivery of the various anti-malaria interventions.

The MPR thus facilitates timely identification of what is working and what is not working and why, and propose solutions to major challenges or barriers to scaling up program implementation. The joint MPR galvanises country Roll Back Malaria partnerships for a policy and strategy dialogue and action around the common vision of a malaria-free future.

In preparing this operational manual the World Health Organization has built on country needs and experiences in piloting program reviews in the Africa and South East Asia regions. The WHO has also utilized the extensive expertise available in its country, inter-country, regional and global malaria control teams in collaboration with Roll Back Malaria secretariat and key partners such as the Global Fund Against Aids, Tuberculosis and Malaria (GFATM) working at different levels of the international health system. This is a trial edition allowing for further updates in two years time to build on the experience and lessons learnt from the series of reviews to be conducted in the African and other WHO regions.

In 1998 Africa took a bold decision to launch the fight against one of the major disease which is a barrier to our health and socio economic development. This African initiative against malaria has now become the global Roll Back Malaria movement. Today as we begin to jointly review the performance of our country programs and health systems with our development partners, we are also reporting that we have been able to increase equitable access and coverage to quality malaria control interventions. In some countries we are beginning to see impact with reduction in malaria infection levels and declining disease incidence. This is making us bolder and more ambitious with regard to planning for malaria elimination in some countries. However we need to continue to strengthen country program and health systems leaderships and management, and build country capacity, structure and systems with critical evaluation and re-design of our control programs and health systems to rapidly respond to changing disease epidemiology and socio-economic environments.
ACKNOWLEDGEMENTS

This operational manual is based on extensive contributions from a core (MPR) working group consisting of Sergio Spinaci, Soce Fall, Nathan Bakyaita, Akpaka Kalu, John Govere, Josephine Namboze, Khoti Gausi, Joaquim Da Silva, Samson Katikiti, Charles Paluku and Shiva Murugasampillay. Valuable support was also received from James Banda and Lebo Lebosang. Overall guidance was provided by Krongthong Thimasarn, Georges Ki-Zerbo, Rufaro Chatora, Oladapo Walker, Edward Addai, Marcel Lama, Mac Otten and Robert Newman.

The successful piloting and improvement of the trial edition of the manual was possible due to the patience and valuable inputs from the malaria control teams from Kenya (Elizabeth Juma, Andrew Wamari.), Botswana (T.Mosweunyane, Kentze Moakofhi) and South Africa (Patrick Moonasar, Eunice Mismani, Mary-Anne Gorepe) Zanzibar (Abdullah Ali) and other WHO country malaria teams. Zambia (Fred Masaninga) Zimbabwe (Jasper Paspaimire, Lincoln Charimari) and Malawi (Wilfred Dodoli). Reviews and inputs were also received from all South African Development Community (SADC) malaria control program teams.
1. INTRODUCTION

After the launch of the Roll Back Malaria (RBM) programme in 1998, most countries with endemic malaria strengthened their malaria control programmes. Today financing is available, and partnerships exist to accelerate and sustain malaria control and elimination in order to achieve national, regional and global malaria targets and the malaria-related Millennium Development Goals.

To be effective, malaria programmes must have universal coverage and greater than 80% use of key interventions by populations at risk for malaria. If such coverage can be rapidly attained, consolidated and maintained, it will reduce malaria transmission and reduce morbidity and mortality due to malaria in children, pregnant women and other adults. Countries that have attained universal coverage and have achieved a notable reduction in the burden of malaria will start moving from control to pre-elimination or even to the elimination phase.

Reviews of national malaria control programmes are important for strengthening public health in countries that are scaling-up universal coverage with malaria services or are moving from control to pre-elimination. WHO continues to provide technical support for capacity-building, programme management and the development of public health systems in malaria-endemic Member States to help them achieve universal access to and equitable coverage with high-quality health care.

This manual is designed to help national malaria control programmes and development partners in conducting programme reviews. It is based on documents and experience in reviewing programmes for controlling malaria and other diseases and provides step-by-step guidance on conducting a review.

1.1 DEFINITION

Malaria programme reviews are periodic, joint collaborative evaluations of national control programmes. Their aim is to improve operational performance and the delivery of antimalarial interventions in order to reduce morbidity and mortality. For the purposes of this review, the malaria control programme includes the government and all partners and stakeholders in malaria control at national, subnational and community levels.

1.2 PURPOSE

Programme performance is reviewed in order to identify achievements in outcomes and impacts, best practices and lessons learnt, critical issues, problems and the causes of the problems. Solutions can then be proposed for more effective delivery, perhaps resulting in revision of programmes and strengthening of structures, systems and capacity to achieve greater equity, better coverage, higher quality and more effective delivery of antimalarial interventions.
1.3 OBJECTIVES

The objectives of a comprehensive programme review are:

- to review the epidemiology of malaria in the country;
- to review the structure, organization, and management framework for the policy and programme development within the health system and the national development agenda;
- to assess progress towards achievement of national, regional and global targets;
- to review the current programme performance by intervention thematic areas and by service delivery levels.
- to define the next steps for improving programme performance or redefining the strategic direction and focus, including revising the policies and strategic plans.

These objectives, with the areas on which they focus, are listed in Table 1 and described in more detail in Annex 1.

Table 1. Objectives and areas of focus

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>FOCUS AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review malaria epidemiology.</td>
<td>Level of endemicity, cyclical and spatial trends, seasonality, parasite prevalence, vector and parasite status</td>
</tr>
<tr>
<td>Review the policy and programming framework, organization, structure and management.</td>
<td>Vision, goals, objectives, policy guidelines, strategic and annual plans aligned to current global malaria control recommendations, guidelines, analysis of strengths, weaknesses, opportunities and threats</td>
</tr>
<tr>
<td>Assess progress towards achievement of national, regional and global targets.</td>
<td>Output, outcome, access, equity, coverage, quality and impact</td>
</tr>
<tr>
<td>Review the current program performance by intervention thematic areas and by service delivery levels.</td>
<td>Problems, barriers, solutions, analyses of strengths, weaknesses, opportunities and threats, best practices</td>
</tr>
<tr>
<td>Define steps to improve programme performance, or redefine the strategic direction and focus, including revision of policies and strategic plan.</td>
<td>Change and re-orientation.</td>
</tr>
</tbody>
</table>

1.4 BENEFITS

The review of a malaria programme helps countries to assess their strategies and activities with a view to strengthening the programme and the systems used to deliver interventions. It also allows identification of what is working and what is not and of solutions to challenges or barriers to programme implementation. This will facilitate planning and resource mobilization for further scaling-up of malaria control services at country level.
2. GUIDING PRINCIPLES

The following guiding principles are the core of a malaria programme review.

2.1 MEASURING AND VALIDATING PERFORMANCE

The programme is assessed with regard to access, equity, coverage, quality, use (uptake) and impact of malaria control and services.

Access, equity and coverage refer to malaria service delivery points in a defined geographical area. Their measurement depends on the availability of data on populations and households and mapping of service delivery. Physical access is the starting point, with services preferably available at all times within 1 hour’s walking distance. Economic access is vital, and all malaria control services should be available free of charge, like all infectious disease control measures. Cultural barriers to access might have to be addressed, especially for women and children in some societies. All people at risk for malaria should have access to malaria control services, without distinction by ethnicity, gender, disability, religion, political belief, economic or social condition or geographical location. National malaria control programmes should ensure universal coverage for all people at risk, with an appropriate package of control interventions.

Use or uptake of malaria control services depends on the effectiveness of the information, education and communication provided for changing behaviour and for community mobilization. Use of services is defined as the proportion of people who need the services who actually use them. Individuals and families must seek services early and comply with instructions for the use of drugs and long-lasting insecticide-treated nets (LLINs). The aim of national malaria control programmes is that at least 80% of all people at risk use an appropriate package of malaria control interventions.

High-quality malaria control services are delivered by well-equipped, well trained and competent health workers. They should be able to deliver diagnoses, drugs, LLINs and indoor residual spraying (IRS), the quality of which depends on the specifications and quality control of the commodities, and adequate training, support and supervision of health workers.

The impact of malaria control is measured from infection and disease levels, on the basis of the numbers of reported malaria cases and deaths and the prevalence of asymptomatic malaria infection. National programmes must try to achieve the goals and targets of Roll Back Malaria (RBM), the World Health Assembly and the Millennium Development Goals.

The planning and management of public health programmes cover the continuum from inputs to results, with outcomes, impact and clear timeframes based on 5-year strategic planning and annual operational planning cycles (Table 2). In malaria control, these cycles depend on annual seasonal trends and time-limiting factors such as the development of resistance to insecticides and drugs.
Table 2. Performance review framework for malaria control programmes

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>INPUTS</th>
<th>OUTPUTS (service delivery)</th>
<th>OUTCOMES (coverage and quality)</th>
<th>IMPACTS (disease and infection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaling-up vector control</td>
<td>Finance</td>
<td>Mapping of malaria service delivery points</td>
<td>Proportion of people (all ages) sleeping under LLINs</td>
<td>No. of malaria cases</td>
</tr>
<tr>
<td>Timely diagnosis and effective case management</td>
<td>Commodities</td>
<td>Routine delivery with annual seasonal campaigns</td>
<td>Proportion of people sleeping in sprayed houses</td>
<td>Annual parasite incidence</td>
</tr>
<tr>
<td>Scaling-up prevention of malaria in pregnancy</td>
<td>Human resources</td>
<td>Mass campaigns</td>
<td>No. and rate of suspected malaria cases tested for malaria</td>
<td>No. of malaria deaths</td>
</tr>
<tr>
<td>Advocacy, information, education, communication, community-based delivery</td>
<td>Infrastructure</td>
<td>Epidemic and emergency preparedness and rapid response</td>
<td>Proportion of suspected (clinical) cases of malaria tested for malaria</td>
<td>Malaria cases fatality rate</td>
</tr>
<tr>
<td>Epidemic and emergency preparedness and rapid response</td>
<td>Logistics and transport</td>
<td>No. of LLINs delivered</td>
<td>Annual blood examination rate</td>
<td>Malaria test positivity rate (slide, RDT)</td>
</tr>
<tr>
<td>Strengthen programme management and capacity-building</td>
<td>No. of courses of ACT delivered</td>
<td>No. of people with fever tested with RDTs and blood slides</td>
<td>Proportion of people treated with ACT within 24 h</td>
<td>Malaria parasite prevalence</td>
</tr>
<tr>
<td></td>
<td>No. of epidemics investigated and responded to</td>
<td>Proportion of epidemics detected within 2 weeks and responded to within 1 week</td>
<td>Proportion of people with knowledge, attitude, beliefs and practices with regard to malaria and malaria prevention</td>
<td></td>
</tr>
</tbody>
</table>

2.2 DEFINING PERFORMANCE STANDARDS

An ideal malaria control programme must meet certain minimum international standards against which it can be compared at one time or between two times.

Evidence-based interventions should be used that are based on proven, cost-effective, national and international best practice. In preparing this guide, international standards were
chosen against which national malaria programme performance could be assessed. These standards apply to policy, techniques or programmes, as shown in Annex 2. They cannot be adapted locally, and all malaria programme reviews must meet these standards to allow comparisons between countries. The thematic desk reviews and field data collection checklists were designed with these standards in mind.

2.3 IDENTIFYING PROBLEMS AND SOLUTIONS IN SERVICE AND PROGRAMME DELIVERY

The focus of the review is on the operational points of service provision, at household, community and district levels. It also addresses the strategic level for programme coordination, supervision and monitoring of management at district, provincial or state level and for national policy and standard-setting (Table 3).

Table 3. Malaria programme responsibilities at different levels of the health system

<table>
<thead>
<tr>
<th>LEVEL OF HEALTH SYSTEM</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Policies, standards, structure and systems, institutional training and capacity development, research priorities and agenda</td>
</tr>
<tr>
<td>Subnational: province or state</td>
<td>Management, monitoring, evaluation, training, supervision</td>
</tr>
<tr>
<td>District</td>
<td>Service provision, monitoring, evaluation, supervision</td>
</tr>
<tr>
<td>Health facility</td>
<td>Service provision, monitoring, evaluation, supervision of community activities</td>
</tr>
<tr>
<td>Community</td>
<td>Service provision</td>
</tr>
<tr>
<td>Household</td>
<td>Service use (need and demand)</td>
</tr>
</tbody>
</table>

2.4 PROGRAMME DELIVERY AT DIFFERENT LEVELS

Community participation in the planning, management and delivery of malaria control services should be encouraged, as should public-private partnerships and multisectoral collaboration. At each level, the review should identify the issues by thematic area, including behaviour change communication, vector control, treatment, surveillance, monitoring and evaluation, and others as appropriate, in line with the standards (Table 4).
Table 4. Responsibilities in different programme thematic areas

<table>
<thead>
<tr>
<th>PROGRAMME THEMATIC AREA</th>
<th>RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion: advocacy, information, education and communication for behaviour change,</td>
<td>Polices, strategies, objectives, indicators, targets, guidance, training and</td>
</tr>
<tr>
<td>community- and home-based malaria control</td>
<td>activities</td>
</tr>
<tr>
<td>Prevention: vector control, intermittent preventive treatment in pregnancy and infants,</td>
<td>Polices, strategies, objectives, indicators, targets, guidance, training and</td>
</tr>
<tr>
<td>epidemics and emergency preparedness and response, malaria in travellers</td>
<td>activities</td>
</tr>
<tr>
<td>Diagnosis, treatment and cure</td>
<td>Polices, strategies, objectives, indicators, targets, guidance, training and</td>
</tr>
<tr>
<td></td>
<td>activities</td>
</tr>
<tr>
<td>Surveillance, monitoring, evaluation and research</td>
<td>Polices, strategies, objectives, indicators, targets, guidance, training and</td>
</tr>
<tr>
<td></td>
<td>activities</td>
</tr>
<tr>
<td>Programme management, including supervision, procurement and supply management, human</td>
<td>Policies, annual and strategic plans, proposals Manuals, guidelines, monthly,</td>
</tr>
<tr>
<td>resource management, costing and financial management</td>
<td>quarterly and annual reports, annual reviews and planning conferences Organogram</td>
</tr>
<tr>
<td></td>
<td>and team-building</td>
</tr>
</tbody>
</table>

2.5 LEADERSHIP AND OWNERSHIP BY RESPONSIBLE PERSONS

The aim of programme reviews is to ensure effective management, involving all members of the programme, WHO, local experts and stakeholders and partners who know the area, what the problems are and who will take part in implementing solutions to the identified problems, to scale-up malaria control and elimination sustainably.

The NMCP must take the lead in planning and implementation of the MPR supported by WHO and key RBM partners at national, provincial/state and district levels. This will promote ownership of the findings and increase the chances of implementing the recommendations.
3. TIMING, SCOPE AND STRUCTURE OF PROGRAMME REVIEWS

Effective planning and management of malaria control programmes require policies, guidance and strategic and annual operational plans with set, time-bound targets. The planning can be complemented by gap analyses and needs assessments and the preparation of proposals for funding to the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and other sources of financing. All types of planning and proposals can be made more effective and efficient by regular programme reviews or evaluations, which improve performance and provide evidence for redesigning or changing the programme to ensure sustainable scaling-up of malaria service delivery.

Malaria programme reviews are related to but differ from needs assessments and evaluations of strategic plans (Table 5). The products of these slightly different processes are useful for thematic reviews. As shown in the table, malaria programme reviews should be conducted every 3–5 years as part of mid-term and end-of-term evaluations before the strategic plans are revised and updated and, if possible, as part of the evaluation preceding a fresh Global Fund proposal. A programme review is mandatory when a country has scaled-up malaria control, has obtained an effect on the numbers of malaria cases and deaths and is considering new investments in malaria control or reorientation to pre-elimination or elimination.

Table 5. Planning and assessment in different comprehensive evaluations

<table>
<thead>
<tr>
<th>TYPE OF EVALUATION</th>
<th>OBJECTIVES</th>
<th>TIMING</th>
<th>OUTPUT</th>
<th>OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic plan review</td>
<td>Midterm and end of term review of strategic plan</td>
<td>Every 5 years</td>
<td>Updated malaria strategic plan</td>
<td>Strategic direction and medium-term plan</td>
</tr>
<tr>
<td>Gap analysis</td>
<td>Financial needs to make funding proposals</td>
<td>Before submission of a Global Fund grant proposal</td>
<td>Gap analysis report</td>
<td>Increased financing for scaling-up</td>
</tr>
<tr>
<td>Malaria programme review</td>
<td>Periodic performance review for sustainable scale-up</td>
<td>Every 3–5 years</td>
<td>Aide-memoire, review report, thematic reports</td>
<td>Improved programme performance for scaling-up delivery (or strategic reorientation for pre-elimination)</td>
</tr>
</tbody>
</table>
These guidelines pertain to detailed, comprehensive reviews, which include ‘desk reviews’ of eight thematic programme areas:

- advocacy, information, education, communication and community mobilization;
- programme management;
- malaria commodities procurement supply management;
- malaria vector control;
- epidemic and emergency preparedness and response;
- diagnosis and case management;
- malaria prevention and treatment in pregnancy; and
- epidemiology, surveillance, monitoring, evaluation and operational research.

