NATIONAL MALARIA ELIMINATION PROGRAMME

Monitoring and Evaluation Plan 2014-2020

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FEDERAL MINISTRY OF HEALTH

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FOREWORD

Malaria programme implementation has witnessed a significant increase in funding support by government and partners, as well as in coverage with malaria Interventions. Budgetary allocation for Malaria activities by Government has also increased in the last 2 years from N246, 500,000 in 2012 to N1, 080,365, 178 in 2013. The percentage of pregnant women who received two or more doses of SP/Fansidar during antenatal visit is now 23% (NDHS 2013) which is an improvement over the 8% recorded in 2008 (NDHS) and 13% in 2010 (MIS) respectively.

Despite these gains, malaria deaths remain unacceptably high at 300,000 deaths per year. It is our desire to reduce malaria deaths to zero by 2020. The new National Malaria Strategic Plan (2014-2020) reflects our aspiration to transit to malaria elimination.

It is important to note that the thrust of the 2014-2020 Strategic Plan is founded on the principles of:

- Robust multiple prevention strategies driven by significant scale-up of IRS, universal coverage of LLIN and strategic use of Larviciding. Use of IPT with SP for pregnant women will be invigorated while also strategically deploying seasonal malaria chemoprevention (SMC).
- Provision of universal prompt access to effective case management with emphasis on parasite confirmation before treatment.

It is also important to note that we cannot achieve the laudable goals of thisnew strategic plan without a monitoring and evaluation plan.A sound monitoring and evaluation plan is therefore critical for the Malaria Community to demonstrate progress in the achievement of outcomes and impact of Malaria Control efforts.

The Monitoring and Evaluation (M&E) plan describes the activities and data required to determine the extent to which desired objectives are attained. It describes the data recording and reporting roles at each level and for each partner, the tools for collecting and reporting the data and the schedule of activities. In addition, the plan highlights NMEP M&E strategies, the roles and responsibilities of Partners, Quality Management Systems and how evaluation results will be disseminated.

It is my hope that this plan will aid coordinated efficient programme implementation across all the intervention areas. I am confident that it will ensure that programme implementation is guided by relevance, cost-effectiveness, local context and environment which will ensure that all the activities are monitored continuously and that coverage are evaluated periodically by NMCP and its Partners.

I wish to thank the Malaria Partnership for supporting the process of development of this important document. I look forward to improved and efficient programme implementation.

Mr Linus Awute
Permanent Secretary, Federal Ministry of Health

EXECUTIVE SUMMARY

The revised M&E plan allows the National Malaria Elimination Programme (NMEP) to work more effectively and efficiently towards achieving her programme goals and objectives. It is a communication tool that outlines various roles and responsibilities regarding monitoring and evaluation for NMEP; organizes plans for data collection, analysis, use, and data quality. It outlines specific strategies and tools to encourage informed decision- making, organizes the numerous M&E activities that must take place in order for it to be actually successful in our quest to eliminate malaria and engages a wider body of people in the national programme so that M&E is integrated into every thematic area of the programme.

The M&E Plan development process was the collaborative efforts of NMEP and its Partners including DfID/SuNMaP, WHO, USAID/MAPS, ARFH, IHVN, and SHI among others. The process commenced with a desk review of the malaria strategic plan 2014-2020; M&E plan 2009-2013; Malaria Programme Review; M&E system assessment among others. The literature review also revealed weaknesses in the programme particularly with data collection from the private sector and the validity of data collected at health facility and community level. A series of stakeholder workshops were held to develop and finalize the draft including its costing.

The document is structured into seven chapters:

- An introductory chapter which focuses on the purpose, methodology, NMEP overview, project description and implementation as well as coordination of M&E activities.
- Chapter 2 presents the Logic Model which articulates the relationship between input, process, output, outcome and impact of programme activities.
- Chapter 3deals with the Indicator Matrix highlighting the key programmatic baseline indicators; targets to be achieved; data sources and frequency of collection; and tracking of the indicators.
- Chapter 4 and 5 focuses on data flow and utilization as well as data quality components of the plan.
- Chapter 6 shows the evaluation plan and operations research questions that might need to be answered during the life span of the strategic plan.
- Chapter 7 presents the reporting plan matrix
- The last contains the annexes that present the Indicator Reference Sheet Action Plan and Costing of the M&E plan as well as contributors to development of the document.

The document is expected to guide collection of the right information necessary for decision making in malaria programme development and implementation.

ACKNOWLEDGEMENT

This document was developed under the auspices of the National Malaria Elimination Programme to outline Specific Strategies and Tools that will encourage informed decision-making. It is an effort by the National Malaria Elimination Programme, Department of Public Health, Federal Ministry of Health to work more effectively and efficiently towards the achievement of her programme goals and objectives.

We are indeed grateful to the Honourable Minister of Health for creating the enabling environment for improved Data Management in the health sector, and to Honourable Minister of State for Health and the Permanent Secretary for Health for their unwavering support for Malaria Elimination Efforts.

I am also grateful to Dr. Olusegun Afolabi, the National Consultant who provided technical guidance and not forgetting the Malaria Partnership who has consistently supported efforts aimed at improving the quality of Malaria Data, as well as those who gladly served in the technical team for the development of this important document. I wish to note the invaluable contribution of staff of the Monitoring and Evaluation Branch of the National Malaria Elimination Programme in facilitating the production of this document.

Dr. Bridget Okoeguale
Director of Public Health, Federal Ministry of Health

ACRONYMS

Acronym	Definition
AA	Artemether-Amodiaquine
ACSM	Advocacy Communication and Social Mobilization
ACT	Artemisinin-Based Combination Therapy
AL	Artemether-Lumefantrine
AMFm	Affordable Medicines Facility malaria
ANC	Ante Natal Clinic
AOP	Annual Operation Plan
ARFH	Association for Reproductive and Family Health
BCC	Behavioural Change Communication
CBO	Community-based Organization
CCM	Country Coordination Mechanism
CHAI	Clinton Health Access Initiative
CHEWs	Community Health Extension Workers
CIDA	Canadian International Development Agency
CSO	Civil Society Organization
DfID	Department for International Development
DHIS	District Health Information System
DHPRS	Department of Health, Planning Research and Statistics
DQA	Data Quality Assessment
DTET	Drug Therapeutic and Efficacy Testing

FCT	Federal Capital Territory
FGD	Focus Group Discussion
FHI 360	Family Health International
FMoH	Federal Ministry of Health
GF	Global Fund
GoN	Government of Nigeria
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HF	Health Facility
iCCM	Integrated Community Case Management
IDI	In-depth Interview
IDSR	Integrated Disease Surveillance Response
IEC	Information Education and Communication
IHVN	Institute of Human Virology Nigeria
IPCC	Interpersonal Communication and Counselling
IPT	Intermittent Preventive Treatment in pregnancy
IPs	Implementing Partners
IRS	Indoor Residual Spray
ISS	Integrated Supportive Supervision
ITNs	Insecticide Treated Nets
IVM	Integrated Vector Management
LLINs	Long Lasting Insecticidal Nets
LGA	Local Government Area

LSM	Larval Source Management
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MICS	Malaria Indicator Cluster Survey
NMIS	Nigeria Malaria Indicator Survey
TWG M&E	Technical Working Group Monitoring and Evaluation
MiP	Malaria in Pregnancy
MOH	Ministry of Health
MPR	Malaria Programme review
NAFDAC	National Agency for Food Drug Administration and Control
NEMA	National Emergency Management Agency
NGO	Non-Governmental Organization
NHMIS	National Health Management Information System
NHSDP	National Health Strategic Development Plan
NMCP	National Malaria Control Programme
NMEP	National Malaria Elimination Programme
NMSP	National Malaria Strategic Plan
OR	Operations Research
PMC	Project Management Committee
PMI	US President's Malaria Initiative
PPMV	Propriety Patent Medicine Vendors
PPP	Public Private Partnership

PR	Principal Recipient
PSM	Procurement and Supply Chain Management
QA	Quality Assurance
RBM	Roll Back Malaria
RDTs	Rapid Diagnostic Test kits
RMC	Role Model Caregivers
SARA	Service Availability and Readiness Assessment
SBCC	Social Behavioural Change Communication
SUFI	Scaling-Up for Impact
SFH	Society for Family Health
SHI	Sustainable Health Initiative
SMC	Seasonal Malaria Chemoprevention
SMoH	State Ministry of Health
SP	Sulphadoxine-Pyrimethamine
SR	Sub-Recipient
SuNMaP	Support for National Malaria Program
USAID	United States Agency for International Development
WHO	World Health Organisation

1.0 INTRODUCTION

1.1 PURPOSE OF THE M&E PLAN

The M&E plan allows the National Malaria Elimination Programme (NMEP) to work more effectively and efficiently towards achieving her programme goals and objectives.

- It is a communication tool that outlines various roles and responsibilities regarding monitoring and evaluation for NMEP
- Organizes plans for data collection, analysis, use, and data quality
- It outlines specific strategies and tools to encourage informed decision-making
- Organizes the numerous M&E activities that must take place in order for it to be actually successful in our quest to eliminate malaria
- Engages a wider body of people in the national programme so that M&E is integrated into every thematic area of the programme

1.2 METHODOLOGY

The M&E plan development process used a participatory approach involving all stakeholders in Malaria control. The process commenced with a desk review of the Malaria Strategic Plan 2014-2020; M&E Plan 2009-2013; Malaria Programme Review; M&E system assessment, among others. This gave an insight into the malaria programme and the drive towards pre-elimination. The literature review also revealed weaknesses in the programme particularly with data collection from the private sector and the validity of data collected at the health facility and community level.

