ENHANCED MALARIA CASE MANAGEMENT

District Review & Implementation Plan

DIRECTORATE OF MALARIA CONTROL
MINISTRY OF HEALTH - PAKISTAN

ASSOCIATION FOR SOCIAL DEVELOPMENT

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Enhanced Malaria Case Management District Review & Implementation Plan

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Section 1: Introduction & Background

Introduction

Roll Back Malaria (RBM) is a global initiative to fight against malaria. The RBM has been built on the foundations of the accelerated implementation of global and regional malaria control strategies. Its objective is to halve the malaria burden by 2015, in participating countries, through interventions that are adapted to local needs and by reinforcement of the health sector.

Pakistan is a member of the WHO Global Roll Back Malaria (RBM) Initiative, and committed to achieve the countrywide RBM coverage by the year 2010. The overall objective of RBM in Pakistan is to reduce malaria morbidity and mortality to a point where it no longer remains a major public health problem in the country. Main emphasis is on the strengthening of diagnostic, curative, preventive and surveillance services in the environment of decentralizing health services. The key intervention elements include: enhanced management of malaria cases, integrated vector control mainly through spraying and use of bed nets, early detection and control of malaria outbreaks, and advocacy and community mobilization for malaria control. The key elements of enhanced malaria case management include: a) early diagnosis based on quality assured laboratory investigations (i.e. microscopy and RDT) and standardized clinical assessment, b) prompt treatment by prescribing and dispensing drugs as per programme guidelines, c) educating patients about treatment and prevention of malaria, and d) standardized recording, reporting and monitoring.

In the devolving health system, districts are taking more responsibility for identifying and addressing the priority health needs of their respective population. Malaria control, through effective implementation of RBM strategy package, is a national as well as local health priority. This exercise is meant to provide the district management and the programme staff an opportunity to systematically review the situation (i.e. inputs and practices) and accordingly plan district-level implementation of activities to address the "gaps" and enhance the coverage as well as quality of RBM interventions.

Arrangements for Early diagnosis/treatment of Malaria Cases

As per national programme policy, passive case detection (PCD) is the main strategy for detection of malaria cases. However, restricted use of active case detection (ACD) would be continued in the areas of high epidemiological importance such as flood affected areas and during potential epidemics/out breaks.

The primary health care network in each district (i.e. district and sub-district hospitals, rural health centers and basic health units, as well as community based workers e.g. lady health workers, CDC/malaria supervisors etc.) is enabled to deliver malaria diagnosis, treatment, prevention and surveillance activities for their respective populations. The district health offices, with the help of the provincial malaria control programme, plans and coordinate the enhanced malaria case management through strengthened network of facilities and health workers. The Malaria Control Programme assistance for the district level implementation includes mainly: a) providing technical and operational guidance and support, b) facilitating the planning and monitoring of implementation, c) ensuring the availability and quality of human and material inputs, and d) providing external quality assurance inputs for laboratory functioning.

The Executive District Officer (EDO) Health is overall responsible for malaria control activities in a district. A district level official (District or Deputy District Officer Health or else) is designated as RBM Focal Person to coordinate malaria control activities in the district. It is preferred for the EDO (H) to designate an officer who has: a) an experience of coordinating communicable disease control programme activities and b) already has been provided the mobility support. The Communicable Disease Control Officer, Assistant Entomologist (where available), and Communicable Disease Control Inspectors (CDCI) would assist mainly in vector control and malaria prevention activities in the district.

All the hospitals (district and sub-district) and rural health centers in a district are strengthened, as malaria microscopy centers, to administer MP test and treat malaria cases. A selected number of basic health units in each district are strengthened, as RDT Centers, to administer rapid diagnostic test (RDT) and treat malaria cases. The district headquarter hospital would also provide care to severe/complicated malaria cases. The **strengthening** of facilities as microscopy or RDT centers include: staff training, equipment (e.g. microscope, where needed), laboratory reagents and supplies, anti-malarial drugs, recording and reporting tools, and communication materials. The required strengthening of health facilities for enhanced malaria case management is achieved through combined efforts of the programme and the respective district health offices. In the districts included in PPHI initiative, the respective District Program Manager (PPHI) would coordinate the malaria case management activities at basic health units.