Malaria programme reviews occur in four distinct phases, with several steps and activities in each phase, as shown in Table 6. A programme review can take 6–12 months but should be kept as short as possible.

Table 6. Phases of a malaria programme review and estimated duration

<table>
<thead>
<tr>
<th>PHASE</th>
<th>ACTIVITIES</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Planning</td>
<td>≤ 3 months</td>
</tr>
<tr>
<td>II</td>
<td>Internal thematic desk review</td>
<td>≤ 3 months</td>
</tr>
<tr>
<td>III</td>
<td>Joint programme field reviews</td>
<td>2–4 weeks</td>
</tr>
<tr>
<td>IV</td>
<td>Final report, follow-up of recommendations, updating policies and plans and re-design of programme</td>
<td>≤ 6 months</td>
</tr>
</tbody>
</table>

The outputs of a malaria programme review can include a summary report, an aide-memoire, a slide presentation, a press release, a comprehensive report, journal articles, an updated comprehensive malaria policy and an updated, costed strategic plan.
4. METHODS

A malaria programme review involves a mixture of methods, including desk reviews of technical thematic areas based on programme data, reports, documents and published literature; updating country databases and country profiles; mapping of populations at risk; estimating burden and making projections; policy and management analyses; special studies; and group work, individual consultations and provincial and district field visits with interviews and observations. The methods should be adapted to the specificities of each country. The tools that can be used include:

- the country malaria database and profile format;
- the country malaria risk mapping and service mapping format;
- the country annual malaria report format;
- the country world malaria report format;
- tools for household and community assessment surveys (access, use of LLINs, IRS, home-based malaria management, community-based initiatives, knowledge, attitude, behaviour and practice);
- tools for health facility surveys (diagnosis and treatment, malaria in pregnancy, routine delivery of LLINs);
- tools for estimating the true burden of infection and disease;
- tools for costing the burden of infections and disease and their control;
- tools for malaria programme policy review (vision, goals, objectives and strategies);
- tools for reviewing implementation of annual and strategic plans;
- analyses of strengths, weaknesses, opportunities and threats with regard to reviewing programme management (structure and organization at all levels, human resources, surveillance and information system, procurement and supply management, costing and financing);
- tools for field consultations, interviews and observations in districts, provinces and nationally;
- guidance on preparing desk review reports based on literature and document reviews;
- framework for preparing internal systematic reviews
  - promotion: advocacy, information, education, communication and community mobilization;
  - prevention: malaria vector control, malaria epidemics and emergencies;
  - treatment: malaria parasite control, diagnosis, treatment and cure;
  - management: malaria control and elimination structures, systems and management; surveillance, information, surveys and research;
- format for slide presentations;
- format for press releases and press conferences; and
- the malaria programme review report format.
5. PHASE I: PLANNING

The aim of the preparation and planning phase is to consult and ensure consensus among all partners and stakeholders on the objectives of the review, to prepare a checklist to track activities and to make a costed plan/proposal to secure the required funding.

The outputs of phase 1, a review coordinator, the secretariat and a steering group are appointed, a checklist is drawn up and plan and proposal are developed and funds are mobilized to conduct the review.

This preparatory phase should be fully owned by the national malaria control programme and its partners. It usually takes 3–4 months, but the duration depends on the context. If it is done well, subsequent phases will be easier. The 10 steps in phase 1 are:

- Identify the need for a programme review.
- Build consensus to conduct a review.
- Define the objectives and outputs of the review.
- Appoint a review coordinator and establish an internal secretariat and task team.
- Send an official request to WHO for technical support.
- Identify and agree on the terms of reference of the internal and external review teams.
- Select and prepare central, provincial and district sites for field visits.
- Plan administration and logistics.
- Develop a review proposal, with a budget, and identify funding source(s).
- Design a checklist for tracking activities.

5.1 IDENTIFY THE NEED FOR A PROGRAMME REVIEW

Malaria programme evaluation should be scheduled into the strategic and annual planning cycles of the national malaria control programme and health sector plans. The ministry of health and the national malaria control programme, in consultation with malaria technical advisory committees, WHO and partners, should determine the need for a review and its timing and identify possible financing.

5.2 BUILD CONSENSUS TO CONDUCT A REVIEW

Consultation with and involvement of partners and stakeholders in the preparatory phase is essential for the success of the review. Stakeholder meetings should be held to discuss the justification for the review. The process and timing of the phases should be planned, after the
availability of a technical team to conduct the review has been ascertained, and funding for the review should be identified.

5.3 APPOINT A REVIEW COORDINATOR AND ESTABLISH AN INTERNAL REVIEW SECRETARIAT AND TASK TEAM

The review coordinator and secretariat manage the programme review, with technical and programme support from WHO.

5.3.1 REVIEW COORDINATOR

The role of the programme manager is to lead, plan and organize the review, prepare all the background material and organize the participation of internal and external reviewers. The programme manager may delegate this task to a senior member of his or her team, who will follow-up day-to-day planning and organization. The coordinator can be supported by one or more consultants.

Examples of tasks of the review coordinator:

- prepare a review proposal and plan;
- prepare a budget and secure financing;
- set up a review secretariat and review the task force, supported by national and international facilitators or consultants;
- identify internal and external review team members;
- prepare background documents, conduct a desk review and collect the necessary materials;
- arrange the logistics of the review;
- support the preparation of presentations;
- support the preparation of the aide-memoire, slide presentation and press release;
- support preparation of the report and its printing and dissemination; and
- follow up the recommendations of the review and implement the plan of action.

5.3.2 REVIEW SECRETARIAT

The national malaria control programme should set up a secretariat to provide the necessary logistic, secretarial and communication support. This team should be drawn from national malaria control programme personnel who have access to programme resources, documentation and data.

The review secretariat provides technical, organizational and logistic support for all phases of the review. The technical tasks are to prepare summaries of the status of the programme and
its thematic areas; identify major achievements, best practices and problems; investigate the main problems and select possible solutions; and draw up recommendations and a plan of action.

The team should have a common understanding of the purpose and schedule of the review, the role of the programme manager, the role and contribution of each member and the role of facilitators from WHO, UNICEF and other partners. The members of the secretariat should have skills in leadership and management, data collection and analysis, conducting desk and management reviews and assessing health programmes and systems.

The secretariat should recognize that a programme review is an integral part of managing an effective malaria control programme and that they will have to allocate a good part of their time to its preparation. They should have access to key data and documents.

5.3.3 REVIEW TASK TEAM

The national malaria control programme and its partners should appoint a malaria programme review steering group, with membership drawn from partner institutions, who will oversee the review. The task team will refine the terms of reference, adding the objectives and expected outcomes of the review, provide guidance and ensure that the recommendations are followed up.

The composition of the review task team depends on the scope and proposed method. The recommended team will include:

• the review coordinator;
• malaria control programme staff who constitute the core secretariat, who may be supported by short-term national consultants and national technical officers from institutions involved in malaria control;
• members of the internal review task force, from malaria advisory committees and technical working groups; and
• members of the external review team, with a facilitator from WHO, a senior independent internal expert in malaria control and representatives of RBM partners.

The task force should be limited to 8–10 people with both technical and programmatic knowledge and skills in malaria control and public health service delivery. They should be in positions that can influence policy and operational decisions.

5.4 DEFINE THE OBJECTIVES AND OUTPUTS OF THE REVIEW

The national malaria control programme will then draft the terms of reference, objectives and outputs of the review, for consideration and approval by the national malaria task force, malaria advisory committees, technical working groups and senior policy-makers in the ministry of health, who are the main stakeholders. The terms of reference are also shared with key
multilateral and bilateral development partners, nongovernmental organizations and other partners for their consideration, input and possible involvement and financing of the review.

The review coordinator and the secretariat, in consultation with key stakeholders and partners, will define the purpose and set the objectives of the review. The objectives can include reviewing and updating the epidemiology of malaria; reviewing the policy and programming framework for malaria control in the country; assessing progress towards achieving global, regional and national targets; reviewing current programme performance for each intervention and service; and defining the next steps for improving programme performance or redefining the strategic direction.

The potential outputs of the programme review are a summary report, an aide-memoire, a slide presentation, a press release, a report, a journal article, an updated, comprehensive malaria policy and an updated, costed strategic and annual operational plan.

5.5 IDENTIFY AND AGREE ON THE TERMS OF REFERENCES OF THE INTERNAL AND EXTERNAL REVIEW TEAMS

To conduct a successful malaria programme review, it is important to select a review team that includes both national (internal) and international (external) experts. The review team should have a variety of competences and should include: a field epidemiologist, a clinical specialist in malaria case management, an internal medicine physician, a paediatrician, an obstetrician or gynaecologist, a parasitologist and pathology specialist, an entomologist or vector control specialist, a procurement and supply management specialist, an information, education and communication and behaviour specialist, a health economist, a monitoring and evaluation specialist, a disease modeller and programme administration and management specialists.

Experts with the requisite skills and experience can be recruited locally from other departments, provinces, universities, research institutions and consultancy firms. All members of the review team should be capable of critical thinking and problem-solving and have communication skills that will enable them to discuss the status and performance of the programme with teams at different levels, to identify critical issues and bottlenecks and to find appropriate solutions. They should provide insight into problems and assist in following up the recommendations and improving the performance of malaria programmes.

The number and composition of the review team is determined by the size of the country and the components of the programme that are to be evaluated. It is important to include provincial and district health team managers, malaria focal points or coordinators and even programme managers from neighbouring countries.

External experts should be recruited with the support of WHO, to complement the internal experts. External reviewers bring new experience and perspectives, while internal reviewers provide local experience, insight and understanding of the local situation. Team members should be selected on the basis of their expertise and the institutions and organizations they represent. The team leader should have in-depth programme experience and good writing and editing skills.
5.6 SEND AN OFFICIAL REQUEST TO WHO FOR TECHNICAL SUPPORT

External assistance from facilitators and experts should be requested from WHO and RBM. WHO technical assistance may be available during all four phases as appropriate. As soon as consensus is reached, the country should write to WHO. The technical assistance plans and costs should be included in the proposal and planning.

5.7 SELECT AND PREPARE CENTRAL, PROVINCIAL AND DISTRICT SITES FOR FIELD VISITS

5.7.1 SELECTION

The internal review secretariat and team should select sites for field visits that are representative of the epidemiology of malaria in the country. The selection should not be biased to well-performing districts and should include both rural and urban areas. Although the focus is on public health services, an effort should be made to include faith-based and nongovernmental organizations as well as private service providers.

5.7.2 PREPARATION

The internal review team should prepare profiles of the provinces and districts to be visited. The national malaria control programme should hold consultative meetings with selected provincial and district malaria focal points, who will assist in the preparation of provincial and district profiles and help plan the field visits.

A district or provincial malaria profile is a summary of the epidemiology, main interventions, programme organization, service delivery points, recent programme outputs, coverage with interventions and the schedule and completeness of surveillance and information. The questionnaire for the World Malaria Report and a well-functioning malaria database can be used to prepare district and provincial malaria profiles.

5.8 PLAN ADMINISTRATION AND LOGISTICS

Planning and arranging meetings for consultation and field visits, with transport, accommodation and support from local teams should be managed by the review secretariat with a designated focal point or administrator supported by a logistics team assigned to coordinate the task. Areas in which logistics are required include:
• government agreements, letters to WHO and key partners confirming requests for technical and financial support;
• provision of information on the review for development partners;
• coordination and invitations to the review secretariat and the internal task team;
• provision of information on the purpose of the review and logistics to institutions, states, regions, provinces and districts to be visited;
• financing of local and international costs, such as photocopying, transport, per diem and consultants’ fees;
• making hotel reservations;
• coordinating transport;
• reserving meeting space;
• providing secretarial and administrative support;
• ensuring equipment and supplies (computers, printers, photocopiers, printers); and
• preparing press releases and press briefings.

The supplies needed are computers and overhead projectors, flip charts, note pads, paper, pens, pencils, felt-tip marker pens, index cards, adhesive tape and stick-on clay.

5.9 DEVELOP A REVIEW PROPOSAL, WITH A BUDGET, AND IDENTIFY FUNDING SOURCES

The malaria programme review secretariat and the task force should prepare a proposal with a clear rationale, method, tools and budget. They should seek policy and ethical clearance as appropriate. Funding for the review should be identified from the monitoring and evaluation section of budgets for malaria projects, programmes and annual operational plans. Extra funds are sought at meetings and consultations with stakeholders and partners. A malaria programme review proposal should consist of: an introduction or background, the objectives of the review, the expected outputs and outcomes, management and coordination of the review process, the methods and tools to be used, the time line (Gantt chart), the budget and references.

The review secretariat should prepare a work plan and budget, which should then be approved by the steering committee and submitted for funding. An example of a work plan, budget and malaria programme review planning checklist is given in Annex 3.

The budget items to be considered are:
1. hiring of consultants (internal, external, secretariat);
2. printing, stationery, communication and photocopying;
3. consultation and preparation with provinces and districts;
4. holding retreats on thematic areas for the secretariat and task team;
5. holding stakeholder meetings and workshops;
6. hiring or procuring computer equipment;
7. travel, per diem, transport and logistics;
8. meetings;
9. translation;
10. field review;
11. holding a final drafting retreat;
12. dissemination of the review report (national, provincial, regional, district); and
13. holding a retreat to update policies, strategies and plans for the programme.

5.10 DESIGN A CHECKLIST FOR TRACKING ACTIVITIES

In order to monitor the progress of the review, a checklist should be prepared, which should include:

• briefing of programme and ministry of health staff;
• official communications to local WHO country, intercountry and regional offices to facilitate the review;
• literature review;
• document review;
• preparation of thematic area desk review and presentations;
• updating country database and national, provincial and district malaria profiles; and
• field consultations, interviews and observations on programme delivery.

The overall review consists of a planning period, desk and field reviews, preparation of the report and follow-up of recommendations. The field review, which involves both internal and external reviewers, usually takes 2–3 weeks, depending on the size of the country. Adequate time should be planned for the internal and external team, secretariat and consultants to build a common agenda, verify the information prepared and validate it further by conducting national, regional and district consultations and field interviews and observations.
6. PHASE II: THEMATIC DESK REVIEW

The aim of phase 2 is to conduct a thematic desk review and to select tools for the field review. This internal review consists of a summary of recent progress in achieving set targets for access, coverage, quality, use and impact. It allows the programme to identify best practices, recognize problems, determine the priority of those problems, decide how to investigate those of highest priority and propose appropriate solutions. It also reveals information weaknesses and gaps and focuses the external review.

If appropriate, the review may lead to recommendations to modify policies, strategies and activities to ensure that the programme can accelerate the delivery of high-quality malaria control services. The thematic desk review is based on an updated malaria database, country profiles and malaria epidemiology.

The outputs of phase 2 are reports and slide presentations on the thematic desk review, adapted tools for field work and a completed review score sheet. The thematic review is the most important part of the MPR as it will greatly influence the success of the next phase.

The five steps of phase 2 are:
1. assembling information from reports and documents,
2. conducting a technical thematic desk review,
3. compiling a thematic desk review and
4. score achievement by thematic areas
5. Selecting and adapting data collection methods for the field review.

6.1 ASSEMBLING INFORMATION FROM REPORTS AND DOCUMENTS

The national malaria control programme focal points and review secretariat should review the available documents and categorize them for the desk review. The main documents and reports for the desk review include:
1. health sector and malaria programme documentation
   • strategic plans;
   • annual operational plans;
   • annual and quarterly reviews, meetings and conference reports;
   • policies and guidelines; and
   • project proposals;
• previous malaria programme reviews and recommendations;
• surveillance and service delivery reports;
• sentinel surveillance site reports;
• activity reports, including training, support, supervision, workshops;
• household and health facility survey reports;
• socioeconomic reports, such as UNDP Human Development Reports;
• malaria programme research proposals and reports;
• published papers on malaria in the country, retrieved from PubMed or HINARI with agreed search strategies;
• partners’ annual reports;
• proposals for funding initiatives, such as the Global Fund and the United States President’s Malaria Initiative; and
• needs assessment reports.

The documents collected should be photocopied, and a small malaria review library should be created so that the documents are easily accessible throughout the review. All documents should be also compiled in electronic copy form. (soft copies and scanning hard copies)

6.2 CONDUCTING A TECHNICAL THEMATIC DESK REVIEW

The available facts and figures should be analysed critically in order to define the current status of the delivery of malaria control interventions and the capacity, structures, systems and management of the national malaria control programme within the national public health system. This will include a summary of past progress and performance, current issues, challenges and problems and solutions, strategies and activities for future acceleration and scaling-up of access to and coverage with high-quality malaria control interventions.

The purpose of reviewing unpublished and published reports and documents is to obtain information on:
• major programme activities, achievements, best practices and lessons learnt
• the status of programme indicators (coverage, outcome, equity, quality, impact);
• trends in the prevalence of infection and morbidity, mortality and disability due to malaria;
• changes in major malaria risk factors.
• progress towards set targets; and
• major problems, bottlenecks or barriers to implementation and scaling-up;

Desk reviews address policies and planning, the delivery of key technical interventions, supervision and monitoring, progress towards set targets, institutional capacity for developing structures, systems and human resources, financing trends and gaps, the procurement and distribution of essential commodities and infection and disease trends.
Thematic desk reviews are conducted by the national focal point and the review working groups in the following thematic areas:

- advocacy, information, education, communication and community mobilization;
- programme management;
- malaria commodities procurement supply management;
- malaria vector control;
- epidemic and emergency preparedness and response;
- diagnosis and case management;
- malaria prevention and treatment in pregnancy; and
- epidemiology, surveillance, monitoring, evaluation and operational research.