A five-day stakeholders' workshop was convened to develop a Zero Draft of the M&E plan after which the lead Consultant articulated all the inputs. The Zero Draft was then presented to the M&E sub-committee where further inputs were made.

Another three-day stake-holders' workshop was convened during which the draft plan was finalised and a costed M&E plan produced.

1.3NATIONAL MALARIA ELIMINATION PROGRAMME OVERVIEW

Background of Organization

In line with the global push for malaria elimination and the gain arising from the implementation of the Malaria Strategic Plan 2009-2013, the National Malaria Strategic Plan 2014 – 2020 aims

at achieving a marked reduction in malaria burden in Nigeria to pre-elimination levels by 2020. Hence the vision, mission and strategic objectives have been aligned to ensure the attainment of this goal. To further give credence to the commitment of the Government of Nigeria towards the elimination of malaria, the National Council on Health recently re-designated the National Malaria Control Programme as National Malaria Elimination Programme (NMEP).

The NMEP is domiciled in the National Malaria and Vector Control Division, in the Department of Public Health of the Federal Ministry of Health Nigeria. It is mandated to formulate and facilitate policy and guidelines, coordinate the activities of partners and other stakeholders on malaria control activities. It is also charged with providing technical support to implementing bodies including states, LGAs and stakeholders, mobilization of resources, monitoring and evaluation of progress and outcomes in malaria control efforts.

In order to fulfil its role, NMEP is organized into seven branches as shown below with other supporting units and entities that provide financial, technical and human resource support as may be required.

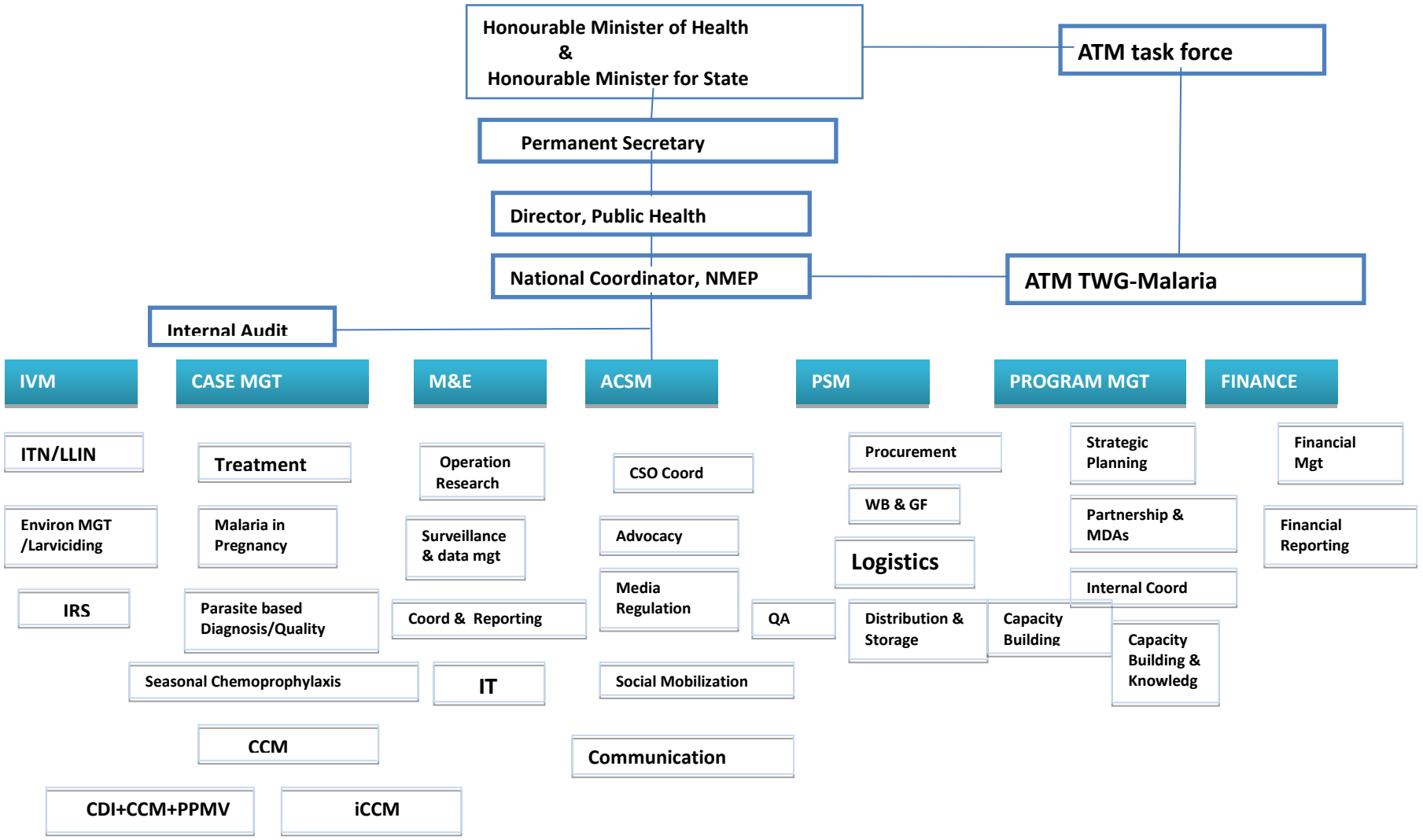


Figure 1 Organizational Chart of the National Malaria Elimination Programme

For effective internal coordination within the NMEP, the organizational structure of the National Malaria Control Program was reviewed on the request of the Federal Ministry of Health in order to develop a functional system and improve human and institutional capacities required for the expanding role of NMEP. The terms of reference (ToR) of the various branches of NMEP were also revised at the stakeholders' workshop with inputs from the representatives of the FMoH, the National Coordinator, branch heads, development partners and State Programme Managers.

Vision and Mission Statement

The ***Vision*** is to have a **MALARIA FREE NIGERIA.**

The ***Mission*** is to provide equitable, comprehensive, cost effective, efficient and quality malaria control services ensuring transparency, accountability, client satisfaction, community ownership and partnership.

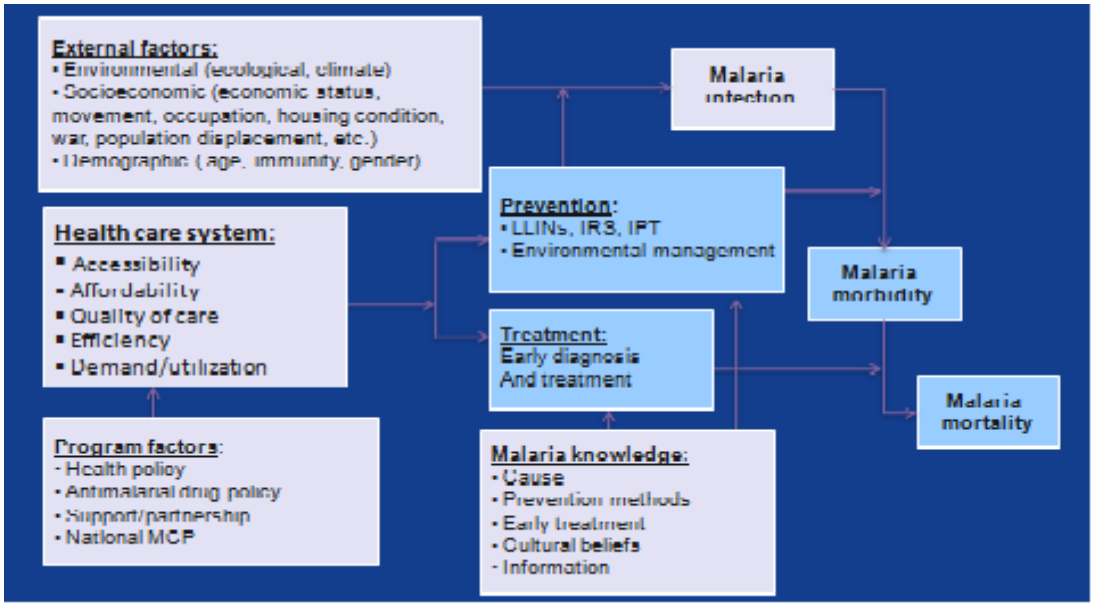


Figure 2: Conceptual framework for malaria burden

1.4 PROJECT DESCRIPTION

The Malaria Programme Review (2012) documented the current situation of the programme along nine thematic areas: epidemiology; programme management, policies and strategies; integrated vector management; case management; malaria in pregnancy; procurement and supply management; advocacy, communication and social mobilization; and surveillance, monitoring and evaluation and operations research.

Programme Management, Policies and Strategies

Major strides have been made in effective management of the National Malaria Elimination Programme including the development of the following strategic documents:

- National malaria control strategic plans 2001-2005, 2006-2010 converted to a roadmap 2009-2013; 2014-2020
- Annual Operational Plans (AOPs) at Federal level, and in some states
- Development and dissemination of National policies and guidelines in major intervention areas.
- Functional Malaria Technical Working Group with active subcommittees.

Integrated Vector Management (IVM)

NMEP has distributed over 58 million LLINs since 2010 through mass distribution campaigns and other channels. The national malaria control strategic plan 2009-2013 called for the distribution of 63 Million LLINs by the end of 2010 and for at least 80% of these nets to be put into use.