The patients with symptoms of possible malaria, visiting health facilities or getting in contact with community based health workers (such as LHW, CDC/ malaria supervisor) are clinically assessed, as per Malaria Control Programme (MCP) guidelines. Those who are suspected to be a possible malaria case is then referred for laboratory tests,

where feasible, to confirm the diagnosis. The programme priority for the health facilities is to give the test results on the same-day-basis, so that prompt treatment of malaria cases can be ensured. The **confirmed** malaria cases (either microscopically or with RDT) are registered and treated as per national guidelines. Those **not confirmed** (on microscopy or RDT) but clinically judged as malaria, would also be registered and treated as **clinical malaria** case, as per MCP case management guidelines. In situations where the laboratory testing (i.e. microscopy or RDT) is not available, the malaria case is judged (clinically) and treated as **clinical malaria**, as per MCP case management guidelines. The patients with symptoms/signs, of complicated/severe malaria, visiting health facilities would be clinically assessed and referred to the respective district level hospital.

The subsequent sections explain the rationale and provide step-by-step guidance to plan activities for the following four key dimensions of RBM implementation.

Key Dimensions of RBM implementation

1. Enlist, assess and select the health facilities and its staff to be strengthened for malaria case management, as Microscopy and RDT centers
2. Assess the need and plan the strengthening of facilities by training the staff and arranging the required material inputs.
3. Discuss and agree on recording, reporting and monitoring of malaria case management.
4. Discuss and plan the arrangements for assuring quality of laboratory investigations (i.e. microscopy and RDT)

Section 2: Select Health Facilities as Microscopy & RDT Centers

Microscopy Centers:

Rationale:

The microscopy is considered a gold standard for confirmed diagnosis of malaria and its parasite. The Programme recommends strengthening of the district and sub-district hospitals and rural health centers as microscopy centers for malaria case management. The existing staff and laboratory at these facilities makes it feasible for the programme to start offering malaria microscopy and treatment with a minimal additional laboratory related input and responsibility (e.g. training, materials and quality assurance).

Process:

- The programme and district staff enlists the district and sub-district level hospitals and rural health centers, primarily on the basis of data available at the respective district health office.
- The programme and district staff also gathers, from the records and informed individuals in the district office, a selected set of key input and performance indicators for each facility being considered as a potential microscopy center. This also includes short listing of the doctors, laboratory and paramedic staff to be trained and engaged in the malaria care delivery process at each respective microscopy center. The staff short listing for involvement in malaria care is based mainly on criteria: a) main responsibility is OPD patient care, b) working in the morning shift (in case of doctors: one male and one female), c) perceived willingness and ability to deliver malaria care as per guidelines, d) expected to serve at the facility for the next two years or more, and e) not known to have already been trained on new malaria guidelines. The names of short listed staff are noted in the three columns of the "microscopy center - malaria input and performance review" form (please see the tool and guidelines in Appendix-A1 and A-3 respectively).
- The programme and the district staff, on the basis of compiled facility data, recommend inclusion or non-inclusion of each facility as a microscopy center. All facilities meeting the minimal level of "functioning eligibility" criteria for inclusion are included in the RBM intervention (i.e. availability of core staff and a functioning OPD). Only those facilities are left out where serious gaps/issues related with core staff availability and/or OPD functioning are considered "not addressable" for the malaria programme.
- The planning team reviews the input and output data on each facility and endorses the recommended: a) inclusion/non-inclusion of the facilities as malaria microscopy centers, and b) list of staff recommended for malaria training. In light of the team members' comments on facility inclusion and short listed staff, the recommended list of facilities and staff to be trained from each facility is finalized.

The EDO(H) designates a Malaria Focal Person for the district. Then the programme and district staff shares the data and their recommendations for the team to review, discuss, and endorse (with or without modification). Each facility notes its staff, in its respective document, recommended for malaria training.

RDT Centers:

Rationale:

The rapid diagnostic tests are currently being recommended only for the facilities where establishing and sustaining the quality assured microscopy is found not feasible i.e. basic health units where microscopy services generally do not exist. The method is relatively new, and country experience of implementing RDT-based management of malaria cases is inadequate. An effective implementation of RDT-based case management would require inputs including staff training and supervision, management of kits, monitoring of inputs and practices, and evaluation and refinement of guidelines and tools. Keeping in view the managerial challenges for the programme and the district, the programme recommends starting implementing RDTs in few selected basic health units in each district and then expanding subsequently in light of early experiences, evaluations and refinements.