Guidance for preparing systematic reviews in these areas is given in Annex 4.

Initially, focal points in the malaria programme prepare a first draft of the desk review in the thematic area for which they are responsible. Then, the review steering group, supported by the secretariat, constitutes thematic desk review teams, drawn from the malaria advisory group and its subcommittees. Each thematic review team should be led by a chairperson and a rapporteur, who, if necessary, can be supported by one or more local consultants. These teams are ultimately responsible for compiling each thematic desk review report. The chairperson and the rapporteur should prepare the second draft of the thematic review report.

In the next step, one or more meetings are held for group work by the working groups, facilitated by the chairperson and the rapporteur. The group should be encouraged to ask questions and request clarifications and to add relevant information or indicate other sources of information. The group should achieve consensus and prepare the final thematic desk review report and slide presentation. The discussions and report should focus on the objectives and output of the malaria programme review.

6.2.1 UPDATING THE MALARIA DATABASE AND MALARIA COUNTRY PROFILES

Information on routine malaria surveillance and programme delivery is collected and updated periodically by the malaria control programme and by the national integrated disease surveillance and national health information or health management systems. The data from sentinel sites and research on parasites, drug resistance and vector resistance are kept by the programme and by researchers and research institutions in individual reports.

Community, household and health surveys that are part of malaria control programme surveys, demographic health surveys and malaria indicator surveys are conducted periodically and the key results must be summarized. The information currently collected by different sources and methods is often kept by different officers within the programme, by other departments and by institutions, often on spread sheets. This information must be consolidated at national level before the review, to allow reviewers to view the facts and figures available and to identify gaps and weaknesses in the data sources. Thus, in preparation for the review, all the available information from different sources is brought together into central databases and a country profile. Country profile database tools and country support are available from the Global
Malaria Programme for this purpose. The malaria indicators used are standardized and harmonized with regional and global indicators. The available national protocols for malaria surveillance, information surveys and research should be reviewed, and the timeliness, completeness and representativeness of the various data assessed.

6.2.2 MALARIA EPIDEMIOLOGY AND TRENDS, AND PROGRAMME IMPACT

The technical review should determine whether interpretation of the available data indicates that decreases are occurring in:

- the number of people at risk for malaria and the spatial area of malaria transmission;
- the number of malaria cases;
- the number of deaths due to malaria;
- the estimate of malaria parasite prevalence.

Current malaria risk classifications and risk maps should be updated and reviewed, in keeping with changes in malaria epidemiology and control. The estimates of target populations at risk should also be updated. Routine data from the surveillance and reporting system should be analysed for time trends and spatial distribution by district. The timeliness, representativeness and completeness of the malaria reporting system must also be assessed. Data from the malaria-specific surveillance and information system should be compared with data on inpatients and outpatients with malaria and laboratory data from the national health management information system. Data on malaria outbreaks and epidemics should be compared with those for other epidemic diseases in integrated disease surveillance systems. Research on prevalence and monthly transmission patterns should be assessed and reviewed, although these data may apply only to point sources.

6.2.2.1 Morbidity

Morbidity trends come from routine reporting of morbidity counts through the national surveillance system. The following categories can be ascertained:

**Malaria cases:**

- Suspected cases of malaria with a positive parasite-based test.
- Suspected malaria cases can be divided into three categories: suspected malaria cases, suspected malaria cases that receive a parasite-based test, and confirmed malaria cases. Impact is monitored only using confirmed cases. Suspected malaria cases are often called “clinical” malaria cases.
- Inpatient malaria cases. Inpatient malaria cases should be counted separately. Inpatient malaria cases should be diagnosed based on a parasite-based test.
- Definition of malaria case in the pre-elimination and elimination phase. Countries with very low incidence of malaria often revise their case definition of malaria case to include any person with a (slide) positive malaria test, even those asymptomatic persons with positive tests found during additional case finding and screening.
• Imported malaria is considered to have occurred when an investigation reveals that the infec-
tion was acquired outside the area in which it was diagnosed.

• The annual parasite incidence is the proportion of all blood smears containing malaria para-
site per year per 1000 population. This indicator depends on the adequacy of case finding. This indicator is mostly used in low-incidence countries.

• The annual blood examination rate is the proportion of the total number of blood slides ex-
amined per year per 1000 population, which reflects the adequacy of case detection. The minimum annual blood examination rate should be 1% per month and 10% per year.

• The malaria test (slide or rapid diagnostic test) positivity rate is the proportion of the total number of blood slides or RDT results found positive for malaria parasites in the total number of blood samples examined. This gives the parasite load in the community and does not de-
pend on the completeness of case detection.

• The *P. falciparum* percentage is the proportion of the total number of blood smears or rapid tests results found positive for *P. falciparum* out of the total number of blood smears or RDTs performed with species differentiation. This gives an indication of the trends in *P. falciparum* infections.

6.2.2.2 Mortality

Trends of inpatient malaria deaths provide a measure of progress in preventing severe ma-
laria and malaria-related death.

Malaria-specific proportionate mortality can also be estimated using verbal autopsies during population surveys, however, sensitivity and specificity issues can complicate interpretation. Trends in all-cause child mortality can be examined, although these trends are not malaria specific.

6.2.2.3 Malaria parasite prevalence rate

The prevalence rate is the number of all cases of a disease in a defined population at a spe-
cific time.

The malaria parasite rate in children 2–9 years is the proportion of all children aged 2–9 years found to have malaria parasites out of the total number of children examined in blood surveys.

These measurements are used to assess the levels and types of malaria transmission and to monitor the progress and impact of malaria programmes.

6.2.3 MAJOR PROGRAMME ACTIVITIES, ACHIEVEMENTS AND BEST PRACTICE

The team should summarize the main malaria programme activities in the strategic plan and use reports to determine the level of achievement, ascertain the representativeness and ac-
curacy of the information and make meaningful inferences for the malaria situation in the country. They should also note the major activities, achievements, best practices, problems or challenges and lessons learnt.
A 'major planned activity' is one related to the programme objectives and for which resources are allocated and an expected output is defined.

A 'major achievement' is a qualitative designation, which indicates that an activity has been carried out well and completed and an output is available. Targets that have been attained or are likely to be attained on time are major programme achievements. Targets that are unlikely to be achieved on time may suggest a problem.

'Best practices' are innovative methods that have been designed to support effective, efficient implementation or delivery of malaria control services. They can be documented and shared among provinces, districts and countries.

'Major problems' may be due to activities that have been performed incorrectly or not at all. They may represent bottlenecks or barriers to carrying out activities effectively.

### 6.2.4 Status of Programme Progress Towards Set Targets

Each malaria programme has set targets and performance indicators for assessing its progress. Information on the exact level of some indicators may not be required for their definition, or more than one measurement may have been made during the years under review. All measurements should be listed, with dates and sources. In reviewing the indicators, information on trends, periodicity and the reliability of measurements should be recorded. Lack of progress in indicators for set targets that are quantifiable objectives goals can indicate problems in policy, strategy or implementation. Any apparent discrepancy or stagnation should be investigated further.

An indicator is a number, proportion or rate that suggests or indicates the extent or level of programme activity and achievement or the level of some disease or health condition in a population, in this case reaching the malaria risk target population.

Targets are quantifiable goals and objectives that include a specific level of expected achievements and a date.

The review will indicate whether data and information are available to assess progress and performance in a meaningful, quantifiable way. If no or inadequate information is available, the problem itself should be reported and addressed. If targets have been set, performance can be measured as progress towards targets, whereas if no targets have been set, performance can only be measured by reviewing past and present indicators. If there are no set, quantifiable targets and specific data on indicators are not available, performance can be assessed only qualitatively. Targets that have been achieved indicate success, and the way in which the country achieved the targets may be a good practice that should be shared. Targets that are not achieved indicate problems, lack of progress or poor performance. Sometimes, a target is not achieved because it was unrealistic or because no specific activities were planned or programmed to achieve it.
6.2.5 CAPACITY OF THE PROGRAMME TO DELIVER SERVICES

The capacity of the national malaria control programme and partners to deliver malaria control interventions at all levels of the health system and in the community should be assessed. A rapid analysis of strengths, weaknesses, opportunities and threats with regard to programme implementation should be conducted, and key issues that should be addressed to improve programme performance should be identified.

6.2.6 BARRIERS TO IMPLEMENTATION AND SCALING-UP OF MALARIA CONTROL

The team should identify major problems, bottlenecks and barriers experienced in implementing planned activities, with the evidence and source of information for each identified problem. In addition, possible solutions for identified problems should be described, and any additional investigations required to clarify the problem and issues further should be reported, as well as the lessons learnt.

Problems can be defined as any circumstance that might have led to limited or unsatisfactory implementation of activities. The thematic desk review should state and define the problems clearly, list and discuss possible causes, list questions that should be answered in order to determine the causes of the problems and list questions that should be answered in order to find possible solutions.

The review will also determine the information gaps in the thematic area. Some might be filled by finding more documents.

6.3 COMPILING A THEMATIC DESK REVIEW REPORT

The report should focus on the objectives of the malaria programme review, should be in line with the malaria programme review standards and should provide the minimal information required to guide programme reorientation. As each thematic area is different, Annex 4 proposes outlines for each area.

Experience shows that there are usually gaps in surveillance and survey data; some can be filled immediately, while others must await planned surveys. The malaria programme review team should not commission large, expensive studies in the limited time of the review but should rely on what can be collected quickly with the available resources within the scheduled time frame for the review. However, the teams should identify the data gaps and recommend studies to be done to fill in these gaps.
6.4 SELECTING AND ADAPTING DATA COLLECTION METHODS FOR THE FIELD REVIEW

Each thematic working group should review the generic WHO data collection tools (Table 7) and adapt them, taking into account the critical issues and gaps in information identified in the thematic desk review. The adaptations should be presented to all the working groups and the review task force. Once consensus has been obtained, the review team secretariat should modify the tools in preparation for the field visits. Only those questions that will help improve the assessment should be asked during field work.

Table 7. Data collection methods for malaria programme reviews

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>TOOL</th>
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</thead>
<tbody>
<tr>
<td>Community</td>
<td>Community health workers tool</td>
</tr>
<tr>
<td></td>
<td>Community consultation tool</td>
</tr>
<tr>
<td>Health facility</td>
<td>Health facility tool-I: health centres</td>
</tr>
<tr>
<td></td>
<td>Health facility tool-II: districts and provincial hospitals</td>
</tr>
<tr>
<td>District</td>
<td>District health team tool</td>
</tr>
<tr>
<td>State, province, region</td>
<td>Provincial or state health team tool</td>
</tr>
<tr>
<td>Central</td>
<td>National malaria control programme consultation tool</td>
</tr>
<tr>
<td></td>
<td>Tool for briefing and consultation with ministry of health senior management</td>
</tr>
<tr>
<td></td>
<td>Tool for consultation with ministry of health departments, programmes and units</td>
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<tr>
<td></td>
<td>Partners consultation tool</td>
</tr>
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</table>

When the final data collection tools are available, group work and role play should be conducted to ensure that the internal review teams are familiar with the field data collection tools. A practice session could be organized in the nearest province or district to field-test the tools.
7. PHASE III: FIELD REVIEW

This phase of the review involves more interactive data collection. Its aim is to allow internal and external reviewers to interact with people at national level who are responsible for advocacy, policy, standards, guidance, capacity-building, technical support and financing and those responsible for the planning, organization, delivery and supervision of services at district and regional or provincial levels. The review should include community assessments, especially in countries where community-based interventions are used.

In decentralized health systems, malaria control is conducted by provincial and district health authorities. The field visits allow the teams to observe how malaria control services are being delivered and to verify the information provided in the thematic desk review reports. The visits also give those responsible for programme performance the opportunity to talk and to air their views to a neutral review team in order to identify the critical issues and their possible solutions.

The outputs of phase 3 are: an updated thematic desk review, summary reports, and presentations, district or provincial review reports, a draft main report, an executive summary, an aide-memoire and a slide presentation.

The 11 steps in phase 3 are:

1. Briefing and team-building between internal and external review teams
2. Building consensus on the findings of the internal thematic desk reviews
3. Becoming familiar with the data collection methods for field visits
4. Briefing and forming the teams for field visits
5. Visiting national institutions and organizations (Central level)
6. Making district, provincial, state and regional field visits
7. Sharing reports and presentations from field visits
8. Preparing a draft review report
9. Preparing the executive summary, aide-memoire and slide presentation
10. Presenting the review findings and recommendations
   • meeting with senior management of the ministry of health,
   • high-level meeting and signing of aide-memoire,
   • media events (press release and press conference) and
   • stakeholder workshop
11. Completing the final draft of the review report
7.1 BRIEFING AND TEAM-BUILDING BETWEEN INTERNAL AND EXTERNAL REVIEW TEAMS

During this session, the internal and external members of the review team are probably meeting for the first time and should get to know one another in preparation for the field work. The review task force will present all aspects of the malaria programme review and progress so far, in order to ensure a common understanding and consensus. At this stage, team members can volunteer or be appointed to take on specific tasks, according to their expertise and expected roles.

The briefing session will cover:

• ministry of health structure and policies relevant to malaria control,
• the structure of the malaria programme within the ministry of health,
• the rationale and objectives of the malaria programme review,
• an overview of the review method and tools,
• the review report format and
• plans for disseminating the review findings.

The briefing should take about 2 days, to allow consultations and team-building. Ideally, all the team members should be accommodated at the same location throughout the review to facilitate team work and sharing of ideas. They should have adequate meeting rooms at both the national malaria control programme site and their place of accommodation. They should be given time to read the various draft reports and documents and be given overview presentations. The aim is ensure common understanding and consensus on the review objectives, process and methods.

7.2 BUILDING CONSENSUS ON THE FINDINGS OF THE INTERNAL THEMATIC DESK REVIEWS

The internal and external members of the review team will have received the thematic desk review reports before the beginning of phase 3. During this session, the teams discuss the key findings and conclusions by thematic area and identify information gaps. For this purpose, the external and internal members of the review teams should be reconstituted into thematic review groups, according to their expertise and interests. Once the thematic groups have been reconstituted, each team should hold separate meetings to:

• review the internal thematic desk review report and reference documents,
• review and update the review score sheet,(Excel sheet available from WHO)
• identify the key issues,
• assess the adequacy and reliability of the data and information presented,
• identify and suggest ways of filling information gaps,
• identify best practices and lessons learnt and
• identify issues that should receive more attention during the field visits.

The output of this session should be a slide presentation and report by thematic area that can be fed into the final malaria programme review report. Ideally, this work should be completed before the field visits begin. Also the teams should check the data collection checklist to ensure that pertinent issues are addressed during the filed work.

7.3 BECOMING FAMILIAR WITH THE DATA COLLECTION METHODS FOR FIELD VISITS

The tools adapted in phase 2 should be presented to the field review team, which should familiarize itself with the tools, make suggestions and finalize them. Once the tools are ready, the teams should conduct role play to ensure that they known how to use them. If possible, a practice session should be organized in the nearest province or district.

7.4 BRIEFING AND FORMING THE TEAMS FOR FIELD VISITS

The review secretariat should specify the provinces and districts that have been selected for field reviews and explain the selection criteria. A draft agenda for the field visits should have been prepared and appointments set up. All appointments should be reconfirmed before the teams arrive.