Indoor Residual Spray (IRS) has been implemented in 3 selected LGAs in each of the 7 States supported by the World Bank Malaria Booster programme, viz. Bauchi, Jigawa, Gombe, Kano Anambra, Akwa-Ibom and Rivers State. Lagos State has also implemented IRS through the SMoH with a total of 250,000 households protected. Additional IRS was provided in Nasarawa State through the US President Malaria Initiative (PMI) in 2011.

Larval source management (LSM) comprises larviciding and environmental management and, both are being increasingly advocated for to complement other vector control interventions. In redefining its long term vector control strategies in Nigeria, the NMEP incorporated LSM as a component of IVM. Pilot larviciding has been carried out in five locations in Nigeria (Rivers, Nasarawa, Ogun, Lagos and Jigawa States).

Malaria Case Management

Nigeria has updated policies, guidelines, and other operational documents; subsequently access to recommended malaria medicines has improved in increasing number of public and private health facilities.

Parasite-based diagnosis of malaria

The NMSP 2009-2013 set a target to scale-up parasitological diagnosis of malaria in public and private health facilities to at least 80 %. Some progress have been made towards the attainment of this objective but the target has not been achieved with health facility records indicating that only 15% of fever cases were tested before treatment with antimalarial drugs(MPR 2012).

Access to affordable quality-assured antimalarial medicines

Artemether-lumefantrine (AL) and Artesunate-amodiaquine (AA) are the recommended ACTs for treating uncomplicated malaria in Nigeria. Results of therapeutic efficacy studies of these two ACTs conducted in all the six geo-political zones of Nigeria in 2009-2010 showed that PCR-confirmed D-28 cure rates were above 95%, thus authenticating their suitability as first line therapy for uncomplicated malaria in Nigeria.

Availability of ACT has increased largely due to the Affordable Medicines Facility-malaria (AMFm) Project but the percentage of under five children with fever who received prompt treatment with ACTs lags behind.

Management of Severe Malaria

The NMEP has adopted a change in treatment policy to align with WHO recommendation for the use of Injectable Artesunate as the drug of choice in cases of severe malaria.

Private Sector involvement

Private sector involvement in malaria management is low and largely not captured in the database. Efforts are being made to support and improve the performance of the private sector in diagnosis and treatment of malaria including strategies to effectively integrate and engage Proprietary Patent Medicine Vendors (PPMVs) in community case management of malaria. Given the high patronage enjoyed by PPMVs in both urban and rural Nigeria, effective involvement of this category of health providers in diagnosis (with RDTs) and treatment of malaria would immensely contribute to the rapid scale-up of parasite-based diagnosis and treatment of malaria.

Integrated Community Case Management (iCCM)

While progress has been made towards promoting community case management including the training of Role Model Care givers, the number of community-based providers required to fully scale-up iCCM in Nigeria is yet unclear.

Seasonal Malaria Chemoprevention (SMC)

In 2012, Nigeria adopted SMC for implementation in the nine northern states that fall within the Sahel belt with a total estimated population of 8.5milion children.

Malaria in Pregnancy

The use of LLINs, intermittent preventive treatment (IPT) with sulphadoxine-pyrimethamine (SP) in pregnant women and prompt treatment of confirmed malaria are the core strategies for control of malaria in pregnancy. These interventions are targeted to be delivered at the health facility with emphasis on promotion of focused antenatal care. Implementation of malaria control in pregnancy appears to be fairly well integrated at all levels of healthcare provision across the country. The wide variation observed in the percentage of women that attend antenatal care in health facilities across the country implies that it is crucial to promote community-based prenatal care service for women in low ANC attendance areas

Intermittent preventive treatment (IPT)

Recent national surveys showed that the percentage of pregnant women that received at least two doses of IPT remained low across the country with marginal increase from 6.5% in 2008 (NDHS 2008) to 13.2% in 2010 (NMIS 2010). Facility data pooled from the States showed slightly higher operation coverage of 18.7% with a wide variation IPT use across the State.

Treatment of malaria in pregnancy

The current Guidelines on diagnosis and treatment of malaria in Nigeria (FMoH 2011) recommend that pregnant women with uncomplicated malaria in the second and third trimesters should be treated with the recommended Artemisinin combinations therapy (ACT), while only oral quinine is recommended for those with malaria in the first trimester of pregnancy. It cautions that use of ACTs in the first trimester should only be in situations where no alternatives are available.

Community delivery of Malaria control in Pregnancy

The role of community-oriented resource persons at the level of health providers (such as role model caregivers and trained traditional birth attendants) in the delivery of IPT remains unclear.

Procurement and Supply Management

Procurement and Supply Management activities cut across the scope of malaria interventions and implementation. . Therefore the outcomes of malaria prevention and treatment activities undertaken to achieve the mission of the NMEP are contingent on the timely and full supply of antimalaria medicines and commodities. The operations of the NMEP PSM branch are guided by general national policies, specific policies governing pharmaceutical sector operations, as well as policies and guidelines for malaria programme management in particular. Such policies and guidelines include:

- the Public Procurement Act (2007);
- the National Drug Policy (2005);
- the National Antimalarial Treatment Policy (updated in 2011);
- the National Standard Treatment Guidelines (updated in 2011)
- A Framework for malaria PSM in Nigeria (2012)

Steady progress has been recorded by the PSM branch since its inception in 2007. The achievements include the development of PSM Tools, and subsequent training on Malaria Commodity Logistic System (MCLS), across national, state and LGA levels. Quantification exercises, now undertaken with an impressive complement of RBM Partners along with NMEP, have become more robust, scientific and participatory.

Advocacy, Communication and Social Mobilization (ACSM)

Since the development of the National ACSM Strategic Framework and Implementation Plan (ACSM-SF & IP) to drive the implementation of the ACSM component of the NMSP 2009 – 2013, about 16 States of the Federation have since adapted the ACSM-SF & IP to their specific needs. Each of the 16 States has also constituted all stakeholders in malaria communication into an ACSM Core Group that is responsible for planning, implementing and evaluating State-based ACSM activities.

Communication & Social Mobilization

Through community mobilization and use of IEC materials, ACSM contributed significantly to the successful distribution of about 60million LLINs during the LLIN campaigns.

Advocacy

Counterpart funding for net distribution was successfully leveraged on from a couple of States during the LLIN campaigns, as a result of advocacy events by NMEP. Advocacy kits were developed and deployed by NMEP to promote adequate and timely release of funds and equitable deployment of health providers to rural and hard-to-reach places for malaria control activities.

Surveillance, Monitoring and Evaluation

Generating reliable information for action remains the guiding principle for M&E in public health programmes. This principle continued to inform the M&E components of the previous strategic plan that sought to "establish a sound and continuously updated database that monitors progress towards agreed targets and is used to effectively manage and adjust interventions based on evidence".

Progress

- The work stream of measuring outcome and impact also recorded some significant milestones. The National Programme successfully conducted several key population based surveys that provide information at outcome and impact levels for the programme. The Malaria Indicator Survey (MIS) was conducted in 2010, the Multi Indicator Cluster Survey (MICS) in 2011 and the National Demographic Health Survey (NDHS) in 2013. Other relevant epidemiologic data were generated through sentinel surveys and some behavioural surveys, worthy to mention include the Post LLIN distribution Campaign Net tracking Surveys (State Specific); Monitoring Area Surveys (five cycles completed); Retail Outlet Survey (1 cycle) and the OMNIBUS KAP surveys.
- Quarterly supportive supervisory/data verification visits were activities routinely conducted by the M&E branch of the national program during the plan years.
- The transition of the National Health Management Information System (HMIS) from a wholly paper-based system to an electronic based system has been found to significantly improved during the implementation period of the last strategic plan.

Specifically, the District Health Information System (DHIS) was introduced in 2010 by the DHPRS as a desktop based electronic platform and has slowly been migrated to the web based DHIS2.0 version in 2012. .

- Another key milestone achieved was the commencement of the process of harmonization of programmatic data capturing tools with NHMIS tools.

1.4 IMPLEMENTATION AND COORDINATION OF M&E ACTIVITIES

Implementation arrangement

The Monitoring and Evaluation (M&E) plan describes the activities and data required to determine the extent to which the desired objectives are attained. In this regard, it describes the data recording and reporting roles at each level for each partner, the tools for collecting and reporting the data and the schedule of activities. Furthermore, the plan highlights NMEP M&E strategies, the roles and responsibilities of Partners, Quality Management Systems and how evaluation results will be disseminated.

The NMEP plans to implement rigorous M&E activities which will facilitate decision-making process. The M&E plan is therefore tailored to accomplish this as well as simultaneously respond to the information needs of different partners directing efforts to meeting national needs. The M&E branch of NMEP will work closely with NHMIS and other stakeholders, including NGOs and the private sector to avoid duplication of efforts by harmonizing data collection formats.

Coordination of M&E activities

The M&E Branch of the NMEP serves as the national secretariat for the M&E Sub-committee of the Malaria Technical Working Group (TWG). The ToRs outline areas of supporting coordination, data quality, and data availability and defines the operational research agenda as well as linking research to policy decision making. The TWG has membership drawn from the NMEP, research institutions and academia, principal recipients, sub-recipients, development partners, private sector and NGOs. The objective of the TWG is to guide and support the implementation of the M&E component of the Country Strategic Plan 2014-2020.

The M&E TWG meets quarterly while its ad-hoc sub committees meet more frequently as the need arises. Forums exist at the national level such as Health Data Coordination Committee (HDCC), to share results and achievements.