Process:

- The programme and district staff enlists the basic health units, by the associated microscopy center (i.e. RHC), primarily on the basis of data available at the respective district health office.
- The programme and district staff also gathers, from the records and informed individuals in the district office, a selected set of basic input and performance indicators for each basic health unit being evaluated for selection as a potential RDT center.
- The programme and district staff recommends fifteen basic health units, out of those meeting the minimal level of "input" and "performance" criteria for inclusion, for selection on the basis of agreed selection criteria. The key considerations for recommending the selection of basic health units include: a) availability of core staff, b) OPD attendance during last calendar month, and c) serving the hard to access population (please see the tool and guidelines in Appendix-A2 and A-3 respectively).
- For each of the fifteen recommended facilities, the programme and district staff also recommends a doctor and a paramedic to be trained and engaged in malaria care delivery at the respective facility. The staff short listing for involvement in malaria care is based mainly on criteria: a) regular working in OPD, b) perceived willingness and ability to deliver malaria care as per guidelines, c) expected to stay at the facility for the next two years or more, and d) not known to have already been trained on new guidelines (please see the tool and guidelines in Appendix-A2 and A-3 respectively).
- The planning team reviews the input and performance data on each facility and endorses and finalizes the recommended: a) inclusion/non-inclusion of the facilities as malaria RDT centers, and b) short listed staff to be trained from each selected facility.

Selected RDT Centers with the microscopy center________________

RDT Center 1	RDT Center 2	RDT Center 3

The programme and district staff shares the data and their recommendations for the team to review, discuss, and endorse (with or without modification). Each microscopy center notes its selected associated RDT center(s) in its own document.

Section 3: Plan and Arrange Staff Trainings & Material Inputs

Staff Training:

Rationale:

The Malaria Control Programme Pakistan has developed a set of operational guidelines and training materials for doctors, laboratory and paramedic staff, managers, and community based health workers to enable them to deliver and manage malaria care, as per national policies. The use of standardized guidelines and materials is meant to minimize the variations in case management practices. The recommended staff training are:

At each selected microscopy and RDT center:

- Two doctors at microscopy center and one doctor at RDT center receive two-days training course. The training event(s) for a batch of about twenty (20) doctors is arranged at the district level (e.g. District Health Development Center), and programme facilitates the event by arranging the trainers, training materials and logistics (e.g. per-diem) for the trainees.
- A Paramedic, identified as Malaria Facilitator at each microscopy and RDT center, receives a one-day training on malaria case registration, health education, reporting and monitoring. The training event(s) for a batch of about twenty (20) paramedics is arranged at the district level (e.g. District Health Development Center), and programme facilitates the event by arranging the trainers, training materials and logistics (e.g. per-diem) for the trainees.
- The lady health workers and CDC supervisors, associated with the microscopy and RDT centers, receive one-day training course. The training is preferably arranged at the respective health facility, and programme facilitates the event by arranging the trainers, training materials and logistics (e.g. per-diem) for the trainees.

At each microscopy center (only):

- One laboratory staff receives ten days training course. The training event(s) for a batch of 10 – 20 staff is arranged at the province level (e.g. Provincial Health Directorate), and programme facilitates the event by arranging the trainers, training materials and logistics (e.g. per-diem) for the trainees.

Process:

- The programme and the district staff, before coming to the planning event, separately group the doctors and the paramedics from the microscopy and RDT centers into batches (see tools in Appendix-B-1 and B-2, and guidelines in Appendix B-4).
- While planning the training events for doctors and paramedics, it is preferred to:
    - Limit the number of trainee doctors or paramedics less than 25 in a batch. If the number of trainees exceeds 25, then split them into two equal size batches.
    - Invite the doctors (or paramedics) from the microscopy center and its associated RDT centers to the same training event, so that mutual understanding is developed.

- Avoid two doctors from the same microscopy center to attend the same training event (i.e. invite them to separate training events, if possible), so that patient care at the facility is not affected.

- The programme and the district staff, before coming to the planning event, in consultation with the selected provincial training institution, proposes two date options for training the identified laboratory staff from the district (laboratory staff from each microscopy center already recommended during facility input & output review process). In cases where the programme and the district prefer to divide the district laboratory staff into two training batches, then consider calling trainees from more than one district in a training course (see Appendix-B-3).
- The planning team reviews the draft plan (i.e. tables in Appendix-B1 – B3) and endorses the recommended grouping of doctors, paramedics and laboratory staff into respective batches. The team also finalizes the dates and venue for each batch of doctors, paramedic and laboratory staff trainees. Each facility then records their respective agreed schedule of doctors, paramedic and laboratory staff training in the following two tables.