The criteria for choosing field sites vary with the level of the health system and its responsibility in programme management and service provision (Table 8 and annexe 1). The preparatory analysis might indicate a change in sites for field visits, but logistical challenges should be given careful consideration.
Table 8. Review by health system level

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>RESPONSIBILITY AND AUTHORITY</th>
<th>FOCUS OF REVIEW</th>
<th>SPECIFIC ISSUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>Service provision: rapid diagnostic tests, artemisinin-based combination therapy, long-lasting insecticide-treated nets, indoor residual spraying</td>
<td>Physical, financial and cultural access. Community health workers providing malaria control services. Community leaders involvement and demand and ownership of malaria control services.</td>
<td>Knowledge, attitude, behaviour and practice of communities with regard to services and service providers.</td>
</tr>
<tr>
<td>Health facility</td>
<td>Service provision: rapid diagnostic tests, artemisinin-based combination therapy, long-lasting insecticide-impregnated nets, indoor residual spraying</td>
<td>Physical, financial and cultural access. Health facilities providing diagnostic and treatment services and routine supply of LLIN.</td>
<td>Knowledge, attitude, behaviour and practice of service providers with regard to capacity to deliver and cover the population at risk</td>
</tr>
<tr>
<td>District</td>
<td>Programme management and tracking of implementation</td>
<td>Targeting risk population. Routine reporting of services delivered. Universal coverage and cases and deaths due to malaria. Use of malaria data for decision making.</td>
<td>District focal point on malaria. Coordination and tracking of annual cycles of implementation</td>
</tr>
<tr>
<td>Provincial</td>
<td>Programme management and tracking of implementation</td>
<td>Annual planning, training, supervision, coordination, reporting</td>
<td>Provincial focal point on malaria. Coordination and tracking of annual cycles of implementation</td>
</tr>
<tr>
<td>Central</td>
<td>Programme management and policy, standards and guidelines</td>
<td>Policies, guidelines, governance and partnership, strategic and annual planning, financing and proposals</td>
<td>National program capacity and organization. Priority of malaria in national health agenda, gaps in financing, gaps in human resources, gaps in malaria commodities</td>
</tr>
</tbody>
</table>

7.5 VISITING NATIONAL INSTITUTIONS AND ORGANIZATIONS

The field review should start with a meeting between the team, the national malaria control programme and various subunits to clarify, verify and request more information, to fill in gaps in the thematic review reports and presentations provided at the briefing sessions. This could be followed by individual meetings with focal points for the thematic areas.
The purpose of the central visits is to determine the status of collaboration within the health sector and with other government sectors involved in malaria control. They leave scope for exploring ways to strengthen collaboration to achieve more effective malaria control and elimination. At these central visits, therefore, team members receive briefings on the review objectives, methods, output and outcome; consult on achievements, best practices, lessons learnt, problems or bottlenecks and their possible solutions; identify areas in which collaboration and coordination could be strengthened; and obtain relevant documents and information to fill gaps.

The consultations should include some or all of the institutions and individuals listed below. The aim is to consult with the national department, the National Malaria Control Programme and other health departments in the Ministry of Health, academic and research institutions, other RBM partners and sectors.

- the national malaria control programme manager and intervention focal persons;
- the director of disease control (responsible for national malaria control programmes);
- the director of planning in the Ministry of Health;
- the principal recipient of Global Fund grants and the country coordinating mechanism;
- the permanent secretary and the director of medical services in the ministry of health;
- health departments and programmes working on malaria-related Millennium Development Goals;
- academic and research institutions;
- development partners;
- nongovernmental and civil society organizations involved with malaria;
- other Ministries and programmes relevant to malaria control; and
- the private sector, especially major suppliers of malaria control commodities.

A preliminary courtesy visit should be paid to senior health policy-makers, such as the secretary for health, the director of health and senior directors of other departments. They should be informed about the objectives and the start of the review and should be asked for suggestions, advice and participation in the findings and recommendations at the end of the review. Consultations should also be held with health departments that support the work of the national malaria programme, such as health planning, pharmaceuticals, laboratories, child health and reproductive health.

Other government sectors to be visited are the Ministries of Finance and Economic planning (domestic financing and prioritization in the development agenda), local government (malaria service delivery and community mobilization), agriculture and water management (effects on production and risks for transmission) and education (school health and malaria control in schools).

Visits should be scheduled to national laboratory and research institutions and academic institutions such as universities and training centres. Care should be taken to select institutions and subsections that are actively involved in malaria research, teaching and training or with a strong interest in future involvement in malaria control.
Development partners that finance and support malaria control programmes should be visited and consulted, and the level of past, present and future contributions assessed. Global Fund malaria principal recipients and local funding agents must be given adequate time to evaluate the performance of approved Global Fund grants. Private sector suppliers of malaria control commodities should be consulted with regard to public and private sector demands, available supplies and production and marketing capacity.

7.6 MAKING DISTRICT, PROVINCIAL, STATE AND REGIONAL FIELD VISITS

The districts and provinces to be visited are selected in phase 1. The number of provinces or districts to be visited depends on the government, health sector administrative structures and the logistics of travel.

Provincial teams will have been consulted by the review secretariat during the preparation phase and briefed on the objectives, methods and expected outputs and how they will contribute. This should be repeated by the team before they start their assessments. Discussions will be held with the district and provincial health management teams as well as with the management and staff of provincial and district hospitals. Provincial and district-level supervisors in the national malaria control programme should not be actively involved in conducting interviews. Selected peripheral health facilities should be visited for discussions with their management and staff, and neighbouring communities should be visited to assess the services delivered and their perceptions of malaria control.

The review team should determine how the provinces support the districts in providing malaria control services. In particular, the team should assess district monitoring of malaria risk factors, coverage, supervision, monitoring and evaluation, supply chain management, financing and budget, coordination, training and operational research.

The district visits allow the team to observe how promotion, prevention and treatment services are being organized, managed and delivered to outpatients and inpatients at health facilities, by community and village health workers and by malaria field workers and mobile teams. The field visits allow verification of the information from the desk review, documents and presentations and provide opportunities for the review team to clarify operational issues and fill gaps in the information provided.

At district and health facility level, the review team should focus on service provision:

- levels of infection and disease burden and trends;
- access (geographical, financial, cultural) and equity of distribution of malaria control service points;
- coverage with malaria control interventions of subdistrict areas of risk and populations at risk;
- quality of malaria control services provided;
- quality of malaria surveillance data;
• knowledge, attitude, behaviour and practice of malaria service providers;
• satisfaction of the population using the malaria control services; and
• knowledge, attitude, behaviour and practice of communities at risk for malaria.

The malaria service delivery points to be visited are:
• provincial and district malaria control offices: indoor residual spray teams;
• provincial and district hospitals: outpatient, antenatal care, maternity, inpatient, laboratory, pharmacy and records departments;
• private clinics, pharmacies and drug shops;
• peripheral health facilities: outpatient and antenatal care departments, child welfare clinics;
• community groups providing malaria services;
• focus group discussions with communities (including community leaders); and
• records department, to collect data and review the quality of inpatient care.

The main method for a field review is to ask questions on the basis of a checklist. The groups that the team should talk to are staff managing the programme at provincial and district level, staff providing malaria control services, malaria patients about the services offered and communities that do and do not use malaria control services. They should also directly observe health workers providing services and give feedback at debriefing sessions to district and provincial staff.

The feedback should be summarized on report formats for health facility, district and provincial review, as a summary of the key findings, conclusions and recommendations. Team members should compare the information and interpretations and reach consensus on the findings and recommendations. Feedback or debriefing allows those who participated and provided information for the review to advise the review team about the appropriateness of the findings and the reasons for certain issues, successes and bottlenecks. They should also provide advice about the feasibility and sense of ownership of the proposed recommendations.

Before debriefing, it is important that the review team take a few minutes to ensure consensus on the review findings and recommendations. Feedback should be provided to all the sites and levels visited by the team leader before the team leaves. The debriefing session should include not only the district and provincial malaria focal point and coordinator but the entire district or provincial health team and other partners and stakeholders. Participants in the feedback sessions at provincial or district level should include representatives of the health facility, if possible. A suggested agenda for the debriefing and report is given in Table 9.
### Table 9. Agenda for debriefing provincial and district management teams

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>OBJECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review and discussion of findings</td>
<td>Describe the strengths and weaknesses of what you have observed. Ask if the team agrees: invite them to make suggestions or add information.</td>
</tr>
<tr>
<td>Consensus on recommendations</td>
<td>Agree on solutions to problems and bottlenecks. Discuss responsibility for implementing the recommendations.</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Review what service providers should do to improve their performance. Describe elements that will require the attention and action of staff at the next level.</td>
</tr>
</tbody>
</table>

A written summary of the field review should be left at the district and provincial sites visited (see Annex 5) and a copy sent to the next level up. A full district and provincial report can be completed later. This summary and reports also provides input to the overall national review report.

### 7.7 SHARING REPORTS AND PRESENTATIONS FROM FIELD VISITS

After the field visits, the review teams meet at national level to share their findings, make presentations and agree on conclusions, recommendations and priorities for action. A standard format for malaria programme review field reports (Annex 6) is made available to each team after the field visits. This elicits data on target risk populations, reported coverage with service delivery and disease surveillance trends as well as subjective information, such as observations, analysis, interpretations, conclusions and follow-up recommendations.

One day is allocated after the field visits for the organization of notes, analysis of findings and preparation of field reports and 10–15-min slide presentations. A second day is used for presentations by the review subteams to all the review team members in order to achieve consensus. The discussion should focus on:

- interpretation of findings;
- access, equity, coverage and quality of malaria service delivery;
- progress towards set targets;
- levels of infection and trends in malaria;
- policies and organizational structures;
- guidance;
- major achievements and successes;
- examples of best practices;
• major challenges and problems;
• critical issues;
• conclusions; and
• recommendations.

The assessment at this stage changes from analysis at community, health facility, district and provincial levels to technical and programme thematic areas. Individual analyses must be complemented by group work, facilitated by the use of flip-charts. The group work should promote ownership of the review by all stakeholders, allow different sub teams to make their input and help to crystallize priorities and formulate conclusions and recommendations. These findings should be fed directly into the final thematic review reports and the main report.

7.8 PREPARING A DRAFT REVIEW REPORT

The formats of the aide-memoire and the full review report are shown in Annex 6. At least 2 days should be allocated for drafting the report. The field review teams rejoin the thematic review teams and prepare the relevant sections of the report on the basis of the desk review reports, briefing presentations and field review reports.

Because of the large volume of information that must be condensed into a single report, it is advisable that a central report-writing team be established. This team should begin work on the report during the district and provincial visits and will therefore not participate in those visits. The team will consolidate the different sections to ensure internal consistency and will prepare the aide-memoire and executive summary, with the main findings and recommendations.

In preparing the review report, it is important to ensure:
• consolidation of the main sections, maintaining consistency;
• consistency of names, terms, numbers and abbreviations;
• consistency of observations and conclusions;
• that the problems are well defined;
• that the recommendations relate to the problems and the solutions are feasible; and
• that numbers and names are accurate.

The strategic questions to be addressed in the main report are:
• What are the strengths and weaknesses of the national malaria programme?
• Are the strategies and activities appropriate with regard to:
  – policies and management,
  – effectiveness (doing the right thing) and efficiency,
  – impact on disease burden and trends?
• What are the strategic plans for the national programme and does it have the capacity and flexibility to adapt to changing needs and demands?
7.9 PREPARING THE EXECUTIVE SUMMARY, AIDE-MEMOIRE AND SLIDE PRESENTATION

At the same time as the draft report is being finalized, work should begin on the aide-memoire, the executive summary and the slide presentation of key findings, critical issues and main recommendations for follow-up. The review coordinator must make sure that there is consensus among the internal and external reviewers concerning the aide-memoire and the executive summary before they start dispersing. They should be told that no further changes will be made to the findings and recommendations, and the remaining changes to the report will be only editorial.

The aide-memoire and the executive summary should contain the main messages and the follow-up action required. They should cover:

- malaria risk areas and populations;
- trends in malaria infection and disease burden;
- intervention delivery points and methods;
- main achievements and best practices;
- critical issues, main problems and bottlenecks;
- potential benefits of an effective, well-performing malaria programme;
- policy and organizational changes required; and
- additional resources required.

The main recommendations should be chosen carefully to ensure that they have a major impact on policies, programme organization and management for scaling-up delivery and improving programme performance. Less important recommendations can be included in the technical sections of the report.

Checklist for relevance of recommendations:

- Are they simple and specific?
- Are they feasible?
- Are they affordable?
- Are they consistent with the objectives, policies, strategies and plans of the national malaria programme?
- Are they consistent with the objectives, policies, strategies and plans of the national public health system?
- Are they viewed as collaborative or competitive by different stakeholders?

The slide presentation, which is based on the executive summary, allows timely, effective feedback to policy-makers in the ministry of health, development agencies, the private sector and nongovernmental organizations. This preliminary presentation to key decision-makers, such as directors of communicable disease control, directors of health and WHO representatives, should indicate the acceptability and feasibility of the review findings and recommendations.
7.10 PRESENTING THE REVIEW FINDINGS AND RECOMMENDATIONS

The review coordinator and the internal and external review team members should ensure that they present the review findings and recommendations to a wide audience. The presentation consists of a series of events, at which the internal review team reassumes full responsibility and the external review team provides support. Presentations should be made to malaria technical committees and working groups, malaria advisory and partnership groups, key departments in the ministry of health and relevant academic, research and training institutions.

The purpose of the presentations is to:
• disseminate the review findings,
• mobilize high-level policy and political commitment,
• promote intra- and intersectoral collaboration,
• widen consultation and increase ownership of the review findings,
• ensure that the review findings and recommendations are understood and accepted,
• ensure that the proposed recommendations are consistent with government goals and policies,
• agree on a timeframe and assign responsibilities for implementation of the recommendations and
• increase advocacy for the programme and mobilize financial and technical support.

7.10.1 MEETING WITH THE SENIOR MANAGEMENT OF THE MINISTRY OF HEALTH

A summary of the findings and a draft aide-memoire will be presented and discussed with the senior management of the ministry of health. Changes and corrections will be suggested before final signature.

7.10.2 HIGH-LEVEL MEETING AND SIGNING OF AIDE-MEMOIRE

A final high-level meeting on the review findings should be convened with senior policy-makers within the ministry of health and other relevant sectors and partners. At this meeting, the national malaria control programme manager will present the findings and the suggested actions to key stakeholders. The aide-memoire will then be signed by the senior management of the ministry of health and representatives of other partners.

7.10.3 MEDIA EVENTS

The high-level meeting should be followed by a media event, such as a press conference and a press release for national and international media. Journalists should be given a press kit and the executive summary. The event should be led by senior ministry of health officials, supported
by the review team. Its aim is to highlight what is being done by the government and its partners and increase advocacy, political commitment and public awareness for malaria control.

7.10.4 STAKEHOLDER WORKSHOP

The review team should present the report to a wider audience at a stakeholders’ meeting or workshop. The meeting participants should include representatives of technical committees and working groups, advisory and partnership groups, key departments in the ministry of health, key academic, research and training institutions and representatives of the provinces and districts visited. The presentations should cover the review findings to mobilize high-level political support and increase collaboration and resources.

7.11 COMPLETING THE FINAL DRAFT OF THE REVIEW REPORT

Any feedback obtained from senior policy-makers and stakeholders during presentation of the review findings should be included in the final draft of the report. The final draft should be completed before the internal and external review members separate and should be submitted for final approval by the Ministry of Health within 2 months.
8. PHASE IV: FINAL REPORT AND FOLLOW-UP ON RECOMMENDATIONS

The aim of this phase is ensure finalization and dissemination of the malaria programme review report and follow-up on the recommendations, including updating policies and plans and redesigning the programme if necessary. This important stage of the review process should be owned by the national programme, the review secretariat and the task force.

The output's of phase 4 are a summary of the report, a published malaria programme review report, journal articles, an updated, comprehensive policy, an updated strategic plan and an updated monitoring and evaluation plan. The five steps in phase 4 are:

1. Finalize and publish the report.
2. Disseminate the report.
3. Implement the recommendations.
4. Monitor implementation of the recommendations.
5. Update policies and plans and redesign the programme, if necessary.

8.1 FINALIZE AND PUBLISH THE REPORT

The review coordinator should circulate the draft report to all the review task force members and stakeholders to solicit comments. The final report will be submitted by the national malaria control programme to the task force members for endorsement and subsequently to the ministry of health for approval. This process should take no more than 2 months. The procedures for approval may depend on the administrative organization of the country. The report is then submitted for joint publication by the Ministry of Health and WHO. The report can be refined and a shortened version be submitted for publication in a peer-reviewed journal.

8.2 DISSEMINATE THE REPORT

The National Malaria Control Programme Manager should send a covering letter with the final report to all task force and programme review teams. Copies should be sent to all institutions and individuals visited during the review. In addition, the report should be circulated to all internal and external partners, in order to increase and sustain their support. The final report should be discussed and disseminated at all levels, including stakeholder meetings, media events, on websites and at conferences. The report may also be disseminated at other fora organized by the Ministry of Health. The parts of the report that should be disseminated to different audiences are shown in Table 10.
Table 10. Malaria programme review outputs for dissemination and target audiences

<table>
<thead>
<tr>
<th>OUTPUT</th>
<th>DISTRICTS &amp; PROVINCES</th>
<th>POLICY-MAKERS</th>
<th>PARTNERS</th>
<th>PUBLIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial and district reports</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slide presentation</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aide-memoire</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Summary report</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Malaria programme review report</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Press release, newspaper articles</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Journal publication</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

8.3 IMPLEMENT THE RECOMMENDATIONS

The programme review recommendations should be integrated into annual operational and strategic malaria control plans to raise support from policy-makers, partners and stakeholders responsible for its implementation. The recommendations should guide the formulation and revision of National Malaria Control Programme policies, guidelines and plans as well as possible programme reorientation.

8.4 MONITOR IMPLEMENTATION OF THE RECOMMENDATIONS.

The National Malaria Control Programme should prepare a table or spreadsheet to track implementation of the review recommendations. The table or spreadsheet could also be placed on the national malaria control programme web site. Monitoring the implementation of recommendations is easier if they are few and well structured. Once the recommendations have been integrated into the annual operational plans, follow-up becomes part of quarterly programme monitoring and reporting.