At the state level, such structures and roles do not exist for M&E and operational research coordination; rather focus is more towards basic information sharing. Meetings regularly occur, both formal and informal, between Surveillance/HMIS focal points and the State Malaria Control Programme (SMCP). As the malaria monthly reporting is reliant on surveillance data, the minimum that occurs is extracting malaria data from the surveillance reports.

The Head of the M&E branch of NMEP oversees all M&E activities within the logical framework described in the NMSP and is responsible for their coordination at the national level.He/She ensures that M&E activities for all malaria control projects within the purview of NMEP (WB booster project, DfID project and Global Fund and other projects) are harmonized. He/She ensures that adequate data are reported on timely basis and feedback is given to all stakeholders.

While the service providers at various levels are responsible for data collection, the M&E branch of NMEP at the national and state levels are responsible for providing technical support and analysis. The data collection process covers all programmatic deliverables such as the movement of drugs and other commodities down the supply chain and the utilization of such commodities by the end users, capacity building and other activities. Most of the data will be generated at the Health facility, State and LGA levels. The data is collected using standardized data collection tools which are designed particularly to capture data on the various deliverables and at various levels.

2.0 LOGIC MODEL

Goal: The Goal of this Plan is to reduce malaria burden to pre-elimination levels and bring malaria-related mortality to zero.

Objectives:

1. At least 80% of targeted population utilize appropriate preventive measures by 2020.
2. All persons with suspected malaria who seek care in private or public health facilities are tested with RDT or microscopy by 2020.
3. All persons with confirmed malaria seen in private or public health facilities receive prompt treatment with an effective anti-malarial drug by 2020.
4. At least 80% of the population practice appropriate malaria prevention and management by 2020.
5. There is timely availability of appropriate anti-malarial medicines and commodities required for prevention and treatment of malaria in Nigeria by 2018.
6. 100% of health facilities report on key malaria indicators routinely by 2020.
7. To strengthen governance and coordination of all stakeholders for effective program implementation.

Table 1: Logic Model

Input	Activity	Output	Outcomes	Impact
PROGRAM AREA: INTEGRATED VECTOR MANAGEMENT				
Strategic Objective: At least 80% of targeted population utilize appropriate malaria preventive measures by 2020.				
Objective: Universal access to LLINs				
• Human resource • Funding • Materials (including LLINs,) • Logistics	Targeted LLIN replacement campaigns Mass re-distribution campaign Keep up strategy for continuous distribution of LLINs Develop policy to support local production of LLIN Creation of an enabling environment for private sector involvement Develop culturally appropriate BCC messages Disseminate culturally appropriate BCC messages Monitoring of ownership, utilization and LLIN integrity	Clients using effective nets Clients increase in up-take of LLINs Clients having access to LLINs LLINs are available at the household for use Policy on LLIN production developed Enabling environment created for local LLIN production, LLINs are produced locally for distribution, Increase in locally produced LLIN Culturally appropriate BCC messages developed Culturally appropriate messages in circulation LLIN integrity monitored	Increased awareness of LLIN Increased uptake of LLINs Increased access to LLINs Increased Ownership of LLINs	Reduction in prevalence of malaria Reduction in incidence of malaria
Objective: Increase IRS coverage to 25%				
• GPS • Human resources • Insecticides • Spray machines • Funding • Logistics	Mapping of areas by level of endemicity Purchase geographical reconnaissance equipment Conduct baseline entomological survey	Malaria endemicity mapped, Target areas identified for IRS GPS equipment purchased GPS conducted Baseline entomological survey conducted	Reduction in entomological inoculation rate (EIR) Reduction in vector density	Reduction in Prevalence of malaria Reduction in incidence of malaria

	Select appropriate insecticides from WHO Pesticide Evaluation Scheme (WHOPES) Conduct advocacy on use of IRS Capacity building for sprayers and supervisors Conduct household enumeration Quantification of IRS commodities Procurement of IRS commodities Conduct spray campaigns bi-annually in targeted areas Conduct quarterly entomological, epidemiological and environmental monitoring Conduct Pre-IRS assessment Conduct Post-IRS impact assessment Conduct operations research Quality assurance of IRS chemicals and materials	Appropriate insecticides identified Spray-men trained Enumeration of houses in target area done IRS commodities available Houses/households/rooms sprayed in an effective manner Data available on entomological, environmental and epidemiological indices Pre-IRS assessment conducted Post-IRS impact assessment conducted Operational research (OR)on IRS conducted Quality assurance on IRS materials conducted	Reduction in transmission intensity Reduction in sporozoite rate	Reduction in malaria admission
Objective: Increase coverage of Larval Source Management (LSM) control to 90%				
• Larviciding chemicals and	Develop National Guideline on Larviciding	National guideline on larviciding developed	Increased Community acceptability of larviciding	Reduction in prevalence of

materials • Human resources • Funding • Logistics	Capacity building for larval source management (LSM) Identification of vector breeding site Mapping of malaria vector breeding sites Selection of Insecticide(s) Implement culturally acceptable BCC/ACSM Implement larviciding Conduct pre- and post intervention survey Conduct operations research Conduct QA	Personnel trained on LSM Vector-breeding site identified Mapping of vector breeding sites conducted Insecticides selected BCC/ACSM on larviciding conducted Larviciding conducted OR on larviciding conducted QA conducted	Reduction of larval density	malaria Reduction in incidence of malaria
Objective: Increase utilization of IPT by pregnant women to 100%				
• Medicines • Human Resources • Funding • Logistics • Storage	Review evidence, update and disseminate Device and apply innovative means of DOT for IPT Promote use of IPT during ANC Conduct BCC/ACSM on IPT Build the capacity of ANC health workers Promote use of ANC from early pregnancy Conduct OR on IPT	Evidence updated and disseminated Innovative means of DOT for IPT implemented Use of IPT during ANC promoted BCC/ACSM on IPT conducted Capacity of ANC health workers built Use of ANC in early pregnancy promoted OR conducted	Increased uptake of IPT Increased utilisation of ANC services	Reduction in malaria morbidity among pregnant women Reduction in malaria mortality among pregnant women Improved foetal outcomes

Objective : Implement 80% coverage of seasonal malaria chemoprevention (SMC) in Nine Sahel States				
• Medicines • Human resources • Funding • Logistics • Storage space	Produce guidelines and manuals for SMC Mapping of areas and target population Conduct advocacy to stakeholders Community mobilization Capacity building of health workers Procurement of medicines for chemoprevention Conduct SMC delivery campaigns Pharmacovigilance Conduct OR on SMC	Guidelines and manuals for SMC produced Mapping of target areas and population conducted Advocacy conducted on SMC Capacity built on use of SMC SMC commodities procured SMC campaigns implemented Pharmacovigilance of SMC drugs conducted OR conducted	Increased uptake of SMC	Reduction in malaria prevalence Reduction in malaria incidence
Objective: Increase vector sentinel surveillance in 80% of population				
• Office space • Laboratory equipment • Human resources • Logistics • Funding • Commodities • Training materials	Set up sentinel sites for vector surveillance, three in each geopolitical zone Collaborate with Partners and academia to train staff on vector surveillance and insecticide resistance monitoring Conduct vector surveillance and insecticide resistance monitoring surveys Conduct QA for vector control	Three sentinel surveillance sites established per zone Capacity of personnel built on vector surveillance and insecticide resistance monitoring Vector index surveys conducted QA of vector control commodities	Increased vector surveillance for malaria	Improved malaria programming

	commodities in collaboration with NAFDAC	conducted		
PROGRAM AREA: CASE MANAGEMENT				
Strategic Objective: All persons with suspected malaria who seek care in private or public health facilities are tested with RDT or microscopy by 2020				
Objective: To increase diagnostic testing of suspected malaria cases to 100%				
• Office space • Laboratory equipment • Human resources • Training curriculum • Training materials • Training logistics • RDTs	Provide malaria diagnostic materials in all health facilities Build capacity to confirm diagnosis of malaria Update policy and guidelines on parasitological confirmation of malaria Implement quality assurance in malaria diagnosis Create demand for parasitological confirmation of malaria Conduct OR on parasitological confirmation of malaria	Diagnostic materials available in all health facilities Health care workers (HCWs) diagnosing malaria Guidelines being used by HCWs to diagnose malaria Good quality diagnosis offered Uptake of RDT increased, results are available for improving malaria service delivery	Increased uptake of malaria diagnostic test Reduction in drug resistance Reduction in polypharmacy	Reduced malaria morbidity Reduced malaria mortality
Strategic Objective: All persons with confirmed malaria seen in private or public health facilities receive prompt treatment with an effective antimalarial medicine by 2020				
Objective: Universal coverage of all malaria cases with prompt and appropriate treatment with antimalarial drug				
• ACTs • National guideline • Human resources • Training curriculum Training materials and logistics	Provide ACT in all health facilities Provide ACT to all PPMVs and RMCs Update and disseminate national guidelines on malaria treatment Build capacity of RMCs, PPMVs and HCWs on	ACT available in all health facilities PPMVs and RMCs using ACTs to treat uncomplicated malaria PPMVs and RMCs treating uncomplicated malaria based on national guidelines Capacity of RMCs, PPMVs and HCWs built to treat malaria	Increased uptake of ACTs Reduced incidence of drug resistant malaria Increased reporting of antimalarial adverse reactions	Reduced morbidity Reduced mortality