Staff Training for Microscopy Center: ______________________________

Doctors		Paramedics	
Batch 1	**Batch 2**	**Batch 1**	**Batch 2**
Venue:_____________ Date:_______________	Venue:_____________ Date:_______________	Venue:_____________ Date:_______________	Venue:_____________ Date:_______________

District Laboratory Staff Training

Batch 1	Batch 2
Start date: _______________________	Start date: _________________________

The programme and district staff shares the proposed plan to train doctors, paramedic and laboratory staff for the team to review, discuss, and endorse (with or without modification).

Material Inputs:

Rationale:

Uninterrupted availability of materials including drugs, laboratory reagents and supplies, and print materials is an essential requirement for continued provision of quality diagnosis and treatment care to malaria cases. Some of the malaria related material supplies in a district (e.g. drugs, print materials etc.) are supplemented through programme inputs.

Process:

- The availability of malaria materials is assessed, mainly as a part of district assessment exercise, before the actual district review/ plan event is conducted. The programme staff in consultation with the district staff carries out the assessment and note in the prescribed format for the facility or district.
- The availability situation of anti-malarial drugs, laboratory reagents and supplies, recording reporting tools, and EQA inputs in the district are recorded in the form "Comments – Current District Malaria Inputs and Arrangements" (see guidelines and tool in Appendix-C).
- The availability situation of the microscopes at each microscopy center is a part of Microscopy center review exercise. The facilities are noted where a functioning microscope is not currently available, and the provision of the required number of microscopes to these facilities, through programme and district inputs, is planned accordingly.

Material Input Plan - Malaria

Item	Province to district		District to facilities	
	Deadline	Mechanism	Deadline	Mechanism
Microscopes				
ACT				
Other anti-malarial drugs				
Laboratory reagent/ supplies				
RDTs				
Recording/ reporting tools				

The programme and district staff discusses, agrees and notes the date and the mechanism (in the table above) for provision of each material input to the district and the respective facilities (each facility also note in its respective document).

Section 4: Recording, Reporting & Monitoring

Rationale:

Standardized recording and reporting arrangements and practices help the facilities and the district to document and maintain their respective performances. The Malaria Control Programme has designed a recording and reporting system that caters the key information needs of the programme, without duplicating the efforts. The malaria case management data for periodic reporting is recorded and extracted mainly through the regular HMIS tools. However, a minimal set of additional information has also been added to meet the essential data-requirement for effective implementation of programme interventions. This includes malaria facility register, and monthly malaria reporting forms for facilities and district. Training on relevant recording and reporting forms is included in the malaria courses designed/developed for the respective facility and district staff

A regular periodic interaction between the facility staff and their district level supervisor (e.g. District RBM Focal Person, EDO) is required to monitor and maintain the quality of malaria case management practices in a district.

Process:

The programme has recommended the following three structured monitoring events to ensure optimal interaction at facility and district levels. The programme has already developed a set of guidelines and tools for each of the three monitoring events.

Quarterly District-level Meeting of Microscopy Centers:

- The in-charges of all the microscopy centers attend the district level quarterly meeting, chaired by the EDO(H) of the respective district.
- Each Microscopy Center presents its performance on a selected set of programme indicators.
- The district officials (EDO and RBM Focal Person), with the help of microscopy center staff, review the performance and also discuss the deviations as well as required actions for each microscopy center.

Monthly District-level Meeting of RDT Centers:

- The Malaria Facilitators of all the RDT centers attend the district level monthly meeting, chaired by the respective District RBM Focal Person.
- The performance of each RDT center is reviewed on a selected set of programme indicators, including RDT consumption and malaria treatment.
- The observed deviations are discussed, and actions are accordingly suggested for each participating RDT center.
- The same forum is also used to replenish the RDT kits/ supplies for each RDT center.