Effective malaria programmes should undertake a ‘mini-review’ at the end of the annual planning cycle as part of monitoring and evaluation, when they prepare their annual reports, annual malaria conferences and new annual plans. Major, in-depth reviews are conducted at mid-term and at the end of 5-year strategic planning cycles. Both short- and long-term planning and monitoring and evaluation cycles should start with an assessment of the implementation of previous review recommendations.

8.5 UPDATE POLICIES AND PLANS AND REDESIGN PROGRAMME

The review forms the basis for updating all national malaria policies into one comprehensive, integrated policy document or for preparing a new national malaria strategic plan. As the review focuses on the structures and systems required for ensuring the effectiveness of the organization and management of the national malaria control programme at all levels, it provides an opportunity for programme reorganization and redesign.
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## ANNEX 1.
FOCUS OF MALARIA PROGRAMME REVIEW
AT VARIOUS LEVELS

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe and validate</td>
<td></td>
</tr>
<tr>
<td>Population at risk</td>
<td>X</td>
</tr>
<tr>
<td>Malaria cases and deaths</td>
<td>X X X X</td>
</tr>
<tr>
<td>Temporal trends</td>
<td>X X X X</td>
</tr>
<tr>
<td>Prevalent malaria parasites</td>
<td>X</td>
</tr>
<tr>
<td>Vector bionomics (breeding, resting, biting density, etc.)</td>
<td>X X X X</td>
</tr>
<tr>
<td>Endemicity by slide-positivity rate</td>
<td>X X X X</td>
</tr>
<tr>
<td>Stratification of districts by current transmission patterns</td>
<td>X X X</td>
</tr>
<tr>
<td>Malaria control situation in context of malaria elimination continuum</td>
<td></td>
</tr>
<tr>
<td>Effect of financing initiatives on national malaria control programme</td>
<td></td>
</tr>
<tr>
<td>Status and capacity of in-country RBM partnerships</td>
<td>X X</td>
</tr>
<tr>
<td>Partnership coordination mechanisms</td>
<td>X X X</td>
</tr>
<tr>
<td>Involvement of priority non-health ministries and institutions in malaria</td>
<td>X X X</td>
</tr>
<tr>
<td>Role of the private sector in malaria control</td>
<td>X X X</td>
</tr>
<tr>
<td>Place of malaria control in the national development agenda</td>
<td></td>
</tr>
<tr>
<td>Poverty reduction strategic plan</td>
<td>X</td>
</tr>
<tr>
<td>National development plan</td>
<td></td>
</tr>
<tr>
<td>Medium-term expenditure framework</td>
<td>X</td>
</tr>
<tr>
<td>Validating the place of malaria control in the ministry of health hierarchy</td>
<td></td>
</tr>
<tr>
<td>Malaria programme in the organogram of ministry of health: influence on</td>
<td>X</td>
</tr>
<tr>
<td>policy and resource allocation</td>
<td></td>
</tr>
<tr>
<td>Health sector strategic plan: reflection of malaria control objectives in</td>
<td>X</td>
</tr>
<tr>
<td>document</td>
<td></td>
</tr>
<tr>
<td>Allocation of Ministry of Health budget: percentage allocated to health</td>
<td>X</td>
</tr>
<tr>
<td>Percentage of recurrent health sector budget allocated and disbursed for</td>
<td>X</td>
</tr>
<tr>
<td>malaria control</td>
<td></td>
</tr>
<tr>
<td>Validating the adequacy of the organization and management of the national</td>
<td></td>
</tr>
<tr>
<td>malaria control programme by assessing the availability and in line with</td>
<td></td>
</tr>
<tr>
<td>global WHO polices of:</td>
<td></td>
</tr>
<tr>
<td>Malaria control policies, legislation and guidelines</td>
<td>X X X</td>
</tr>
<tr>
<td>OBJECTIVE</td>
<td>LEVEL</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>National malaria control programme organizational structure by level</td>
<td>Community  X</td>
</tr>
<tr>
<td></td>
<td>Health facility X</td>
</tr>
<tr>
<td></td>
<td>District X</td>
</tr>
<tr>
<td></td>
<td>Province X</td>
</tr>
<tr>
<td></td>
<td>Country X</td>
</tr>
<tr>
<td>Human resources for malaria control</td>
<td>X</td>
</tr>
<tr>
<td>Financing levels and partnerships</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Strategic planning and comprehensive programme review mechanisms</td>
<td>X</td>
</tr>
<tr>
<td>Operational review and planning mechanisms</td>
<td>X</td>
</tr>
<tr>
<td>Functional supervision, monitoring and evaluation processes</td>
<td>X</td>
</tr>
<tr>
<td>Functional routine programme reporting mechanisms</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Malaria programme management logistics, e.g. office space, equipment,</td>
<td>X</td>
</tr>
<tr>
<td>materials and supplies, transport</td>
<td>X</td>
</tr>
<tr>
<td>Provincial and district focal persons, offices and logistics</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Confirmed malaria cases (microscopy or RDT) per 1000 persons per year</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Inpatient malaria cases (per 1000 pers/year)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Inpatient malaria deaths (per 1000 pers/year)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Malaria-specific deaths (per 1000 pers/year)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Deaths of children &lt; 5 years from all causes (per 1000 children &lt; 5 years per year)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
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<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Malaria test (slide or RDT) positivity rate</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Malaria parasite prevalence rate</td>
<td>X</td>
</tr>
<tr>
<td>Percentage of children &lt; 5 with fever receiving ACT treatment according to national policy within 24 h of onset</td>
<td>X</td>
</tr>
<tr>
<td>Proportional mortality rate from malaria in hospital, all age groups (% hospital deaths due to malaria)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Percentage of outpatients with suspected malaria who have laboratory</td>
<td>X</td>
</tr>
<tr>
<td>diagnosis</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Percentage of persons (all ages) sleeping under an insecticide-treated net</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Percentage of children &lt; 5 sleeping under an insecticide-treated net</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Proportion of households owning at least one insecticide-treated net</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Proportion of persons targeted with IRS, total population and population</td>
<td>X</td>
</tr>
<tr>
<td>at risk</td>
<td>X</td>
</tr>
<tr>
<td>Proportion of persons protected by IRS</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Proportion of population at risk protected by IRS</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Proportion of target population protected by IRS</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Proportion of pregnant women who received at least two doses of intermittent preventive treatment</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
## Malaria programme reviews

<table>
<thead>
<tr>
<th>Objective</th>
<th>Level</th>
<th>Community</th>
<th>Health facility</th>
<th>District</th>
<th>Province</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining and validating status, aids, constraints and perspectives for malaria control interventions</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Availability of and adherence to guidelines and tools</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Availability and skills of focal points and subcommittees and cohesion of thematic teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Timeliness, availability, accessibility and quality of services and service delivery systems</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Determining and validating service delivery in relation to population at risk</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>No. and proportion of suspected malaria cases (clinical or fever cases) tested for malaria parasites by microscopy or RDT</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No. of cases of malaria seen or attended by home management agents</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No. of malaria cases managed in health facilities</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>No. of cases of malaria in children &lt; 5 treated within 24 h</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>No. of pregnant women receiving intermittent preventive treatment at second antenatal care visit</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>No. of LLINs distributed in past 12 months</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No. of LLINs distributed to pregnant women at ANC in past 12 months</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No. of households fully sprayed during past 12 months</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>World Malaria Day events held</td>
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<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behaviour change communication strategy and activities</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mass media involvement in malaria control activities and community-based malaria control strategy and activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus group discussions with community leaders to confirm access to services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Involvement of communities in preventive interventions according to national policy</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Confirm availability of guidelines, logistics and health workers and status of routine reporting</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Availability of guidelines and tools for diagnosis and treatment; insecticide-treated net distribution; intermittent preventive treatment of malaria in pregnancy; emergency preparedness and response; health sector monitoring and evaluation</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Availability of malaria medicines and diagnostic reagents and materials</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Training status of health workers</td>
<td></td>
<td>X</td>
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</tbody>
</table>
## Objective Level

<table>
<thead>
<tr>
<th>Objective</th>
<th>Community</th>
<th>Health facility</th>
<th>District</th>
<th>Province</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status of routine reporting (malaria case and logistics reporting and monitoring of epidemic thresholds)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service use, coverage, quality and policy adherence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service availability</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service uptake</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service quality</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adherence to policy</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of inpatient malaria treatment</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACT, artemisinin-based combination therapy; IRS, indoor residual spraying; LLIN, long-lasting insecticide-treated net; RBM, Roll Back Malaria; RDT, rapid diagnostic test
## ANNEX 2.
### STANDARDS IN MALARIA CONTROL AND ELIMINATION

<table>
<thead>
<tr>
<th>STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Programme Management</td>
</tr>
<tr>
<td>1.1. Place of malaria control in national development agenda</td>
</tr>
<tr>
<td>- National health budget &gt; 15% of national budget and showing increasing trends</td>
</tr>
<tr>
<td>- Malaria included in current national development plan</td>
</tr>
<tr>
<td>- Presidential statement on malaria control and elimination</td>
</tr>
<tr>
<td>- Malaria included in poverty reduction strategic plan</td>
</tr>
<tr>
<td>- There is a line item on malaria in medium-term expenditure framework</td>
</tr>
<tr>
<td>- Malaria included in national Millennium Development Goal plans</td>
</tr>
<tr>
<td>- Malaria control included in non-health sectors e.g. agriculture, tourism, defence, environment, local government, education, housing (see details in checklist).</td>
</tr>
<tr>
<td>1.2 Place of malaria control in the health system</td>
</tr>
<tr>
<td>- Malaria control in the Ministry of Health organogram</td>
</tr>
<tr>
<td>- Malaria control in current national health sector strategic plan</td>
</tr>
<tr>
<td>- Malaria control in allocations of Ministry of Health budgets (there must be a specific budget line for malaria control)</td>
</tr>
<tr>
<td>- Malaria control a priority in health sector reform (sector-wide approach, decentralization), health system and primary health care development</td>
</tr>
<tr>
<td>1.3 Adequacy of organization and management of national malaria control programme</td>
</tr>
<tr>
<td>Policy, legislation and guidelines</td>
</tr>
<tr>
<td>- Existence of a malaria policy covering all the major interventions</td>
</tr>
<tr>
<td>- Existence of implementation guidelines for all major interventions</td>
</tr>
<tr>
<td>- Existence of legislation on malaria eg under the public health act or a special malaria act</td>
</tr>
<tr>
<td>Programme governance and coordination</td>
</tr>
<tr>
<td>- National malaria control inter-sectoral coordination body/commission in place</td>
</tr>
<tr>
<td>- Quarterly meeting of malaria expert advisory technical committees</td>
</tr>
<tr>
<td>- Quarterly meetings of malaria intervention area working groups</td>
</tr>
<tr>
<td>- Quarterly meetings and annual malaria conference with provinces and selected districts</td>
</tr>
<tr>
<td>Partnerships and donor coordination mechanisms</td>
</tr>
<tr>
<td>- Quarterly national RBM partner meetings</td>
</tr>
<tr>
<td>- Malaria 'three ones' adopted by all RBM partners</td>
</tr>
<tr>
<td>- Quarterly RBM partner meetings in malaria endemic districts</td>
</tr>
<tr>
<td>- Malaria partners database and mapping in place</td>
</tr>
<tr>
<td><strong>STANDARD</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Organizational structure and human resources by level</strong></td>
</tr>
<tr>
<td>Existence of a clear malaria control program organizational structure within the health system by level. Minimum staffing of the national NMCP should be 4–7 focal persons for: (1) programme management; (2) prompt and effective treatment; (3) entomology and vector control; (4) research, surveillance, monitoring and evaluation; (5) community-based interventions and behaviour change communication; (6) partnership, planning and resource mobilization; (7) procurement supply management and logistics.</td>
</tr>
<tr>
<td>Malaria control focal person in each endemic district In low-transmission areas, 1–3 people in target provinces and districts with malaria foci.</td>
</tr>
<tr>
<td>Minimum staffing of the national NMCP should be 4–7 focal persons for: (1) programme management; (2) prompt and effective treatment; (3) entomology and vector control; (4) research, surveillance, monitoring and evaluation; (5) community-based interventions and behaviour change communication; (6) partnership, planning and resource mobilization; (7) procurement supply management and logistics.</td>
</tr>
<tr>
<td>Malaria control focal person in each endemic district In low-transmission areas, 1–3 people in target provinces and districts with malaria foci.</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
</tr>
<tr>
<td>&gt; 80% annual plan and &gt; 60% strategic plan being funded. 5% of national health budget allocated for malaria (level of expenditure for malaria per capita). Country has more than one Global Fund grant with high performance rating. High performance rating of other grants such as World Bank booster programme, PMI, DFID.</td>
</tr>
<tr>
<td><strong>Strategic planning and review</strong></td>
</tr>
<tr>
<td>Regular comprehensive malaria programme review or evaluation of implementation of strategic plan every 3–5 years. National malaria control strategy developed and validated with active participation of stakeholders and RBM partners. Simple desk reviews (needs assessment or gap analysis) every 12 months.</td>
</tr>
<tr>
<td><strong>Logistics and commodities</strong></td>
</tr>
<tr>
<td>Adequate office space, office equipment, materials and supplies. Adequate transport, communication link with all districts. National specification and registration for all malaria commodities in place. Procurement supply management plan in place. Functional malaria web site.</td>
</tr>
<tr>
<td><strong>Annual operational and business planning and review</strong></td>
</tr>
<tr>
<td>Annual malaria conference with districts and province and RBM partners. Annual operational and business plan based on strategic plan, with active participation of stakeholders and RBM partners. Annual malaria control business plan in each endemic district or malaria control is reflected in annual district integrated health plans.</td>
</tr>
<tr>
<td><strong>Active involvement in inter-country and cross-border collaboration</strong></td>
</tr>
<tr>
<td>Quarterly cross-border meetings. Participation in WHO subregional annual review and planning meetings. Participation in subregional RBM network meetings.</td>
</tr>
<tr>
<td><strong>2. Vector control</strong></td>
</tr>
<tr>
<td><strong>2.1 Impact</strong></td>
</tr>
<tr>
<td>- Decreasing density and proportion of primary vectors</td>
</tr>
<tr>
<td>- Trend in reduction of certain vector types</td>
</tr>
<tr>
<td>- Trends for reduction of vector longevity and density</td>
</tr>
<tr>
<td>- &gt; 95% susceptibility to first-line insecticides in use</td>
</tr>
<tr>
<td>- Reduction in slide positivity rate and entomological inoculation rate</td>
</tr>
<tr>
<td><strong>2.2 Vector surveillance in place</strong></td>
</tr>
<tr>
<td>Regular monitoring of vector bionomics (breeding, resting, biting habits). Updated vector maps of distribution. Monitoring of vector susceptibility to insecticides.</td>
</tr>
<tr>
<td>STANDARD</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>2.3 Use of LLINs as primary strategy for community prevention</td>
</tr>
<tr>
<td>Country has comprehensive national ITN policy and guidelines. The ITN policy is reviewed every 3–5 years. Whole population at risk for malaria sleeps under LLINs Duties and tariffs on LLINs removed</td>
</tr>
<tr>
<td>2.4 Indoor residual spraying</td>
</tr>
<tr>
<td>Country has comprehensive national IRS policy and guidelines The national IRS policy should be reviewed every 3–5 years. Capacity to undertake insecticide resistance monitoring and entomological monitoring every 2 years. All structures in all IRS-targeted districts are sprayed at least once or twice a year with effective insecticides</td>
</tr>
<tr>
<td>2.5 Integrated vector management</td>
</tr>
<tr>
<td>Written national integrated vector management policy and strategy</td>
</tr>
<tr>
<td>3. Standards for universal access to and coverage with high-quality diagnosis and case management interventions</td>
</tr>
<tr>
<td>3.1 Parasites</td>
</tr>
<tr>
<td>• Decreasing proportion of P. falciparum parasite species</td>
</tr>
<tr>
<td>• 95% susceptibility to first-line drugs in use</td>
</tr>
<tr>
<td>3.2 Impact</td>
</tr>
<tr>
<td>Trends in reduction of OPD and INP confirmed cases/1000 Trends in reduction of confirmed INP deaths Slide positivity rate below 5% Case fatality rate below 5%</td>
</tr>
<tr>
<td>3.3 Malaria diagnosis</td>
</tr>
<tr>
<td>Written malaria diagnostic policy and guidelines for all levels of health-care system, specifying diagnostic practices for routine and epidemic situations, for health facilities, communities and the private sector (may be part of treatment guidelines). Policy and guidelines should be reviewed every 3–5 years. Copies of malaria diagnostic policy and guidelines available at all levels of the health-care system All malaria cases diagnosed with parasitological testing with either RDT or Microscopy Malaria diagnosis quality control and quality assurance system for both microscopy and RDTs</td>
</tr>
<tr>
<td>3.4 Malaria treatment</td>
</tr>
<tr>
<td>ACT-based fixed-dose combination treatment policy at health facility, community and home level that addresses: first- and second-line drugs; treatment of malaria during pregnancy; cost recovery for treatment in both public and private sectors; policy on home management of malaria (where appropriate); access to quality ACTs in private sector. This policy should be reviewed every 3–5 years. Policies on free access to or highly subsidized ACTs by the private sector Updated malaria treatment guidelines for uncomplicated malaria and severe malaria (including pre-referral treatment at community and health facility levels) available at all levels of the health system. Treatment guidelines should be reviewed every 3–5 years. National ban on use of oral artemisinin monotherapy National policy for chemoprophylaxis for internal and external travellers Annual drug quantification and monitoring of stock levels and stock-outs Policy and process for quality control of ACTs</td>
</tr>
<tr>
<td>3.5 Intermittent preventive treatment of malaria in pregnancy</td>
</tr>
<tr>
<td>Policy adopted, with implementation with SP as part of ANC at second and third trimester of pregnancy Implementation evaluated and reviewed every 3–5 years Fully implemented in all eligible high-transmission districts</td>
</tr>
</tbody>
</table>
### STANDARD