	appropriate treatment of malaria Conduct yearly drug efficacy tests Conduct pharmacovigilance on ACTs	according to National guidelines Potent drugs available for malaria treatment Pharmacovigilance conducted		
PROGRAM AREA: ACSM				
Strategic Objective: At least 80% of the population practice appropriate malaria prevention and management by 2020.				
Objective: Increase utilization of malaria prevention packages to 80%				
• Human resources • Transportation • Meeting logistics • Funding	Conduct awareness campaigns Engage community leaders in awareness creation Develop and disseminate targeted BCC messages Advocate for involvement of private sector in malaria prevention Advocate for increased funding for malaria prevention packages Strengthen ACSM coordination at all levels	Awareness increased in the population about malaria prevention BCC messages targeted at different groups available Private sector involved in malaria prevention Community mobilized for uptake of malaria prevention practices	Increased utilisation of malaria prevention packages	Reduced malaria prevalence Reduced malaria incidence
PROGRAM AREA: PROCUREMENT AND SUPPLY CHAIN MANAGEMENT				
Strategic Objective: There is timely availability of appropriate anti-malarial medicines and commodities required for prevention and treatment of malaria in Nigeria by 2018				
Objective: Reduce stock out of malaria commodities to <5%				
Human resources, training curriculum, training materials and logistics.	Conduct an annual quantification and gap analysis exercise Develop and disseminate a procurement plan for malaria	Malaria commodities available in adequate quantities Procurement plan available at all levels of health care	Increased utilisation of malaria commodities, reduced stock-out of malaria commodities	Reduction in morbidity Reduction in mortality

	commodities to all levels of healthcare Build capacity of health care managers on Supply Chain Management (SCM) Institutionalize electronic inventory management of malaria commodities Engage 3rd Party Logisticians to distribute commodities to the ' last mile' Integrate LMIS into DHIS Mainstream SCM into private sector	 Capacity of health care managers built on SCM Electronic inventory management system available in all health facilities 3rd party logisticians distributing malaria commodities LMIS integrated with DHIS 2.0, SCM principles adopted and utilised by private sector and community	 Improved real-time reporting of commodity consumption	
PROGRAM AREA: MONITORING AND EVALUATION				
Strategic Objective: 100% of health facilities report on key malaria indicators routinely by 2020.				
Objective: Universal reporting of key malaria indicators				
Data collection tools, human resources, meeting logistics, training materials and logistics, DQA tool	Complete the harmonisation and rationalisation of tools for malaria reporting Finalise the community data collection tools Build capacity of HCWs, PPMVs and RMCs on data management Create a malaria module in DHIS2.0 Train and re-train M&E officers at facility level and revise M&E curriculum in Schools of Health Technology	Harmonised tools available for data collection Community data feeds into the NHMIS PPMVs and RMCs submit data to the health facilities Malaria data easily retrievable from DHIS2.0 platform Health technology students and M&E officers knowledgeable about M&E	Improved data quality, Increased data demand, Increased access to data	Improved malaria programming

	Develop a supportive supervision plan for M&E Perform quarterly data quality assessments Develop an OR agenda Commission OR studies Document and disseminate OR findings Create more sentinel sites Conduct Malaria programme review biennially Revise NMSP in view of the NSHDP Conduct Malaria Indicator Survey, Health Facility survey and Rapid Impact assessment (RIA) Conduct an epi-analysis study including cost efficiency Strengthen the M&E coordination framework	Data quality improved Priority research studies conducted Data available for evaluation of programme and monitoring	OR findings informing policy and programming Improved co-ordination of M&E activities	
PROGRAM -AREA: PROGRAM MANAGEMENT				
Strategic Objective: To strengthen governance and coordination of all stakeholders for effective program implementation				
Objective: To improve from B- to an A rating in Malaria programming				
Human resources, meeting logistics,	Conduct periodic mapping of stakeholders Review and disseminate the	Stakeholders identified and participating actively in programming Programme implemented	Improved programme coordination Increased funding of	Reduction in malaria morbidity and mortality

	coordination framework Hold quarterly malaria TWGmeeting Develop annual costed operational plan Develop a resource mobilisation plan Conduct a biennial malaria spending assessment Develop financial management and tracking tool Develop a public-private partnership framework Advocate for the development of a local content policy on malaria commodities Develop and disseminate malaria programme reports with audience segmentation Conduct capacity gap assessment Develop a capacity building plan Implement the capacity building plan	according to plan Resources available for adequate programming Resources allocated based on needs Financial probity assured Private sector involved in malaria programming Quality malaria commodities being produced locally Malaria programmers available in adequate numbers and sufficiently skilled to provide service	malaria program Increased efficiency of program elements	

3.0 INDICATOR MATRIX

Table 2: Malaria indicator matrix

Indicator	Level	Baseline	Target(s)	Source of data	Frequency of collection	Responsible
Programme area: Integrated Vector Management						
Number of LLINs distributed	Output	57.8m MIS 2013	TBD	LLIN Campaign reports	Quarterly	NMEP M&E
Number of LLINs distributed to at-risk populations through public sector (mass campaign and routine)/Private sector	Output	9,033,064 (Public), 580,026 (Private)		PUDR(2013)	Biannually	NMEP and Partners
Proportion of population who have access to LLIN within their household	Outcome	14.2% (MIS 2010)	90%	MIS	3 yearly	NMEP M&E
Proportion of households with at least 1 LLIN for every 2 persons	Outcome	14.2% (MIS 2010)	90%	MIS, NDHS	3 yearly	NMEP M&E
Proportion of persons who slept inside LLINs the night before the survey	Outcome	49% (MIS 2010)	90%	MIS, NDHS	3 yearly	NMEP M&E
Proportion of U5 who slept inside LLINs the night before the survey	Outcome	28.7% (MIS 2010)	80%	MIS, NDHS	3 yearly	NMEP M&E
Proportion of pregnant women who slept inside LLINs the night before the survey	Outcome	65% (MIS 2010)	95% (2020)	MIS, NDHS	3 yearly	NMEP M&E
Number of LGAs mapped for IRS intervention	Output	20% of LGAs/ State	20%	Activity report	Biannually	NMEP vector control officer
Proportion of population protected by IRS in the targeted area	Outcome	1%	80% yearly (2020)	Monitoring Area Survey (MAS) report	Annually	NMEP M&E
Proportion of LGAs implementing IRS	Output	3%	25%	Activity report	Annually	NMEP vector control officer
Proportion of structures in the targeted LGAs sprayed with recommended insecticides in the last 12 months	Output	<1% (MIS 2010)	85% of each LGA	MIS	3 yearly	NMEP
Number of persons trained on IRS	Output	5441	75000	Training report	Quarterly	NMEP M&E
Proportion of breeding sites identified in targeted LGAs for larviciding	Output	0%	30%	Activity report	Annually	NMEP M&E
Proportion of breeding sites in the targeted LGAs treated with recommended larvicides	Outcome	NA	90%	Activity report	Quarterly	NMEP M&E
Number of people trained in LSM	Output	0	333000	Training report	Annually	NMEP M&E

Number of sentinel sites conducting Vector Surveillance and Insecticide Resistance Monitoring	Process	7	37	Surveillance routine report, activity report	Quarterly, annually	NMEP Surveillance officer
Proportion of sentinel sites with data on vector density, sporozoite rates and EIRs	Output	6	7	Surveillance report	Biannually	NMEP surveillance officer
Number of new sentinel sites established	Output	6	37	Activity report	Annually	NMEP M&E
Number of Entomological Technicians trained (including on monitoring insecticide resistance)	Output	48	296	Training report	Annually	NMEP M&E
National POA on Insecticide Resistance Management developed	Output	0	1	POA guideline	Annually	NMEP M&E
Programme area: Case management						
Proportion of health facilities conducting malaria diagnostic testing	Outcome	TBD	100%	NHMIS	Monthly	DHPRS / NMEP M&E
Percentage of children U5 with fever in the last two weeks who had blood taken from a finger or heel for testing	Outcome	5.4% (MIS 2010)	100%	MIS	3 yearly	NMEP
Proportion of persons (U5 and Above 5) with suspected malaria receiving a parasitological test (RDT and/or microscopy)	Outcome	22%	100%	NHMIS	Monthly	DHPRS/NMEP M&E
Proportion of all persons (U5 and above 5) testing positive with a parasitological test (RDT and/or microscopy)	Outcome	60% (2010)	<5%	NHMIS	Monthly	DHPRS/NMEP M&E
Proportion of fever cases among children 6-59 months tested with an RDT who receive appropriate management according to test result	Outcome	N/A	100%	NHMIS	Monthly	DHPRS /NMEP M&E
Proportion of persons testing positive that receive antimalarial treatment (in health facilities	Outcome	42%	100%	NHMIS	Monthly	DHPRS/NMEP M&E
Proportion of Children under 5 years of age with fever in the last 2 weeks who received any antimalarial treatment	Outcome	49% (MIS 2010), 12.5% (2013 NDHS)	100%	MIS, NDHS	3 Yearly	NMEP M&E
Proportion of pregnant women with malaria who received appropriate and timely treatment according to national treatment guidelines	Output	N/A	80%	NHMIS	Monthly	DHPRS/NMEP M&E
Proportion of estimated malaria cases (presumed and confirmed) that received first line antimalarial treatment	Output	42% (MIS 2010)	100%	NHMIS	Monthly	DHPRS/NMEP M&E
Proportion of persons with	Output	N/A	0%	NHMIS	Monthly	DHPRS