<u>Monthly Facility-level Meeting of Microscopy Centers:</u>

- The Malaria Facilitators of all the microscopy centers attend the facility level monthly meetings, facilitated by the respective District RBM Focal Person.
- A facility level meeting is arranged for a cluster of 3 – 5 microscopy centers. In this way 2 – 3 meetings are arranged every month in a district, depending upon the number of microscopy centers in a district. The venue rotates among the facilities included in a cluster.
- The performance of each microscopy center is reviewed on a selected set of programme indicators, including input availability and malaria case diagnosis and treatment.
- The observed practice deviations and input gaps are discussed, and actions are accordingly suggested for each participating microscopy center.

Grouping of Microscopy Centers into Clusters

Cluster 1	**Cluster 2**	**Cluster 3 (only if # centers are > 10)**

The programme and district staff discusses and agrees on: a) conduct of the three types monitoring events in a district, and b) facility clustering for monthly monitoring of microscopy centers (also note the clustering in the table above).

Section 5: Assuring Quality of Laboratory Investigations

Rationale:

The confirmed diagnosis and treatment of malaria cases depends on the results of microscopy and/or RDT tests administered at the facility level. The quality of tests includes the materials, the skills and the practices. The Programme has already developed district-based systems for assuring the quality of malaria diagnostic process i.e. microscopy and RDTs. This includes the operating guidelines and tools as well as training of facility and district staff on quality assurance activities.

The Process:

The Programme has developed separate set of operating guidelines and tools for assuring the quality of malaria microscopy (at Microscopy Centers) and RDT testing (at RDT Centers).

Malaria Microscopy:

- The EQA for malaria microscopy is based on internationally recommended approach i.e. Lot Quality Sampling (LQS). In this method, a fixed number of slides from each microscopy center are periodically rechecked by the District Laboratory Supervisor, out of all the malaria parasite slides examined during the period under review.
- The district team designates a senior microscopist as a District Laboratory Supervisor (Malaria) for the district. The District Laboratory Supervisor (DLS-Malaria) is based in an EQA Center, where all the EQA related equipment, materials and records are maintained. The District Laboratory Supervisor is responsible for assuring the quality of microscopy services by visiting each microscopy center at least once every quarter. The DLS, during his visit, provides the facility staff: a) slide rechecking, b) material replenishment, and c) onsite technical support.
- The District Laboratory Supervisor is enabled through the provision of: a) operational guidelines and tools, b) training, c) mobility support i.e. motorcycle with POL, and d) supervision from the provincial reference laboratory.
- All the discordant slides and a sample of concordant slides are then rechecked by the Provincial Reference Laboratory, to ensure the quality of DLS work in a district. In addition to training and technical supervision by the Provincial Reference Laboratory, the district office also does the administrative supervision of the District Laboratory Supervisor working.
- The District Laboratory Supervisor for a district is preferred to have: a) at least ten years or more experience of doing malaria microscopy, b) physically and technically able and willing to take responsibility for the field as well as EQA center responsibilities, and c) likely availability for the DLS role through the next five years.
- The DLS receives two sets of training i.e. a basic ten days malaria microscopy training of the laboratory staff followed by a four-days training as District Laboratory Supervisor. The DLS training is conducted preferably at the respective Provincial Reference Laboratory.

- The team reviews the two suggestions made, by the programme and district staff, in light of the above-mentioned preferences for DLS selection.

DLS Option – 1	DLS Option – 2	DLS Selection

The team reviews the suggestions and agrees on the preferred DLS option (out of the two proposed or else). The finally selected DLS is recorded in column 3 of the above table.

RDT:

- RDT based management of malaria is initiated in selected fifteen basic health units in a district. The remaining basic health units in a district to be considered subsequently, in the second phase, once the approach is found feasible and effective and guidelines and materials are refined in light of early implementation experiences. The transparent criteria-based selection of the first fifteen basic health units, as RDT centers, has already been made in the previous section.
- A central storing arrangement at the district level will be identified, from where all the selected RDT centers receive the RDT kits and also submit the monthly consumption/ progress report. Each RDT center will store, manage and report the RDT related malaria activities, as per nationally agreed guidelines. The programme will facilitate a paramedic from each selected basic health unit (i.e. Malaria Facilitator) to attend a monthly monitoring meeting at the district level.
- At district level, the kits are stored in a refrigerator to be provided through the programme. At facility level, the kits are stored under room temperature. The programme has already developed guidelines for assuring quality of RDT-based management of malaria in a district. At district level a sample of kits kept at room temperature will be periodically compared with the kits stored in a refrigerator to assess the validity of RDT results in a district.