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6 Intermittent preventive treatment of malaria in infants</td>
<td>Policy adopted, with implementation with SP as part of EPI, with DPT2 and DPT3 and measles immunization in children. Fully implemented in all eligible moderate and high-transmission districts. Surveillance of parasite resistance to SP.</td>
</tr>
<tr>
<td>3.7 Drug efficacy monitoring</td>
<td>Malaria drug efficacy monitoring undertaken every 2 years.</td>
</tr>
<tr>
<td>3.8 Pharmacovigilance</td>
<td>Notification system in place with central notification point for follow-up investigation. Build capacity for integrated pharmaco-vigilance system. Routine pharmaco-vigilance reports (monthly or quarterly, and zero reporting), including ACTs, submitted by all districts.</td>
</tr>
</tbody>
</table>

### 4. Functional epidemic and emergency preparedness and response system

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Forecasting</td>
<td>Risk mapping in place for epidemic- and emergency-prone areas. Collaboration in place with non-health sectors (meteorology and civil defence) for medium- and short-term forecasting.</td>
</tr>
<tr>
<td>4.2 Preparedness</td>
<td>Written national malaria emergency preparedness and response policy and guidelines or plan. Regularly updated malaria epidemic preparedness plan of action for each epidemic-prone district. Malaria emergency funds and stocks available at national and district level.</td>
</tr>
<tr>
<td>4.3 Early detection</td>
<td>Functional malaria epidemic warning system as part of integrated disease surveillance and response or other surveillance system. Country routinely using freely available remote sensing information to predict malaria epidemics. Malaria epidemic-prone districts and their health facilities monitoring malaria case trends regularly.</td>
</tr>
<tr>
<td>4.4 Rapid response</td>
<td>At least 90% of malaria outbreak alerts reported are detected within 2 weeks of onset and responded to within 1 week of notification. Post-epidemic assessments regularly done and documented.</td>
</tr>
</tbody>
</table>

### 5. Advocacy, information, education, communication, behaviour change communication and community mobilization

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Advocacy</td>
<td>Malaria and malaria control a priority in national health sector planning and national development planning. High-level political commitment to malaria control: director of health, minister of health, president. Country malaria champions. World malaria day event established.</td>
</tr>
<tr>
<td>5.2 Behaviour change communication</td>
<td>Functional national technical working group on malaria advocacy, behaviour change communication and community mobilization. National malaria communication strategy available. Focal person or unit for behaviour change communication. Malaria risk factors and risk behaviour identified. Surveys conducted on knowledge, attitude, behaviour and practice on malaria control interventions. Key malaria control messages defined. Information, education and communication materials (posters, pamphlets, flip charts, jingles, songs, films) developed and disseminated through appropriate media channels. Best practices for malaria control regularly documented.</td>
</tr>
</tbody>
</table>
### Standards for surveillance, monitoring, evaluation and operational research

**5.3 Community mobilization**
- Updated strategy for community-based malaria control activities
- Community-based malaria control activities implemented in all malaria-endemic district
- Community and village health workers involved in malaria control
- Schoolteachers involved in malaria control
- Traditional leaders involved in malaria control
- Religious leaders involved in malaria control
- Political leaders involved in malaria control

**6. Standards for surveillance, monitoring, evaluation and operational research**

| 6.1 Malaria demography and risk populations | Latest population projections available from last census
| Malaria risk populations categorized by age group
| Numbers and proportions of special malaria risk populations (e.g. children < 5, pregnant women) by district

| 6.2 Malaria mapping and stratification | Malaria risk populations mapped
| Names and updated populations of health and local government administrative boundaries available
| Malaria mapping and stratification categories in use (epidemiological or entomological) with method and date when last updated
| Geographical information system district boundary maps updated
| Geo-references of all health units and malaria service delivery points updated

| 6.3 Indicators and targets | Country has a malaria surveillance, monitoring and evaluation plan.

| 6.4 Surveillance | Written national malaria surveillance guidelines
| Regular surveillance reports or bulletin (maps and graphs) produced and disseminated at national, provincial and district levels

| 6.5 Monitoring drug efficacy and insecticide resistance | Drug efficacy monitoring sentinel sites in place
| Insecticide resistance monitoring sentinel sites in place

| 6.6 Routine information system | Routine reporting system in place that includes:
| Confirmed outpatients cases
| Confirmed inpatient cases
| Confirmed inpatient deaths
| Diagnosis (RDTs and slides taken, positivity rates)
| LLIN distribution
| Treatment with ACT
| IRS delivery
| Reporting on commodities used and in stock
| Malaria activity and performance monitoring system in place

| 6.7 Supervision, monitoring and evaluation | Malaria monitoring and evaluation plan
| Supervisory checklist with schedule by level

| 6.8. Malaria surveys | Malaria household surveys (demographic and health surveys, multiple indicator cluster surveys, malaria indicator surveys) conducted every 3–5 years
| Malaria prevalence survey conducted in past 5 years

| 6.9. Operational research | National malaria research priorities identified
| Evidence of translation of research results into policy
| Evidence of dissemination of research findings
ANNEX 3.
CHECKLIST FOR CONDUCTING A PROGRAMME REVIEW

This checklist is intended as a guide for the preparation, conduct and follow-up of malaria control programme reviews and as a guide for countries, stakeholders and partners managing a malaria programme review.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>STEPS</th>
<th>YES</th>
<th>NO</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1. Planning the malaria programme review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1. Identify the need for a review</td>
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<td></td>
<td></td>
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<td>Step 2. Build consensus to conduct a review with partners and stakeholders.</td>
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<td>Step 3. Appoint a review coordinator and establish internal review secretariat and internal review task team.</td>
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<td>Step 4. Define the objectives and outputs of the review.</td>
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<td>Step 5. Identify and agree on terms of reference for internal and external review teams.</td>
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<td>Step 6. Make official request to WHO for technical support.</td>
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<td>Step 7. Select central, provincial and district field sites for interviews and observations.</td>
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<td>Step 8. Plan administration and logistics.</td>
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<td>Step 9 Develop review checklist of activities.</td>
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<td>Step 10. Develop review proposal with budget and identify funding sources.</td>
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<td>Phase 2. Internal thematic desk review</td>
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<td>Step 1. Assemble information from available documents and reports.</td>
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<td>Step 2. Conduct a technical desk review.</td>
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<td>Step 3. Compile the thematic desk review report.</td>
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<td>Step 4. Select and adapt data collection tools for field review.</td>
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<td>Phase 3. Joint programme field review</td>
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<td>Step 1. Briefing of and team-building between internal and external review teams</td>
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<td>Step 2. Consensus-building on findings of thematic internal desk review</td>
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<td>PHASE</td>
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<td>Step 3. Familiarization with data collection tools for field visits</td>
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<td>Step 4. Briefing and formation of field teams for field review</td>
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<td>Step 5. Central visits to national institutions and organizations</td>
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<td>Step 6. Provincial, state, district and community field visits to malaria service delivery points</td>
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<td>Step 7. Sharing of reports and presentations from field review and consensus on key findings</td>
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<td>Step 8. Preparation of draft report</td>
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<td>Step 9. Preparation of executive summary, aide-memoire and slide presentation of key findings and recommendations</td>
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<td>Step 10. Presentation of review findings and recommendations</td>
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<td>Step 11. Completion of final draft of review report</td>
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<td>Phase 4. Final report and follow-up on recommendations</td>
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<td>Step 1. Finalize and publish report.</td>
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<td>Step 2. Disseminate report</td>
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<td>Step 3. Implement recommendations as part of updating policies, guidelines and plans.</td>
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<td>Step 4. Monitor implementation of the recommendations.</td>
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<td>Step 6. Update malaria policies and strategic and annual operational plans, and redesign programme, if necessary.</td>
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ANNEX.4
MALARIA PROGRAMME REVIEW PROPOSAL FORMAT

1. INTRODUCTION/BACKGROUND
Briefly describe epidemiology of malaria and progress and performance in malaria control and elimination in the country in the past five years.
Rationale for the programme review. (Why review and the context of the review in relation to scaling up malaria control and moving to malaria elimination)

2. REVIEW OBJECTIVES
Specific objectives of the malaria programme review could be adapted from those described in the operational manual.

3. REVIEW PROCESS, TASK MANAGEMENT AND COORDINATION
   - Policy decision to conduct a review
   - Process to get approval
   - Appointment of review leader and coordinator
   - Constitute an Internal review team
   - Constitute and external review team

4. REVIEW METHODOLOGY
The MPR involves a mixture of methods. Adapt from the methodology section of the MPR manual the methods used in each of the four phases and steps.

   4.1. REVIEW TOOLS
Adapt from the MPR manual and list the tools that will be used across the various phases and steps.

   4.2. DATA MANAGEMENT
Data will mainly be managed in tables and excel spreadsheets

   4.3. MOH APPROVAL
Approval to conduct the review by the director of health services and/or Secretary of Health
5. REVIEW TIME LINE (GANTT CHART)

Prepare a time schedule by month of key activities using the phases and steps in the MPR manual

<table>
<thead>
<tr>
<th>Phase</th>
<th>Steps</th>
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<th>F</th>
<th>M</th>
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<th>M</th>
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<td>Phase 1. Planning the malaria programme review</td>
<td>Step 1. Etc.</td>
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<td>Step 2. Etc.</td>
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6. REVIEW OUTPUTS

The outputs of the malaria programme review (MPR) are:

e.g  Programme thematic areas and sub-national reports of the review
      Programme Review Aide Memoire
      Programme Review published Report
      Updated strategic plan and annual operational plan
      Peer reviewed journal publications of program review articles

7. REVIEW BUDGET

Units cost in US$ has to be adjusted for each country needs

<table>
<thead>
<tr>
<th>Phase</th>
<th>Steps</th>
<th>Item</th>
<th>Unit cost</th>
<th>Days/ Units</th>
<th>Total Costs</th>
<th>M</th>
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<tbody>
<tr>
<td>Phase 1. Planning the malaria programme review</td>
<td>Step 1. Identify the need for a review</td>
<td>Step 2. Build consensus to conduct a review with partners and stakeholders</td>
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</table>

8. REFERENCES

Annexes
1. RBM Partners

(List the names of potential partners who could be involved in the programme review)
ANNEX 5.
OUTLINES FOR PREPARATION OF THEMATIC 
REVIEW REPORTS

A5.1 ADVOCACY, INFORMATION, EDUCATION, COMMUNICATION 
AND COMMUNITY MOBILIZATION

The report is the result of a critical expert analysis, based on facts and figures, of the current 
status of delivery of malaria control interventions and the capacity, structures and systems and 
management of information, education and communication, advocacy and community mobiliza-
tion. It summarizes past progress and performance, current key issues, challenges and problems and propose solutions, strategies and activities for accelerating and scaling-up access to 
and coverage with high-quality malaria control interventions.

INTRODUCTION

METHODS

Populations at risk for malaria and behaviour that increases their risk for malaria
The populations at greatest risk for malaria are all people living in areas of risk for malaria, children under 5 years of age, schoolchildren, pregnant women, the poor in both rural and ur-
ban areas and travellers. The behaviour that places them at risk should be identified and docu-
mented.

Advocacy
The aims of advocacy are to place malaria and malaria control as priorities in national health sector planning and national development planning and high-level political commitment. The means used include malaria ‘champions’ and commemorations of e.g. Africa and World Malaria Day, Southern African Development Community Malaria Day and national malaria awareness days.

Behaviour change communication
Behaviour can be changed by conducting surveys of knowledge, attitude, behaviour and prac-
tice with regard to malaria and malaria control interventions. The key malaria control mes-
sages must be clearly defined, and information, education and communication materials should be developed and disseminated through the appropriate media, including radio and television, posters, pamphlets, flip charts, jingles, songs and films. Best practices should be documented regularly.

Community mobilization
The community can be mobilized by involving them in malaria control. The entities used include community and village health workers, traditional leaders, faith leaders and political party leaders.
FINDINGS

Performance (access and coverage) of behaviour change communication
• policies on information, education and communication and community mobilization;
• approved materials, posters, pamphlets, flip charts, jingles, songs, films
• indicators
• targets
• access and delivery points
• coverage trends
• routine reporting on intervention delivery

National coordination and delivery capacity, structures and systems
• national focal point or officer for behaviour change communication
• functioning technical working group on advocacy, behaviour change communication and community mobilization
• communication strategy and guidelines available
• responsible officers or focal points for advocacy, information, education and communication and community mobilization at community, district, provincial and national levels
• annual campaigns during the malaria season
• funding for developing materials, media coverage, social mobilization, training

Research on advocacy, information, education and communication and community mobilization
• priorities for research
• research programmes in place
• regional and international collaboration in research

SUMMARY

• analysis of strengths, weaknesses, opportunities and threats with regard to programmes for advocacy, information, education and communication and community mobilization
• progress and performance in in achieving annual and strategic targets
• key issues, challenges and problems in malaria programme management for scaling-up delivery of advocacy, information, education and communication and community mobilization
• suggested solution and priorities for action in advocacy, information, education and communication and community mobilization and supporting research

CONCLUSION

ACKNOWLEDGEMENTS

REFERENCES

ANNEXES
A5.2 PROGRAMME MANAGEMENT

For the purposes of this review, the malaria control programme includes both the national malaria control programme and all other participants and partners in malaria control at national, subnational and community levels. The report focuses on the administrative performance of the malaria programme during the review period. Although the focus is on the malaria control programme at national level, some attention is given to subnational entities, such as district health management teams, which contribute to malaria prevention and control.

INTRODUCTION OR BACKGROUND

METHODS

FINDINGS

Milestones in malaria and malaria control and elimination in the country
- periods of major control efforts, where, when and by whom
- control strategies and interventions, where, when and by whom

Place of malaria control and elimination in the national development agenda
- malaria as a health sector priority
- malaria on the national development agenda
- national and international resolutions for malaria control and elimination formulated and supported
- malaria in the national health sector and the national development plan

Organizational structure
- national
- provincial
- district
- community
- partners involved
- involvement of nongovernmental and community-based organizations

Governance and partnerships
- national commission for malaria control
- malaria expert advisory technical committee
- expert subcommittee and working groups on malaria intervention areas
- quarterly meetings and annual malaria conference with provincial representatives
- RBM task force

Policy and strategy
- policies
- strategy
- targets
- national malaria control manual
- guidelines on major interventions
Planning and proposals
- national strategic plan
- business plan
- annual operational planning
- project proposals, to e.g. the United States Agency for International Development, the United Kingdom Department for International Development, the World Bank and the Global Fund

Reporting
- indicators and targets
- monthly reports
- quarterly reports
- annual reports
- publications

Programme reviews and evaluations
- performance indicators
- performance targets
- supervision checklist and schedule for programme and main interventions
- annual reviews on monitoring of programme performance
- periodic reviews, evaluations and audits of programme performance

Programme structure, systems and management performance
- structure, systems and management
- degree of verticality and of horizontal integration
- malaria programme within the sector-wide approach
- manager or director and deputy of the national malaria programme
- team leaders and focal points for malaria diagnosis and treatment, vector control, epidemics and emergencies, advocacy, information, education and communication and community mobilization
- national administrator, finance officer, supply and logistics officer
- national operational units at district level; type and organization
- type of personnel and job descriptions by level and by operational unit
- organogram of staff by level and operational unit
- training modules
- training institutions

Economics and financing of malaria control and elimination
- economic impact for families and households and at country level
- cost of malaria (illness, absenteeism, early mortality)
- cost of malaria control to the health sector and the national economy
- malaria and poverty
- malaria and the work force
- malaria and agriculture
- cost-benefit of control
• domestic budget and sources of financing
• international budget and sources of financing

National malaria control supply and logistics
• equipment specifications and ideal numbers
• equipment maintenance workshops
• protective gear (specifications and numbers)
• transport specifications and ideal numbers
• transport maintenance workshops

Research on national malaria programme management
• research priorities in malaria programme management
• main researchers and research team in malaria programme management
• research field sites and stations and research programmes in place
• regional and international collaboration in research on malaria programme management

SUMMARY
• analysis of strengths, weaknesses, opportunities and threats with regard to malaria programme management
• progress and performance of malaria programme management in achieving annual and strategic targets
• key issues, challenges and problems in malaria programme management for scaling-up delivery
• suggested solutions and priorities for action in malaria programme management and supporting research

CONCLUSION

ACKNOWLEDGEMENTS

REFERENCES

ANNEXES

A5.3 MALARIA COMMODITIES PROCUREMENT SUPPLY MANAGEMENT

Ensuring a consistent supply of commodities for malaria prevention and control is an important function of the malaria programme. Some commodities are procured and supplied in a vertical system, others in an integrated public sector delivery system and by the private sector. The thematic review describes all these systems, in order to assess their performance, identify current issues and challenges and suggest ways forward. The main sources of information for the thematic review report on procurement and supply management include reports on policies, guidelines and plans. These are analysed critically in the light of the objectives of the malaria programme review.
INTRODUCTION OR BACKGROUND

METHODS

FINDINGS

Specification of commodities: National standard specifications for malaria commodities

Estimates and quantification of requirements
• methods and software for estimating commodities required
• estimates in the malaria strategic plan
• estimates in the annual plan for the annual malaria season

Financing
• current comparative national and international unit costs of malaria commodities
• domestic budget and sources of financing for commodities
• international budget and sources of financing for commodities

Procurement
• annual and quarterly national procurement cycles and systems
• national or ministry of health procurement agency
• national procurement tender specification and decision system
• provincial or state procurement system in place and limitations
• emergency procurement system to address national stock-outs
• international procurement agency support, specifications and procurement systems

Storage and delivery
• storage and delivery system at district, provincial and central levels
• storage and distribution system at community, district, provincial and national levels

Quality control
• quality control method used in tendering for all malaria commodities
• batch quality control method during delivery of malaria control commodities
• national, regional and global quality control centres used for different malaria commodities

Stock control and reporting
• national stock control cards for commodities at storage and delivery points
• malaria control programme stock control cards for commodities at storage and delivery points
• national and malaria control programme monthly and quarterly reporting on malaria commodities
• national procedures to address shortages or expired stocks of malaria commodities

Policies and guidance: national malaria commodities management guidelines

Training modules

Procurement plan
SUMMARY

• analysis of strengths, weaknesses, opportunities and threats with regard to malaria commodities management
• progress and performance in malaria commodities management in achieving annual and strategic targets
• key issues, challenges and problems in malaria commodities management
• suggested solutions and priorities for action in malaria commodities management and supporting research

CONCLUSION

ACKNOWLEDGEMENTS

REFERENCES

ANNEXES

A5.4 MALARIA VECTOR CONTROL

Vector control is a key malaria control intervention. The thematic review includes a critical examination of both published and unpublished reports to determine current vector bionomics, which influence vector control interventions, systems for delivering the services and identified impediments and strengths. The review summarizes progress and performance, current key issues, challenges, risks and problems and proposes solutions, strategies and activities for accelerating and scaling-up access to and coverage with high-quality vector control services.