confirmed malaria who received any other antimalarial treatment.						/NMEP M&E
Proportion of patients admitted with severe malaria receiving Injectable artesunate treatment at a health facility	Outcome	NA	100%	NHMIS	Monthly	DHPRS /NMEP M&E
Proportion of patients admitted with severe malaria receiving quinine at a health facility	Outcome	NA	100%	NHMIS	Monthly	DHPRS /NMEP M&E
Proportion of pregnant women attending antenatal clinics who received three or more doses of intermittent preventive treatment (IPT) for malaria	Outcome	NA	100%	DHIS, MIS	3yearly	NMEP M&E
Proportion of clients diagnosed with malaria treated with an effective anti-malarial	Outcome	102.1% (2014)	100%	NHMIS	Monthly	DHPRS/NMEP M&E
Proportion of health workers who test cases of fever before treatment with appropriate medicine	Outcome	NA	100%	Health facility survey	Biennially	NMEP M&E
Number of RMM/PPMVs trained on appropriate management of malaria	Output	NA	NA	Training reports	Quarterly	NMEP M&E
Number of parasite sentinel surveillance sites established	Output	37	37*3	Activity report	Annually	NMEP M&E
Programme area: Advocacy, Communication and Social Mobilization						
Proportion of targeted population with mass media activities about malaria prevention and control in the four weeks preceding the survey	Outcome	30% (MIS 2010)	80% NMSP (2014 - 2020)	MIS	3 yearly	NMEP M&E
Proportion of the target population with knowledge of the preventive measures for malaria	Outcome	(51% MIS 2010)	100%	MIS	3 yearly	NMEP M&E
Number of communities reached with sustained Social mobilization/outreach activities	Output	N/A	TBD	Activity report	Quarterly	NMEP M&E
Proportion of the target population reached through facilities-based IPC with IECs on malaria prevention and management	Outcome	N/A	80% NMSP	Health facility survey, SARA	Biennially	NMEP M&E
Proportion of the population who can mention AT LEAST two core intervention in malaria prevention	Outcome	NA	100%	MIS, KAP Survey	Biennially	NMEP M&E
Proportion of the population who know at least one sign or symptom of malaria	Outcome	NA	100%	MIS, KAP Survey	Biennially	NMEP M&E
Proportion of the population who know the recommended treatment for malaria	Outcome	NA	80%	MIS, KAP Survey	Biennially	NMEP M&E

Proportion of the population who report getting tested when malaria was suspected.	Outcome	NA	100%	MIS, KAP Survey	Biennially	NMEP M&E
Proportion of persons with fever who go to a healthcare giver/provider for diagnosis and treatment within 24hours	Outcome	NA	80%	MIS	3 yearly	NMEP M&E
Proportion of health workers with capacity built on IPC on Malaria prevention, diagnosis, treatment and client's rights	Output	NA	80%	Training report	Annually	NMEP M&E
Percentage increase in number of individuals/communities demanding for malaria control services in health facilities	Outcome	NA	80%	DHS; MIS	3 yearly	NMEP M&E
Number of advocacy activities conducted with key stakeholders (political leaders, policy makers, private sector) for policy, funding and other resources for malaria control	Output	NA	80%	Activity report	Annually	NMEP M&E
Number of policy-pronouncements in support of malaria control/elimination activities	Outcome	NA	80%	Activity report	Annually	NMEP M&E
Number of States that establish functional State, LGA and Ward ACSM Core Groups	Output	NA	37	Activity report	Annually	NMEP ACSM
Number of States that have State-specific ACSM Strategic Framework and Implementation Plan	Outcome	NA	80%	Activity report	Annually	NMEP M&E
Number of roundtable meetings held with funders	Process	NA	NA	Activity report	Quarterly	NMEP M&E
Number of materials produced and distributed by type of material and target audience (including print and media)	Output	NA	NA	Activity reports	Annually	NMEP ACSM
Programme area: Monitoring and Evaluation						
Percentage completeness of facility reporting into the national HMIS	Output	44% (2012)	90%	HMIS	monthly	DHPRS/NMEP
Proportion of expected reports from health facilities from all states reporting malaria data through the DHIS	Output	57.6% (2014)	100%	HMIS	Quarterly	DHPRS/ NMEP M&E
Proportion of tertiary facilities reporting malaria data through the DHIS	Output	NA	100%	HMIS	Quarterly	DHPRS/ NMEP M&E
Proportion of PHCs reporting malaria data through mobile technology	Outcome	<1%	80%	Health Facility survey	Biennially	NMEP M&E
Proportion of health facilities with at least one trained health records officer	Output	NA	100%	Health Facility survey	Annually	NMEP M&E

No of planned ISS visits conducted (yearly)	Output	4	4	Activity report	Quarterly	NMEP M&E
No of planned DQA conducted (yearly)	Output	4	4	Activity report	Quarterly	NMEP M&E
Number of planned Operations Research conducted (yearly)	Output	1	4	Activity report	Annually	NMEP M&E
Number of planned surveys conducted	Output	5	8	Activity report	Annually	NMEP M&E
Programme area: Program Management						
Proportion of scheduled TWG-malaria meetings held	Output	2	10	Activity report	Annually	NMEP M&E
Proportion of partners coverage in the malaria programme by states	Output	NA	All	Activity report	Annually	NMEP M&E
Number of states with costed AOP	Output	35	37	Program report	Annually	NMEP M&E
Proportion of states with at least 80% implementation of annual operation plan	Outcome	50%	100%	Activity report	Annually	NMEP M&E
Proportion of States' that hold coordination meetings	Output	81%	100%	Activity report	Annually	NMEP M&E
Number of MPR conducted in the lifespan of the NMSP	Output	2	2	MPR report	Triennially	NMEP M&E
Number of states with financial management guidelines	Output	0%	100%	Special survey	Biennially	NMEP M&E
Proportion of states with PPP coordination platforms	Output	0%	100%	Special survey	Biennially	NMEP M&E
Proportion of LGAs with a copy of National coordination framework	Output	NA	80%	Routine DQA/ISS reports	Quarterly	NMEP M&E
Proportion of capacity building plan implemented	Output	0%	100%	Programme report	Annually	NMEP M&E
Proportion of overall malaria control/elimination budget funded by government	Output	NA	50%	NHA Malaria spending assessment	Annually	NMEP
Proportion of overall malaria elimination budget funded by private sector	Output	NA	40%	NHA Malaria spending assessment	Annually	NMEP
Proportion of overall malaria control/elimination budget funded by development partners	Output	NA	10%	NHA Malaria spending assessment	Annually	NMEP
Programme area: Procurement and Supply Chain Management						
Procurement plan developed	Output	0	1	Programme report	Annually	NMEP M&E
Annual quantification exercise completed	Output	1	1	Quantification report	Annually	NMEP M&E
Number of states with WHO standard storage facility	Output	0	37	ISS report	Biannually	NMEP PSM
Proportion of health facilities reporting no stock-outs of RDTs lasting more than 1 week at any time during the past 3 months	Outcome	20%	>90%	LMIS	Biannually	NMEP M&E

Proportion of health facilities reporting no stock-outs of ACTs lasting more than 1 week at any time during the past 3 months	Outcome	60%	100%	LMIS	Biannually	NMEP M&E
Proportion of HF reporting LMIS through DHIS	Output	0%	50%	DHIS	Monthly	DHPRS/ NMEP M&E
Proportion of HFs reporting timely and accurate consumption data	Output	10%	100%	MCLS/LMIS	Quarterly	NMEP PSM
Number of HCW trained on MCLS	Output	26488 (2010 - 2014)	56,000	Training reports	Annually	NMEP PSM
Number of States Central Medical Stores with electronic inventory management software installed	Input	0%	TBD	Programme report	Annually	NMEP PSM
Number of health facilities with electronic inventory management tool	Output	0%	100%	Health facility survey	Annually	NMEP M&E
Proportion of health facilities with functional microscopes	Output	TBD	100%	Health Facility assessment	Biennially	NMEP M&E
Proportion of product batches (ACTs) tested in previous year that met national and international control standards	Outcome	100% (2013)	100%	Activity report	Annually	NMEP M&E
Proportion of product batches (RDTs) tested in previous year that met national and international control standards	Outcome	50% (2013)	100%	Activity report	Annually	NMEP M&E