Microscopy Center - Malaria Inputs and Outputs Review **Appendix-A1**

Facility	# OPD (January current year)	Functioning Microscope	Staff for malaria training				Recommendation (Include or Exclude)
			Doctors (2)	Laboratory staff (1)	Malaria Facilitator* (1)	# LHW associated	

* Dispenser/ M.T/ LHV

RDT Center - Facility Review and Selection — Appendix – A2

Name of BHU	Difficult to access population?	Core Staff Available? Yes = Y No = N		# OPD (January current year)	Recomd. (Include or Exclude)	Name of staff to be trained (only if inclusion recommended)	
		Doctor	Paramedic*			Doctor	Malaria Facilitator*
1	2	3	4	5	6	7	8
Microscopy center / RHC ______________________							
Microscopy center / RHC ______________________							
Microscopy center / RHC ______________________							

*Dispenser or Medical Technician or LHV

Guidelines to Asses / Select Microscopy & RDT Centers — Appendix-A3

As per programme policy, all public sector hospitals (i.e. district and tehsil/ taluka hospitals) are strengthened as malaria microscopy centers and selected basic health units are strengthened as RDT centers. In case of microscopy centers, only those hospitals/ RHCs are not considered initially where serious gaps/issues related with core staff availability and/or OPD functioning are considered "not addressable" for the malaria programme**.** In case of RDT centers, about fifteen BHU are selected to get optimal return from programme investment. The Programme has suggested a structured process for taking an informed decision about inclusion/ non-inclusion of the facilities as well as identifying the staff to be trained in each of the selected facility. The proposed process is as follows:

- The Programme informs the district health office (through a letter and supplemented with a telephonic call, where appropriate) about its inclusion in RBM strengthening initiative.

- The Programme also requests the district health office (in the letter mentioned above) to facilitate the preliminary situation analysis leading to an informed planning of RBM implementation in the district. The facilitation mainly involves access to the relevant district staff and records (e.g. map, reports, facility lists etc.).

- This initial request is then followed by a 2 – 3 days visit of a designated programme (or partner) staff to the district health office. The main activities during the visit would include:
    - Gather data (from records and through staff interview) to assess the: a) microscopy and RDT centers and identify their staff to be trained on malaria case management, and b) district inputs and arrangements for malaria care.
    - Apply criteria and recommend inclusion or non-inclusion of facilities as microscopy and RDT centers.
    - Prepare draft plans for malaria related training of doctors, paramedics and laboratory staff. These draft plans are then discussed and finalized in the district implementation exercise.

In the section below we focus on data collection/compiling for criterion-based and transparent selection of facilities as microscopy and RDT centers.

Microscopy Center:

- The list of hospitals and rural health centers in a district is based on district office record. Then for each listed facility the:
    - OPD (outpatient) attendance during the month of January (of the current calendar year) is taken either from the:
        - District record/report (where available) or
        - Facility record – by making a telephonic contact through district health office. The monthly serial number of the last patient seen during the month

of January (taken from OPD register) gives the number of new patients attendance during the month.

- Availability of a functioning microscope data is based either on:
  - District record and/or an informed staff
  - Facility record – by making a telephonic contact through district health office.

The availability of a functioning microscope is recorded by putting a tick mark (✓) and non-availability by putting a cross (X) in column-3 of the tool.

- The list of staff from each microscopy center (i.e. doctors, laboratory staff and malaria facilitator) to be trained on malaria case management is recommended on the basis of the following criteria:

  a) Main responsibility for general outpatient care
  b) Work in the morning shift (in case of doctor: preferably one male and one female)
  c) Ability and willingness (as perceived by district staff) to deliver care, as per guidelines.
  d) Expected to stay at the facility for the next two or more years
  e) Not known to have already been trained on new malaria case management guidelines.

  The exercise of staff short listing for each facility relies mainly on district records and staff comments. The programme (and/or partner) staff carries out the exercise in consultation with the respective district staff. The names of individual doctors, laboratory staff and malaria facilitator identified from each facility are recorded in the tool (i.e. column 4 – 6). The number of lady health workers (LHWs) currently associated with each facility is recorded in column-7.