INTRODUCTION OR BACKGROUND

METHODS

FINDINGS

Primary and secondary malaria vectors and bionomics
• sentinel sites for vector bionomics
• breeding, biting, resting habits
• vector density
• entomological inoculation rates
• sporozoite rates and human blood index
• vector susceptibility to the main insecticides used for IRS, LLINs and larviciding
• updated vector maps
Malaria vector control interventions

Indoor residual spraying
• insecticides and pumps with approved specifications for IRS
• capacity for training and retraining in vector control, including training modules
• insecticide safety guidelines
• storage space and equipment maintenance workshops
• logistics (e.g. transport, personal protective equipment)
• annual trends in coverage with IRS
• disposal of wastes

Long-lasting insecticidal nets
• insecticide-impregnated mosquito nets with approved specifications
• annual trends in coverage with LLINs
• types of nets in use
• re-treatment of conventional nets
• distribution methods
• disposal methods

Integrated vector management
• larval control
• other methods

Delivery capacity, structures and systems

Policies and guidelines
• types and numbers of population at risk and population targeted for malaria vector control
• policies for IRS, LLINs, larviciding, repellents, environmental management
• malaria vector control guidelines
• malaria vector control indicators and targets
• annual and strategic vector control plans

Organization
• national team(s) of entomologists and technicians for vector control
• officers, focal points and units responsible for malaria vector control at community, district, provincial and national levels
• functioning vector control subcommittee
• capacity for training and retraining in vector control, including training modules
• storage space and equipment maintenance workshops
• surveillance, monitoring and evaluation system for vector control interventions
• quarterly and annual reporting on LLIN and IRS delivery and coverage
• existence and functionality of quality assurance and quality control systems for commodities such as insecticides for IRS and LLINs
• financing of malaria vector control, including domestic and international funding sources

Entomological programme support
• existence of vector surveillance system, including insectaries
• sentinel sites for susceptibility testing and bioassays
• quality control of interventions, including bioassays
• entomology reference laboratory
Malaria vector control research
• research priorities
• principal researchers and research teams
• research field sites and stations and ongoing vector control research programmes relevant to implementation of the malaria programme
• regional and International collaboration in vector control research

Advocacy, information, education, communication and community involvement
• knowledge, attitude, behaviour and practice with regard to IRS, LLINs and larviciding
• key messages
• materials and media being used
• methods for community involvement and mobilization

SUMMARY
• analysis of strengths, weaknesses, opportunities and threats with regard to all malaria vector control interventions
• progress, performance and key achievements in malaria vector control delivery
• key issues, challenges and problems in malaria vector control delivery
• suggested solutions and priorities for action in vector control delivery, including supporting operational research

CONCLUSION
ACKNOWLEDGEMENTS
REFERENCES
ANNEXES

A5.5 EPIDEMIC AND EMERGENCY PREPAREDNESS AND RESPONSE

Malaria epidemics are a priority in areas of unstable malaria prevalence. Thus, when aggressive control programmes have achieved low transmission, there is a high risk for resurgence and rebound associated with annual and cyclical weather and climatic factors at the same time as decreased access to and coverage with malaria control interventions. Extreme climatic events, such as drought and floods following cyclones or hurricanes, and civil disturbances lead to emergency situations in which the population is more vulnerable to malaria, and malaria control services have broken down. The thematic review critically examines both pub-
lished and unpublished reports on the risk factors and risk areas for malaria epidemics and emergencies, the methods for forecasting them and the steps for ensuring preparedness. Timely surveillance of epidemics and the structures for rapid response and containment are evaluated. The review summarizes progress and performance, key issues, challenges, risks and problems and proposes solutions, strategies and activities for improving epidemic preparedness and rapid response in the malaria control programme, in order to manage epidemics and contain malaria resurgence effectively.

**INTRODUCTION OR BACKGROUND**

**METHODS**

**FINDINGS**

Determinants of malaria epidemics and emergencies and risk factors
- epidemiology of malaria epidemics
- cycle of malaria epidemics
- malaria in emergencies
- stratification of risk and transmission of malaria
- population immunity, vulnerability and risk and severity of malaria in areas of unstable transmission

Forecasting malaria epidemics
- mapping districts and subdistricts at risk for malaria epidemics
- medium- and long-term forecasting in collaboration with national meteorological services and regional drought monitoring centres

Preventing malaria epidemics: targeting epidemic risk areas with annual preseasonal total coverage with IRS and LLINs

Preparedness and planning for malaria epidemics
- annually updated epidemic preparedness plans in epidemic-prone districts, provinces and nationally
- prepositioning of epidemic stocks of commodities in risk districts and, if required, at provincial and national levels
- presence of trained epidemic preparedness teams at district, provincial and national levels

Early warning and surveillance of malaria epidemics
- monthly and weekly warnings during peak months in collaboration with national meteorological services
- weekly malaria surveillance within integrated disease surveillance and response, especially during peak months
- epidemic thresholds in use at all levels
- epidemic detected within 2 weeks of occurrence

Rapid response to malaria epidemics
- response to epidemic within 1 week of notification
- epidemic assessment checklist and tools
- case-based surveillance systems
• diagnosis during epidemics and emergency
• treatment during epidemics and emergencies
• use of insecticide-treated sheeting for temporary shelters during epidemics and emergencies
• IRS and LLIN delivery during malaria epidemics and emergencies
National control systems for malaria epidemics and emergencies
• national focal point and response coordination team
• national policy, guidelines and standard operating procedures
• functioning national technical working group
• response and coordination body at provincial and district levels
• capacity development and training at national, provincial and district levels
• sentinel surveillance, epidemic warning and early detection systems in place at all levels of response
Advocacy, information, education, communication and community involvement
• knowledge, attitude, behaviour and practice with regard to malaria epidemics and emergencies
• key messages in the prevention and control of malaria epidemics and emergencies
• materials and media being used for disseminating information, education and communication about malaria epidemics and emergencies
• methods for community empowerment and mobilization in malaria epidemics and emergencies

SUMMARY
• analysis of strengths, weaknesses, opportunities and threats with regard to malaria epidemics and emergencies
• progress, performance and achievements in malaria epidemics and emergencies
• key issues, challenges and problems in malaria epidemics and emergencies
• suggested solutions and priorities for action in malaria epidemics and emergencies, including supporting operational research

CONCLUSION
ACKNOWLEDGEMENTS
REFERENCES
ANNEXES
A5.6 Diagnosis and Case Management

Introduction or Background

Methods

Findings

Defining the clinical profile of malaria patients
- main parasite species
- other parasite species
- clinical profile of patients: age, population distribution, severity, clinical type, stability of malaria

Malaria case management policy and guidelines
- diagnosis of malaria: clinical and parasitological diagnosis, microscopy, RDTs
- treatment of uncomplicated malaria
- management of severe malaria: specific treatment, pre-referral treatment, adjunctive treatment, treatment of malaria in pregnancy
- home management of malaria: uncomplicated malaria, severe malaria

Structure and management of malaria control programme
- assessment of service delivery: infrastructure, human resources
- structure and functions of national malaria control programme in relation to case management
- malaria control at subnational level: structure and functions related to case management
- malaria control at health unit level: delivery structure and functions
- malaria control at community level: home-based management, delivery structure, functions
- national malaria laboratory specialist
- malaria case management specialist
- national treatment focal points working on malaria case management: paediatrician, obstetrician, general physician, pharmacist
- functioning national malaria case management committee
- officers and focal points responsible for malaria diagnosis and treatment at community, district, provincial and national levels

Supply chain management and logistics
- quantification of medicines and diagnostics: morbidity–consumption methods
- management of routine ordering: annual requirements, safety stocks, time and quantity for reordering
- managing distribution of antimalarial medicines and diagnostics
- logistics and medicine management information system in health facilities

Quality assurance of malaria diagnostics and antimalarial medicines

Malaria case management
- population at risk and population targeted for diagnosis and treatment of malaria
- indicators for malaria diagnosis and treatment
- delivery points for malaria diagnosis and treatment
• annual trends in coverage for diagnosis and treatment
• reporting system for malaria diagnosis and treatment

Training health workers
• main areas for training in malaria case management
• health workers to be trained
• training tools
• training methods
• capacity for training in malaria case management

Advocacy, information, education, communication and community involvement in malaria case management
• knowledge, attitude, behaviour and practice with regard to diagnosis
• key messages with regard to malaria diagnosis and treatment
• materials and media being used to disseminate information about diagnosis and treatment
• methods for community involvement and mobilization with regard to diagnosis and treatment

Capacity for malaria case management: financing malaria case management from domestic and foreign sources

Surveillance
• surveillance of resistance to antimalarial drugs
• sentinel sites for monitoring malaria treatment failure and drug resistance
• coverage with malaria case management

Operational research on case management
• priorities for research on malaria diagnosis and treatment
• principal researchers and research teams on diagnosis and treatment for malaria parasite control
• field sites and stations in place for research on diagnosis and treatment
• regional and international collaboration in research on diagnosis and treatment

Strengths, weaknesses, opportunities and threats with regard to malaria case management delivery

SUMMARY
• progress and performance in malaria case management delivery
• key issues, challenges and problems in malaria case management
• suggested solutions and priorities for action in malaria case management

CONCLUSION
ACKNOWLEDGEMENTS
REFERENCES
ANNEXES
MALARIA PREVENTION AND TREATMENT IN PREGNANCY

INTRODUCTION OR BACKGROUND

METHODS

FINDINGS

Policies in place for prevention and treatment of malaria in pregnancy
- intermittent preventive treatment and LLINs
- screening and treatment of infection in antenatal clinics
- disease treatment
- management of HIV-positive women
- prevalence of malaria infection and mortality in pregnancy
- reporting and monitoring of access to and coverage with treatment for screening-positive and confirmed cases of uncomplicated and severe malaria during pregnancy
- reporting and monitoring of effect of malaria on abortions, preterm births, stillbirths and maternal mortality in pregnancy

Access to and coverage with interventions
- scaling-up of intermittent preventive treatment of malaria in pregnancy, delivery of LLINs for pregnant women and treatment of malaria in pregnancy
- approved LLINs used by pregnant women and routine delivery at antenatal clinics
- approved drugs and protocols for prevention, detection and management of anaemia in malaria in pregnancy
- approved drugs and protocol used for treatment of uncomplicated and severe malaria in pregnancy
- population of pregnant women at risk and proportion of population targeted for coverage with interventions
- prevention and treatment Indicators
- annual, medium- and long-term targets
- access and delivery points
- routine reporting on performance and indicators of access to and coverage with interventions

Advocacy, information, education, communication and community involvement
- knowledge, attitude, behaviour and practice with regard to malaria in pregnancy
- key messages
- counselling for malaria screening and treatment in antenatal clinics
- materials and media being used
- methods for community involvement and mobilization

National delivery capacity, structures and systems
- national focal point for malaria in pregnancy
- methods for institutional collaboration on reproductive health, making pregnancy safer and HIV prevention programmes
functioning national subcommittee on prevention and treatment of malaria in pregnancy
• officers and focal points responsible for malaria in pregnancy at community, district and provincial levels
• training programmes
Domestic and donor funding for malaria in pregnancy
National policies and guidance on malaria in pregnancy
• national guidelines: dedicated or as part of guidelines for malaria case management or prevention
• link with guidelines for reproductive health, making pregnancy safer and HIV prevention
National training modules
Research on prevention and treatment of malaria in pregnancy
• research priorities
• ongoing research

SUMMARY
• strengths, weaknesses, opportunities and threats with regard to the prevention and treatment of malaria in pregnancy
• progress and performance in prevention and treatment
• key issues, challenges and problems in prevention and treatment
• suggested solutions and priorities for action in prevention and treatment delivery and supporting operational research

CONCLUSION
ACKNOWLEDGEMENTS
REFERENCES
ANNEXES

A5.8 EPIDEMIOLOGY, SURVEILLANCE, MONITORING, EVALUATION AND OPERATIONAL RESEARCH

Surveillance, monitoring, evaluation and operational research are important components of any malaria control programme. They require a great deal of information, most of which is not collected or managed by the national malaria control programme. The thematic report therefore consists of a review of the indicators, data collection systems, available data and use with a view to identifying the strengths and the gaps that should be filled in order to have a robust, functional malaria surveillance, monitoring and evaluation system.

Research findings contribute to understanding the malaria situation and occasionally provide data on some key malaria indicators. The scope of the findings may, however, be limited and not
representative of the whole country. The thematic review therefore pulls together all the information and provides an evaluation of its quality and applicability to the malaria situation, in line with the objectives of the programme review.

The epidemiology of malaria heavily influences the focus, objectives and implementation approaches in a country. Its epidemiology changes constantly as a result of ecological, environmental and climatic factors and with the coverage of malaria control interventions. On the basis of the available information, the thematic team can analyse changes in the epidemiology of malaria and may recommend additional studies to confirm the observations.