4.0 DATA FLOW AND USE

4.1 DATA FLOW

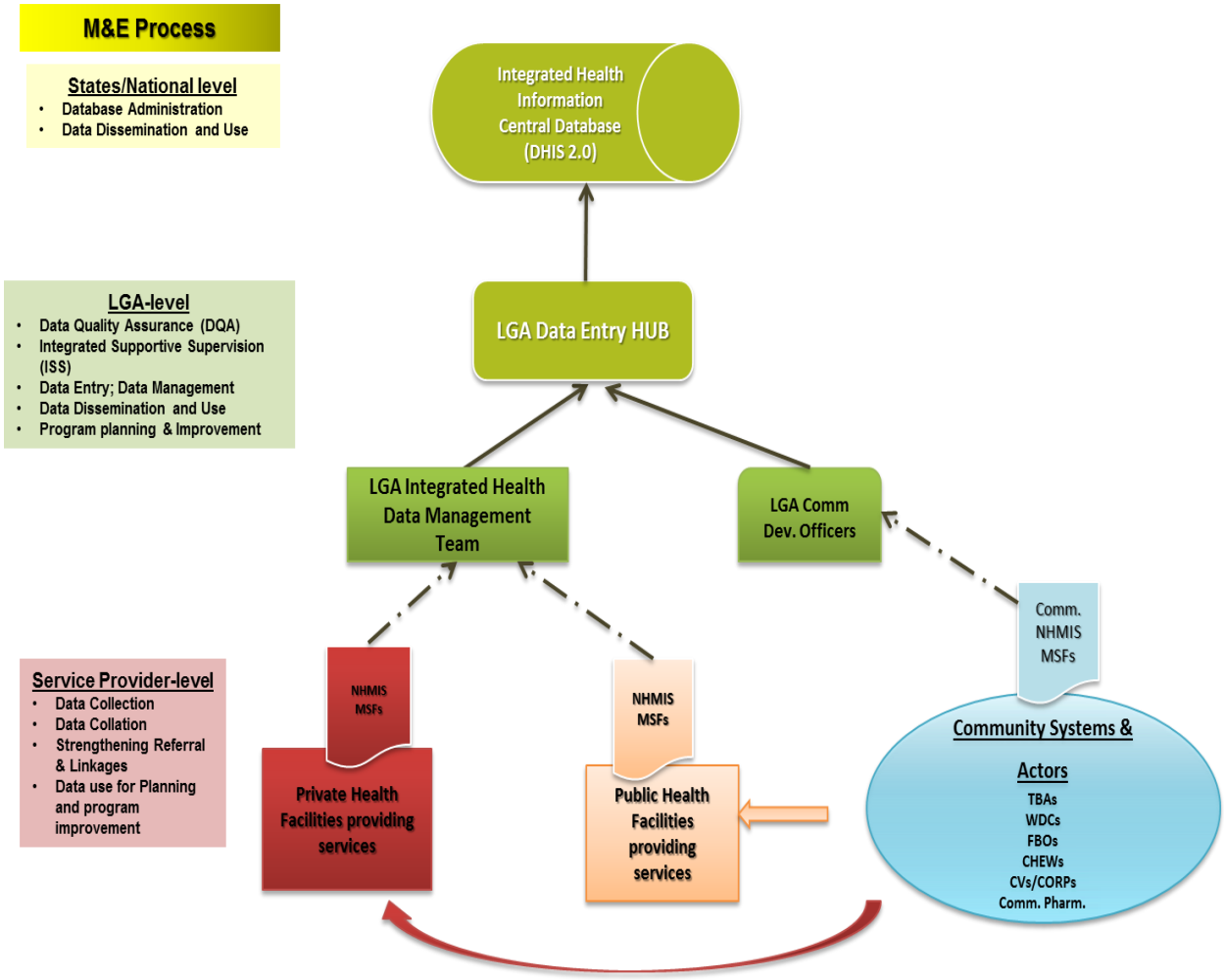
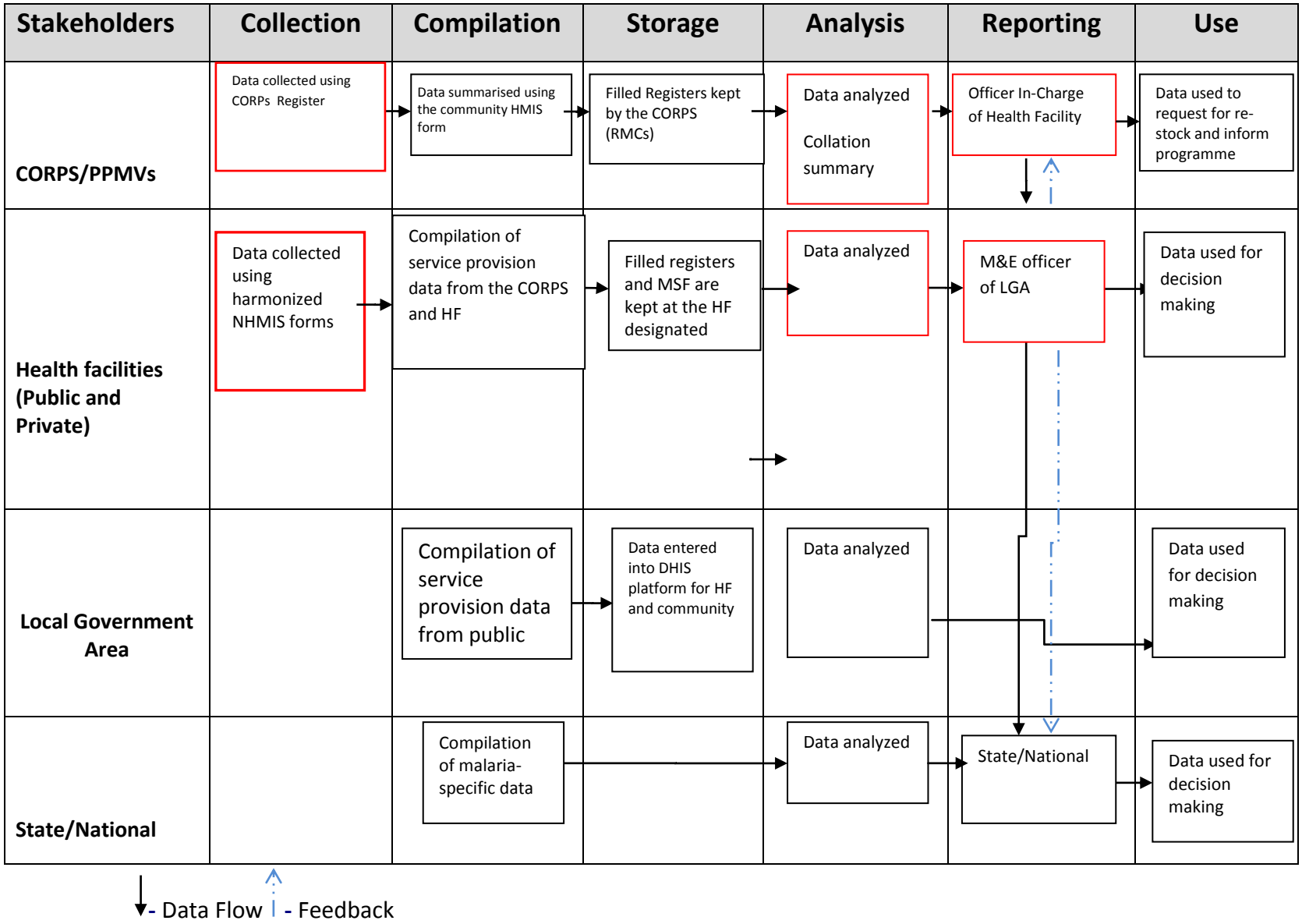


Figure 3: National Data flow

Table 3: National Data Flow



THE CURRENT DATA FLOW

Community

The treatment and commodity utilization data related to children under five years of age are generated at the community level in the public sector by Community Oriented Resource Persons (CORPs); e.g., the Role Model Caregivers (RMCs) and private sector by Proprietary Patent Medicine Vendors (PPMVs), on a daily basis. In the public sector, these are submitted monthly to designated health facilities by CORPs while their private sector partners collect the same data from all participating PPMVs.

Health Facility

Treatment and preventive data are recorded at the health facility for all services provided, including malaria services, using the NHMIS registers and compiled into the NHMIS monthly summary form (MSF). There are some efforts to capture private sector data by some NGOs but the coverage is still low. On a monthly basis, the officer-in-charge of the facility attends a data validation meeting at the LGA secretariat, during which the MSF is submitted and verified.

At the tertiary facilities, the current NHMIS registers fail to capture fully all of the services provided, as more specialized services are provided at this level of health care delivery. The Department of Health Planning, Research and Statistics (DHPRS) has developed a simplified tool that now enables these facilities directly to enter their data into the national instance.

LGA

At the LGA level, health facility data are collated by the LGA M&E officer and entered into the DHIS 2.0 Platform. In states where DHIS 2.0 is not yet operational, the malaria focal person shall retrieve malaria specific data from the NHMIS MSF using the malaria specific data retrieval form and report it to the state.

State

At the state level, upon the entry of data from all facilities, pivot table of programme data are shared to enable the programme officers to analyze their data and apply it to the decision making at the state level. On a monthly basis, a Health Data Consultative Forum involving all disease programmes is held, during which the issues related to health data for the month are discussed. Decisions on the data quality and improvements needed are also taken at this

meeting. Once a consensus on the data for the month has been reached, the state data are signed off by the state's HMIS officer and uploaded to the national instance of the DHIS2.0.
Where DHIS 2.0 is not fully operational, to avoid missing data that are reported by the facilities, malaria data retrieved from the MSFs by the LGA focal persons are used by the state RBM manager to generate an electronic copy of the report for onward submission to the NMEP. Reports from private health facilities are also collated by the private sector partner and submitted to the NMEP.

National

At the national level, the Database Administrator will access the national instance of the DHIS 2.0 and create a pivot table to analyze malaria related data for each month. The data quality (timeliness, completeness) and other indicators are also assessed, and reports produced. However, since the roll out of DHIS 2.0 is still ongoing, the completeness of the data on the current national instance remains a challenge. To mitigate this, the data clerk aggregates data submitted directly by the state malaria programme officers in states where DHIS 2.0 is yet to become fully operational at the NMEP.
Feedback on the status of the reporting will be sent to the Commissioners of the Health/Director of Public Health of the states every month/quarter. States consistently reporting late, not reporting at all or submitting incomplete reports without acceptable explanations will be shown alongside states that are performing well. The monthly states data received are aggregated and inputted into the national database at NMEP by the data clerk. The data manager checks the data for outliers, ambiguities and inconsistencies and provides feedback to the reporting entities. A quarterly summary report is produced and shared.