- Eligibility of each facility is assessed, and inclusion as a microscopy center is recommended on the basis of the following criteria:

Criteria	**Eligibility for Inclusion as a Microscopy Center**
Staff availability	Doctors - 2 (preferably one male and one female) Laboratory staff - 1 Paramedic (Dispenser/MT/LHV) - 1
Monthly OPD attendance	Preferably 1,000 or more patients

The recommendation for inclusion or non-inclusion of each facility, as a microscopy center, is recorded by writing “Include” or “Exclude” in column-8.

RDT Center:

- Each basic health units in a district is listed in relation to the linked microscopy center (i.e. hospital or rural health center). The listing is based mainly on records and comments of the district health office staff.

- Then for each basic health unit, on the basis of district records and/or staff comments, the:

- Catchment population access to other health facilities (difficult or not difficult). The subjective assessment of an access to other facilities is based on a combination of distance/terrain, means of transport and people ability to afford. If the facility is found to be serving the difficult to access population then put “Y” (i.e. yes) otherwise put “N” (i.e. No). The facilities serving the difficult to access population are given priority in the selection of RDT center.
- Availability of core facility staff (i.e. a doctor and a paramedic - to be designated as malaria facilitator) is also assessed and recorded in columns 3 and 4 respectively. The core staff availability is recorded by putting “Y” for yes and “N” for no.

- OPD (outpatient) attendance during the month of January (of the current calendar year) is taken either from the:
  - district record/report (where available) or
  - Facility record – by making a telephonic contact through district health office. The monthly serial number of the last patient seen during the month of January (taken from OPD register) gives the number of new patients attendance.

- Priority of each facility is assessed, and inclusion as a RDT center is recommended on the basis of the following criteria:

Criteria	Eligibility for Inclusion as a RDT Center
Staff availability	Doctors - 1 Paramedic – 1 (Dispenser/MT/LHV)
Monthly OPD attendance	Higher OPD attendance indicates better utilization. A difference of less than 40 in the monthly OPD attendance is not considered significant.
Serve difficult to access population	Those BHUs serving relatively difficult to access population are given priority in the selection of RDT centers.

- Only those basic health units are considered eligible for selection as RDT center where core staff is found in place. Among such eligible centers, the priority is then given to those centers serving the difficult to access population and showing better utilization. The recommendation for inclusion or non-inclusion of each BHU, as RDT center, is recorded by writing “Include” or “Exclude” in column-6.

- As per initial understanding with the programme, a total of fifteen basic health units are to be strengthened as RDT centers in each district. It is recommended that the selected basic health units are evenly distributed around each microscopy center. This means the number of RDT centers (i.e. 15) is divided by the number of microscopy centers to get an average number of basic health units to be strengthened around each microscopy center in the district.

- The list of staff from each RDT center (i.e. doctor and malaria facilitator) to be trained on malaria case management is recommended on the basis of the following criteria:

a) Regular working in the general outpatient care
b) Ability and willingness (as perceived by district staff) to deliver care, as per guidelines.
c) Expected to stay at the facility for the next two or more years
d) Not known to have already been trained on new malaria case management guidelines.

The exercise of staff short listing for each of the fifteen selected basic health units relies mainly on district records and staff comments. The programme (and/or partner) staff carries out the exercise in consultation with the respective district staff. The names of individual doctor and malaria facilitator identified from each facility are recorded in the tool (i.e. column 7 & 8).

Doctors' Malaria Training Plan – Microscopy and RDT Centers **Appendix – B1**

No.	Batch 1		Batch 2	
	Venue: ____________ Date: ____________		Venue: ____________ Date: ____________	
	Doctor	Facility	Doctor	Facility
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

No.	Batch 1		Batch 2	
	Venue: ____________ Date: ____________		Venue: ____________ Date: ____________	
	Paramedic	**Facility**	**Paramedic**	**Facility**
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Malaria Laboratory Staff Training Plan – Microscopy Centers (only) **Appendix –B3**

<table>
<tr><th rowspan="3">No.</th><th colspan="2">Batch 1</th><th colspan="2">Batch 2</th></tr>
<tr><td colspan="2">Venue: ____________________________
Date: ____________________________</td><td colspan="2">Venue: ________________________________
Date: ________________________________</td></tr>
<tr><th>Laboratory staff</th><th>Facility</th><th>Laboratory staff</th><th>Facility</th></tr>
<tr><td>1</td><td></td><td></td><td></td><td></td></tr>
<tr><td>2</td><td></td><td></td><td></td><td></td></tr>
<tr><td>3</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4</td><td></td><td></td><td></td><td></td></tr>
<tr><td>5</td><td></td><td></td><td></td><td></td></tr>
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<tr><td>17</td><td></td><td></td><td></td><td></td></tr>
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Guidelines to Plan the Staff Training on Malaria Care — Appendix-B4

The malaria training is planned for the staff identified (and recorded) during the assessment and selection of microscopy and RDT centers.