INTRODUCTION OR BACKGROUND

METHODS

FINDINGS

Epidemiology
• risk for malaria by
• geographical spread
• administrative boundaries
• eco-epidemiological strata
• main malaria parasites, distribution and prevalence
• main malaria vector species and bionomics
• environmental and climatic factors influencing malaria
• burden of malaria on the health system
• socioeconomic impact of malaria

Demography and risk populations
• updated population in health and local government administrative boundaries and names
• date of last official census and last official projected population
• populations at risk for malaria categorized by age and gender, as appropriate

Risk mapping and stratification
• names and numbers of health and local government administrative boundaries
• names and numbers of malaria-specific administrative boundaries, if any
• all districts mapped for endemicity and epidemic risk
• malaria mapping and stratification categories in use (epidemiological or entomological)
• geographical information system mapping software in use and date when last updated

Malaria control and elimination targets and indicators
• national malaria targets defined
• strategic and annual targets set and annual progress reviews in place
• national malaria indicators defined
• sources of data and frequency of data collection for malaria indicators defined

Routine surveillance and information system
• system for reporting malaria outpatients, inpatients and deaths and whether suspected or confirmed
• existing integrated disease surveillance systems include malaria variables, such as integrated disease surveillance and response and health sector monitoring and evaluation
• type of integrated disease surveillance: cases and deaths reported weekly or monthly, case-based, malaria a reportable or a notifiable disease
• source of surveillance data: all health units or sentinel health units
• dedicated malaria surveillance or information system
• malaria epidemic surveillance, including epidemic thresholds and a database

Logistics information system
• routine LLIN delivery and stock reporting
• routine IRS delivery and stock reporting
• routine RDT and ACT delivery and stock reporting
• commodities stock control reporting
• laboratory reporting of malaria slides and RDTs processed and confirmed

Surveys and evaluations
• reports and dates of malaria prevalence surveys
• reports and dates of community and household surveys of malaria
• reports and dates of health facility surveys of malaria
• other surveys: knowledge, attitude, behaviour and practice, quality of antimalarials
• evaluations and reviews

Malaria database
• WHO malaria database in place
• date of last update of malaria database

Country profile
• WHO summary country profile in place
• district malaria profiles in place

Reports
• monthly
• quarterly
• annual
• reports from surveillance of drug and insecticide resistance
• country malaria ‘report card’ or ‘dashboard’ in place and updated
• reports of subnational and national reviews and planning meetings

Informatics support
• computers, software, e-mail and Internet network for districts and provincial malaria focal points
• country websites and process for updating
• web-based reporting

Operational research
• basic and operational research priorities established
• research projects and programmes in place
• research institutions with a section on malaria, field centres and malaria research programmes in place
• national universities with malaria research programmes
• regional and international collaboration in malaria research in place
Organization, structure and capacity of monitoring and evaluation unit
• monitoring and evaluation plan
• focal point and unit
• technical working group
• linkage with overall health sector monitoring and evaluation (e.g. integrated disease surveillance and response, national statistics agency)
• qualifications, skills and experience of team
• budget and financing

SUMMARY
• strengths, weaknesses, opportunities and threats with regard to malaria surveillance, information, surveys and operational research
• progress, performance and key achievements of the surveillance, monitoring and evaluation operational research system
• key issues, challenges and problems in malaria surveillance, monitoring, evaluation and operational research
• suggested solutions and priorities for action in the area of malaria surveillance, information, surveys and operational research

CONCLUSION
ACKNOWLEDGEMENTS
REFERENCES
ANNEXES
ANNEX 6.
FIELD REVIEW CHECKLISTS

Interviews will be conducted at central level with representatives of non-health sectors, selected RBM partners, programmes and units in the ministry of health and senior management in the ministry of health. This would be followed with interviews with health service and malaria control manager at provincial/ state, district, health facility and community level.

The introduction, objectives and focus of all the interviews are the same, but the questions may vary. Each interview should start with the same introduction, describing the objectives of the malaria programme review and the focus of the interview, before the questions are asked, so that the interviewers introduce the interview in a standardized fashion. The interview should finish with thanking the respondents and collecting any hard or soft copies of additional information that will explain some of the observations.

The following detailed check lists are available from WHO for adaption to country health system and program needs.

<table>
<thead>
<tr>
<th>INDEX NUMBER</th>
<th>NAME OF CHECKLIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part One:</td>
<td>National Level Checklist</td>
</tr>
<tr>
<td>N - One:</td>
<td>Checklist for Top Ministry Officials</td>
</tr>
<tr>
<td>N - Two:</td>
<td>Checklist for Other Government Departments and Partners</td>
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<tr>
<td>N - Three:</td>
<td>Checklist for the Malaria Programme Manager</td>
</tr>
<tr>
<td>N - Four:</td>
<td>Checklist for the Malaria Entomologist</td>
</tr>
<tr>
<td>N - Five:</td>
<td>Checklist for the Malaria Case Management Focal Point</td>
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<tr>
<td>N - Six:</td>
<td>Checklist for the Drug Regulatory Authority</td>
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<tr>
<td>N - Seven:</td>
<td>Checklist for the National Public Health Laboratory/ Laboratory Focal Persons</td>
</tr>
<tr>
<td>N - Eight:</td>
<td>Checklist for the Central Medical Stores</td>
</tr>
<tr>
<td>N - Nine:</td>
<td>Checklist for the Epidemic Preparedness and Response Focal Point</td>
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<tr>
<td>N - Ten:</td>
<td>Checklist for the Health Education and Promotion Focal Point</td>
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<tr>
<td>N - Eleven:</td>
<td>Checklist for the Surveillance, Monitoring and Evaluation Focal Point</td>
</tr>
<tr>
<td>Part Two:</td>
<td>Provincial/Regional Level Checklist</td>
</tr>
<tr>
<td>Part Three:</td>
<td>Checklist for the District Health Management Team</td>
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<tr>
<td>Part Four:</td>
<td>Checklist for District and Primary Hospitals</td>
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<tr>
<td>DPH - One:</td>
<td>Checklist for the Hospital Management Team</td>
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<tr>
<td>DPH - Two:</td>
<td>Checklist for the Hospital Out Patient Department (OPD)</td>
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<tr>
<td>DPH - Three:</td>
<td>Checklist for Antenatal Care Clinic (ANC)</td>
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<tr>
<td>DPH – Four:</td>
<td>Checklist for the In-Patient Ward (Adult and Paediatric)</td>
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<tr>
<td>DPH – Five:</td>
<td>Checklist for Maternity Ward</td>
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<tr>
<td>DPH – Six:</td>
<td>Checklist for Laboratory</td>
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<tr>
<td>DPH – Seven:</td>
<td>Checklist for Pharmacy</td>
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<tr>
<td>DPH – Eight:</td>
<td>Checklist for Clinics and Health Posts</td>
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<tr>
<td>Part Five:</td>
<td>Checklist for the Community Interview</td>
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</tbody>
</table>
ANNEX 7.
PERFORMANCE SCORE SHEET

An excel spreadsheet tool is available from WHO for scoring performance against standards by thematic areas.

ANNEX 8.
FORMAT FOR SUMMARY OF KEY MALARIA INDICATORS

<table>
<thead>
<tr>
<th>KEY MALARIA INDICATORS</th>
<th>Y/N/NA</th>
<th>TARGET</th>
<th>BASELINE</th>
<th>ACHIEVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Decline (%) of confirmed malaria cases and rates (interpreted with % suspected malaria cases tested), including annual parasite index (API)</td>
<td></td>
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<tr>
<td>2 Decline (%) in inpatient malaria cases</td>
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<tr>
<td>3 Decline (%) in inpatient malaria cases</td>
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<td>4 Decline (%) of malaria test positivity rate</td>
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<tr>
<td>5 Trend of % suspected malaria cases tested</td>
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<tr>
<td>6 All-cause under-five mortality rate</td>
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<tr>
<td>7 Observed reduction of number and size of epidemics reduced over time</td>
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<tr>
<td>8 Observed reduction in vectorial capacity in 5 years</td>
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<td></td>
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<tr>
<td>9 Observed reduction in districts with malaria transmission over time</td>
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<tr>
<td>10 Total Malaria cases per 1000 population</td>
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<tr>
<td>11 Malaria parasite prevalence, children 2-9 years</td>
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<tr>
<td>12 Anemia prevalence in children aged 6-59 months</td>
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<tr>
<td>13 In patient deaths due to confirmed malaria (%)</td>
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<tr>
<td>14 Proportion malaria cases confirmed by microscopy or RDT</td>
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<tr>
<td>15 Proportion of uncomplicated malaria cases receiving prompt and effective treatment within 24 hours according to the national policy</td>
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<tr>
<td>16 Proportion malaria/fever cases treated with nationally recommended first-line antimalarial treatment (annual)</td>
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<tr>
<td>17 Proportion of children under 5 years of age with fever who received anti-malarial treatment through home-based management</td>
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</tbody>
</table>
### KEY MALARIA INDICATORS

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Y/N/NA</th>
<th>TARGET</th>
<th>BASELINE</th>
<th>ACHIEVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Proportion of households (HH) with at least one ITN/LLIN</td>
<td></td>
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<tr>
<td></td>
<td>Proportion of persons (all ages) who slept under an ITN/LLIN the previous night</td>
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<tr>
<td>19</td>
<td>Proportion of children under 5 years of age who slept under an ITN/LLIN the previous night</td>
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<tr>
<td>20</td>
<td>Proportion of household residents who slept under an ITN/LLIN the previous night</td>
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<tr>
<td>21</td>
<td>Proportion of households with at least one ITN/LLIN and/or sprayed by indoor residual spraying (IRS) in the last 12 months</td>
<td></td>
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<tr>
<td>22</td>
<td>Proportion of women who received 2 or more doses of intermittent preventive treatment (IPT) for malaria during their last pregnancy (in the last 2 years)</td>
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<tr>
<td>23</td>
<td>Proportion of children under 5 years of age with fever in the last 2 weeks who received anti-malarial treatment according to national treatment policy within 24 hours of onset of fever</td>
<td></td>
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<tr>
<td>24</td>
<td>Proportion of patients admitted with severe malaria receiving correct treatment at health facilities</td>
<td></td>
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<tr>
<td>25</td>
<td>ITNs/LLINs distributed within the past 3 years (compare it to population divide by 2)</td>
<td></td>
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</tr>
<tr>
<td>26</td>
<td>Percentage of at risk population target with IRS in the last 12 months</td>
<td></td>
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</tr>
<tr>
<td>27</td>
<td>Proportion of population (in targeted areas) which received spraying through an IRS campaign in the last 12 months</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>28</td>
<td>Proportion of health facilities with microscopy and/or RDT capability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Proportion of health facilities with no reported stock-outs lasting &gt;1 week of nationally recommended antimalarial drugs, RDTs, and LLINs (for routine distribution) at any time during the past 3 months</td>
<td></td>
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</tbody>
</table>

API = Number of microscopically confirmed malaria cases detected per 1000 population during one year
ANNEX 9.
FORMAT FOR MALARIA PROGRAMME REVIEW REPORTS

A9.1 MALARIA PROGRAMME REVIEW DISTRICT/ PROVINCIAL REPORT

Key informant (name, designation, address, telephone). Team
Name of province or district
Date

1. Introduction
   • objectives
   • province
   • district
   • why province and district were chosen
   • people met: full names, designations, institutions and addresses

2. Findings
   2.1 Adequacy of organization and management of malaria control in the province in terms of:
      • Availability of focal person for malaria control
      • Availability and coordination of malaria control partnerships
      • Availability of malaria control annual business or operational plans or malaria control activities within the health plan
      • Status of resource mobilization and financing of malaria control activities
      • Availability of appropriate malaria control guidelines and tools
      • Adequacy of malaria control logistics: office space, office equipment, materials and supplies, transport
      • Status of malaria surveillance, supervision, monitoring and evaluation
   2.2 Malaria profile in province and appropriateness of interventions being implemented
   2.3 Access, coverage, quality of malaria control interventions in relation to national targets

3. Performance rating of the province or district

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Highly adequate</td>
</tr>
<tr>
<td>B</td>
<td>Adequate</td>
</tr>
<tr>
<td>C</td>
<td>Present but not adequate</td>
</tr>
<tr>
<td>D</td>
<td>Not adequate</td>
</tr>
</tbody>
</table>
One-paragraph explanation of the rating

4. Key issues
   4.1–4.5

5. Problems (barriers, challenges, constraints)
   5.1–5.5

6. Proposed solutions
   6.1–6.5

7. Recommendations
   7.1–7.5

8. References
   8.1–8.5

Annexes
- Provincial or district malaria profile
- Provincial or district data by month and year (e.g. malaria cases and deaths among out- and inpatients)
- Provincial or district data on delivery of interventions (LLIN, IRS, ACT)

A9.2 FORMAT FOR THE AIDE-MEMOIRE

The aide-memoire is a memorandum setting forth the major findings of a review and discussion and agreement, used especially to build and facilitate follow-up of recommendations.

Date of review (XXXX to XXXX)

The Ministry of Health of [name of country], the World Health Organization (WHO) and [specify key RBM partners that contributed]

- Purpose
  - Briefly what the MPR is
- Background
  - Rationale, objectives, methodology
- Key Findings and Action points
  - Key targets
  - Malaria epidemiology
  - By thematic areas
  - Action points for each thematic area
- Conclusion
- Commitments by government and partners
- Signature
Signature by senior officers of the Ministry of Health, Government, WHO, UNICEF and other major RBM partners

Annexes
Timetable and programme review team members

A.9.3 FINAL REPORT OUTLINE FOR MALARIA PERFORMANCE REVIEW REPORT (MPR).

FORWARD
ACKNOWLEDGEMENT
EXECUTIVE SUMMARY

• key findings
• key best practices, success stories and facilitating factors
• main problems and challenges
• key recommendations

1. INTRODUCTION
1.1 Background
   Define the MPR
   Justification for the MPR during that period
1.2 Objectives of the MPR
   Adapt what is currently in the guidelines
1.3 Methodology of the MPR
  - Brief description of how the various phases were conducted
    Phase 1
    Phase 2
    Phase 3
    Phase 4
1.4 Outline of the document
  - Briefly describe the outline of the report

2. CONTEXT OF MALARIA CONTROL

Brief description of what has happened in malaria control in the country over the last 10-15 years with emphasis on the past 5 years:
2.1 Historical milestones in malaria control
2.2 Malaria control within the national development agenda
2.3 National health policy
2.4 National health sector strategic plan
2.5 National development plan
2.6 Organizational structure for malaria control
2.7 Key strategies for malaria control
2.8 Key players in malaria control
2.9 Linkages and coordination
2.10 Conclusions and Recommendations

3. EPIDEMIOLOGY OF MALARIA

This section will describe what has been existing and also any modifications to the epidemiology noted/suspected based on review findings:

3.1 Geographical distribution of malaria
3.2 Population at risk
3.3 Stratification and risk map
3.4 Malaria parasites
3.5 Malaria vectors
3.6 Disease trends
3.7 Conclusions and recommendations.

4. PROGRAMME PERFORMANCE BY THEMATIC AREAS

In this section, report on programme performance by thematic area as below.

4.1 Programme management
   4.1.1 Introduction
   4.1.2 Policy
   4.1.3 Organization
   4.1.4 Guidance
   4.1.5 Human resources, training and capacity development
   4.1.6 Strategic and annual planning
   4.1.7 Financing
   4.1.8 SWOT Analysis
   4.1.9 Successes, best practices and facilitating factors
   4.1.10 Problems and challenges
   4.1.11 Conclusions and recommendations
4.2 Procurement and supply chain management
   4.2.1 Policy
   4.2.2 Guidelines
   4.2.3 Registration of products
   4.2.4 Specifications
   4.2.5 Quantifications
   4.2.6 Procurement, storage and distribution
   4.2.7 Inventory Management
   4.2.8 Quality Control
   4.2.9 SWOT analysis
   4.2.10 Successes, best practices and facilitating factors
   4.2.11 Issues and challenges
   4.2.12 Conclusions and recommendations.

4.3 Malaria vector control
   4.3.1 Introduction
   4.3.2 Policy and guidance
   4.3.3 Organizational structure
   4.3.4 Guidance
   4.3.5 Human resources, training and capacity development
   4.3.6 Annual planning
   4.3.7 Service delivery outputs and outcomes
   4.3.8 SWOT Analysis
   4.3.9 Successes, best practices and facilitating factors
   4.3.10 Issues and challenges
   4.3.11 Conclusion and recommendations

4.4 Malaria diagnosis and case management
   4.4.1 Introduction
   4.4.2 Policy and guidance
   4.4.3 Organization of case management services
   4.4.4 Human resources, training and capacity development
   4.4.5 Annual planning
   4.4.6 Malaria Diagnosis
   4.4.7 Malaria Treatment
4.4.8 Malaria prophylaxis
4.4.9 Performance indicators and targets
4.4.10 Service Delivery outputs and outcomes
4.4.11 SWOT Analysis
4.4.12 Successes, best practices and facilitating factors
4.4.13 Issues and challenges
4.4.14 Conclusion and recommendations

4.5 Advocacy, BCC, IEC and social mobilization
4.5.1 Introduction
4.5.2 Policy and Guidance
4.5.3 Organization
4.5.4 Human resources, training and capacity development
4.5.5 Annual planning
4.5.7 Performance indicators and targets
4.5.8 Service Delivery outputs and outcomes
4.5.9 SWOT Analysis
4.5.10 Successes, best practices and facilitating factors
4.5.11 Issues and challenges
4.5.12 Conclusion and recommendations

4.6 Malaria in pregnancy
4.6.1 Introduction
4.6.2 Policy and Guidance
4.6.3 Organization of MIP service delivery
4.6.4 Human resources, training and capacity development
4.6.5 Annual planning
4.6.7 Performance indicators and targets
4.5.7 Service Delivery outputs and outcomes
4.6.8 SWOT Analysis
4.6.9 Successes, best practices and facilitating factors
4.6.10 Issues and challenges
4.6.11 Conclusion and recommendations
4.7 Surveillance, Monitoring and Evaluation
  4.7.1 Introduction
  4.7.2 Policy, Guidance, Coordination
  4.7.3 Malaria country profile, risk mapping and stratification
  4.7.4 Human resources, training and capacity development
  4.7.5 Routine Information Systems
  4.7.6 Sentinel Surveillance Systems
  4.7.7 Monitoring and Evaluation Plan
  4.7.8 Malaria Surveys
  4.7.9 Malaria Reporting
  4.7.10 Malaria database and informatics System
  4.7.11 Progress towards achievement of targets
  4.7.12 Successes, best practices and facilitating factors
  4.7.13 Issues and challenges
  4.7.14 Conclusion and recommendations

CONCLUSIONS

KEY RECOMMENDATIONS

ANNEXES

ANNEX 1: AGENDA FOR ALL THE PHASES OF THE MPR

ANNEX 2: PEOPLE INVOLVED IN MPR

• Thematic review teams
• Field teams
• People visited