- The doctors, laboratory staff and malaria facilitators identified for malaria training at each microscopy center are noted in the tables given in Appendix-B 1 – 3 respectively.
- The doctor and malaria facilitator identified for malaria training at each RDT center are noted in the tables given in Appendix-B 1 and 2 respectively.

- While planning the training events for doctors and paramedics, it is preferred to:
  - Limit the number of trainee doctors or paramedics less than 25 in a batch. If the number of trainees exceeds 25, then split them into two equal size batches.
  - Invite the doctors (or paramedics) from the microscopy center and its associated RDT centers to the same training event, so that mutual understanding is developed.
  - Avoid two doctors from the same microscopy center to attend the same training event (i.e. invite them to separate training events, if possible), so that patient care at the facility is not affected.

- While planning the training events for laboratory staff, it is preferred to:
  - Propose two batches (with tentative start dates), in consultation with the provincial training institution, for laboratory staff training.
  - Offer the district to divide the total number of laboratory staff to be trained in two batches. In such case, each training batch may include trainees from more than one district.
  - Explore the tentative logistic arrangements for trainees, and inform the district during the planning exercise.
- prepare transparencies of the training plans proposed for doctors, laboratory staff and malaria facilitators (if projector can be made available during the forthcoming planning exercise).

Comments – Current District Malaria Inputs and Arrangements — Appendix-C1

Drugs/ supplies	**Amount available?**	**Source/ sustainability?**	**Issue(s)/ Comments?**	
ACT				
Primaquine				
Quinine				
Chloroquine				
Laboratory supplies?				
External quality assurance	**Dist. EQA Center/ DLS?**	**EQA operating guidelines and tools?**	**DLS mobility, training and supervision?**	**Other comments?**
Malaria Monitoring	**BHU level**	**RHC level**	**Hospital (DHQ/THQ) level**	**District level**
Reporting arrangements (responsibility, guidelines)				
Monitoring arrangements				

Guidelines to Assess District Malaria Inputs & Arrangements — Appendix-C2

This tools covers mainly three areas i.e. drugs and supplies, external quality assurance, and malaria monitoring. Some basic data is gathered from district records and staff interviews to assess each of the three areas of interest. The information gathered on the tool is then used in the implementation planning exercise.

Drugs and supplies

Four essential anti-malarial drugs and laboratory supplies (i.e. reagents and supplies) used as an indicator of material input availability. The quantity of drugs available in district stock as well as estimated availability at the facilities is recorded mainly from the store inventory. The laboratory supplies cover both reagent and supplies (e.g. slides, prickers, slide boxes etc.). The adequacy of the laboratory materials is assessed and recorded in general terms i.e. adequate if the supply of all essential items has generally remained uninterrupted throughout the last six months.

The potential sources include: the programme, the district budget, and the project (e.g. GFATM). The sustainability covers how likely is the current level to continue during the next 3 – 5 years. The issues related with drugs and laboratory materials may include: quality, pricing, in-time procurement, storage, inventory control, distribution etc.

External quality assurance

This covers three main areas: a) EQA center and DLS in place, b) EQA guidelines and tools available, and c) DLS enabled through training, supervision and mobility. The other comments may include areas such as: staff availability, fieldwork challenges, link with the provincial laboratory etc.

This part of assessment is based mainly on staff interview (to be supplemented with observation, where appropriate). The notes taken in these columns help in planning the activities to strengthen the external quality assurance arrangements.

Malaria Monitoring

This covers mainly the malaria related recording/reporting and monitoring at facility (BHU, RHC and hospital) and district levels. The reporting arrangements cover mainly the guidelines/ tools and responsibility to record/report malaria activities at various levels. The monitoring arrangements cover the monitoring events (e.g. a meeting or a facility visit), the methods used (i.e. record review, observation, discussion etc.), the set of responsibilities, and the guidelines/tools for structured monitoring activities at various levels (i.e. facilities and district).

This part of assessment is based mainly on staff interview and review of monitoring related records/ guidelines/ tools (if available).