Observations from the current system

The data flow shows data stream from the lowest level of malaria service provision (community) through the health facility to the local government and then to the state and federal with feedback in the opposite direction. The Private sector however is not in tandem as data does not flow to the LGA from this level of health care provision leading to a major loss of data in the national data system. Presently, the community data collection tool is being finalised which should galvanise data collection at that level. Most of the data collected at the HF and community level are not analysed and utilised at the level where they are generated (highlighted in red) and thus limited use for programming at that level. This has implications on data demand and quality of data emanating from these levels. There is therefore a need to strengthen use of

data at the lower levels. The transition from paper based to electronic based data collection with the roll-out of DHIS 2.0 poses a big challenge with low level of skilled manpower at the periphery. Thus, adequate provision will need to be made for capacity building of M&E officers at the health facilities.

A radical solution needs to be developed to improve data reporting from the private sector. In this respect, advocacy visits need to be paid to the regulatory agencies (MDCN, PCN) to enlist their support in the bid to make proof of submission of valid, timely data the National system as a pre-requisite for renewal of licences of clinics, community pharmacy outlets and patent medicine providers on an annual basis. The assent of the National Health Bill will help in no small way to give legal backing to this approach.

4.2 DATA USE PLAN

Table 4: National Data Use Plan

Indicator	Uses	Stakeholders	Mechanism	Format	Other comments
Number of LLINs distributed	Reach of LLIN	Funders	Report	Fact sheet	Provide it in a timely manner
Proportion of households with at least 1 LLIN for every 2 persons	Coverage of households Gaps in distribution	Funders Implementing partners	Report	Fact sheet	Timeliness of data
Proportion of persons who slept inside LLINs the night before the survey	Utilization	Funders; Implementing partners	Trend	Fact sheet	Dissemination meetings be held
Proportion of U5 who slept inside LLINs the night before the survey	Utilization disaggregated to u-5s	Funders; Implementing partners MDG team Technical partners	Trend	Fact sheet	Dissemination meetings be held
Proportion of pregnant women who slept inside LLINs the night before the survey	Utilization among pregnant women and coverage	Funders; Implementing partners MDG team Technical partners	Trend	Fact sheet	Dissemination meetings be held, advocacy
Proportion of LGAs implementing IRS	Reach of the programme Acceptability	LGAs; State MP Funders	Report	Advocacy briefs	Advocacy visits
Proportion of structures in the targeted LGAs sprayed with insecticides recommended by the national guidelines	Coverage	NMEP; Funders	Report	Bulletin	Dissemination
Proportion of persons or population protected by IRS in the targeted area	Effectiveness of the intervention Coverage	Funders; NMEP; IPs; General population	Report	Fact sheet	Dissemination
Number of breeding sites identified for larviciding	Efficiency of the programme	NMEP	Report	Report	None
Proportion of breeding sites in the targeted LGAs treated with recommended larvicides	Coverage of programme	NMEP; Funders; IPs	Report	Report	Dissemination
Number of sentinel sites conducting Vector Surveillance and Insecticide Monitoring	Coverage	NMEP; Funders	Report	Program report	Dissemination
Number of sentinel sites established	Coverage	Funders; NMEP	Report	Bulletin	Dissemination
Proportion of sentinel sites with data on vector density, sporozoite rates and EIRs	Effectiveness of programme	NMEP; Funders; IPs	Report	Fact sheet	Dissemination
Proportion of public health facilities with a functional microscopes	Facilities with capability to diagnose malaria with microscopy	NMEP; FMoH Funders	Report	Memo; Fact sheet	Advocacy, dissemination
Proportion of health facilities conducting malaria diagnostic testing	Utilization of diagnosis for treatment of malaria	NMEP; IPs	Report	Report	Dissemination

Proportion of persons (U5 and Above 5) with suspected malaria receiving a parasitological test (RDT and/or microscopy)	Coverage of parasitological testing	NMEP; FMoH	Report	Fact sheet	Timeliness dissemination, validity of data,
Proportion of all persons (U5 and above 5) testing positive with a parasitological test (RDT and/or microscopy)	Malaria prevalence Effectiveness of programme	NMEP: IPs; Funders	Trend	Fact sheet	Timely dissemination
Proportion of fever cases among children 2-59 months tested with an RDT who receive appropriate management according to test result (ACT for RDT+ fever and no ACT for RDT- test result)	Effectiveness of the program; Coverage of appropriate treatment	NMEP; FMoH; Funders; IPs	Trend	Fact sheet	Timely dissemination
Proportion of persons testing positive that receive antimalarial treatment (in public and private health facilities)	Coverage differential by facility type	IPs; FMoH;	Trend	Fact sheet	Validity of data, timely dissemination
Proportion of Children under 5 years of age with fever in the last 2 weeks who received any antimalarial treatment	Indiscriminate utilization of antimalarial	NMEP; FMoH; IPs	Trend	Fact sheet; Advocacy briefs	Timely dissemination, advocacy
Proportion of pregnant women with malaria who received appropriate and timely treatment according to national treatment guidelines	Coverage of IPT	NMEP; FMoH; Funders; IPs	Trend	Fact sheet	Timely dissemination
Proportion of persons confirmed malaria who received antimalarial treatment.	Coverage of appropriate treatment	FMoH; NMEP; IPs	Report	Fact sheet	Timely dissemination
Proportion of patients admitted with severe malaria receiving injectable artesunate/quinine treatment at a health facility	Coverage of treatment of severe malaria	NMEP; IPs	Report	Report	None
Proportion of health facility that had laboratory ISS as a QA scheme in the last 12 months	Coverage of QA	NMEP;	Trend	Memo	None
Proportion of Pregnant women receiving 3 doses of SP-IPT	Coverage of IPT Proxy for ANC attendance	NMEP; FMoH	Trend	Fact sheet	Timely dissemination
Number of ACTs utilized by children under 5 years	Uptake of ACTs in children under 5 Proxy for number of malaria cases in under 5s	NMEP; IPs	Report	Bulletin	dissemination
Proportion of clients diagnosed with malaria treated with an effective anti-malarial	Coverage of appropriate antimalarial treatment	NMEP; IPs; SDPs	Trend	Fact sheet; Advocacy brief	Timely dissemination; Dissemination at quarterly LGA meetings
Proportion of health workers who test cases of fever before treatment with appropriate medicine	Quality of service provision at SDPs	SDPs; IPs; NMEP	Trend	Advocacy brief	Dissemination at quarterly LGA meetings
Number of RMM/PPMVs trained on appropriate management of malaria	Coverage of capacity building plan	NMEP; IPs	Report	Bulletin	None
Proportion of the target population reached with mass media activities	Coverage of community mobilization	NMEP; IPs	Report	Fact sheet	Dissemination

about malaria prevention and management.					
Proportion of the target population who can mention two core intervention in malaria prevention or management	Assessment of knowledge of population about malaria Reach of BCC messages	Funders; NMEP; IPs	Trend	Fact sheet	Timely dissemination
Proportion of the target population who know at least two sign and symptom of malaria	Assessment of knowledge of population about malaria Reach of BCC messages	Funders; NMEP; IPs	Trend	Fact sheet	Timely dissemination
Proportion of persons with fever who go to a healthcare giver/provider for diagnosis and treatment within 24hours	Care seeking behaviour of population on malaria	NMEP; IPs	Report	Advocacy brief; Fact sheet	Timely dissemination Advocacy to Communities
Proportion of overall malaria control/elimination budget funded by government	Ownership of malaria intervention by Government Sustainability of program	Funders; FMoH; IPs	Trend	Fact sheet; Advocacy brief	Advocacy to GoN
Proportion of overall malaria elimination budget funded by private sector	Measures progress of the desire and will of private sector to implement malaria program	GoN; Organised private sector	Trend	Fact sheet; Advocacy brief	Advocacy to private sector
Proportion of health facilities using the revised data collection tools	Harmonization of data collection process	NMEP; IPs	Trend	Fact sheet	None
Proportion of LGAs reporting malaria data through the DHIS	Coverage and utilization of DHIS2.0	DHPRS, FMoH; NMEP IPs	Trend	Fact sheet	None
Proportion of tertiary facilities reporting malaria data through the DHIS	Uptake of data reporting by tertiary facilities	DHPRS, FMoH; NMEP IPs	Trend	Fact sheet	None
Proportion of PHCs reporting malaria data through mobile technology	Coverage of electronic data reporting	DHPRS, FMoH; NMEP IPs	Trend	Fact sheet	None
No of planned ISS visits conducted (yearly)	Effectiveness of programme	NMEP	Report	Bulletin	None
No of planned DQA conducted (yearly)	Effectiveness of programme	NMEP	Report	Bulletin	None
Proportion of planned Operations Research conducted (yearly)	Effectiveness of program	NMEP	Report	Bulletin	None
Proportion of planned surveys conducted	Effectiveness of programme	NMEP	Report	Bulletin	None
Number of sentinel sites established	Coverage of sentinel surveillance	NMEP	Report	Bulletin	None
Proportion of sentinel sites monitoring insecticide resistance	Efficiency of programme	NMEP	Report	Bulletin	None
Proportion of sentinel sites with data on vector density, sporozoite rates and EIRs	Effectiveness of surveillance programme	NMEP	Report	Bulletin	None

Annual quantification exercise completed	Efficiency of procurement system	Funders; NMEP; IPs	Report	Bulletin	Timely dissemination
Proportion of health facilities reporting no stock-outs of RDTs lasting more than 1 week at any time during the past 3 months	Efficiency and effectiveness of the procurement system	Funders; NMEP; IPs	Trend	Fact sheet	Timely dissemination
Proportion of health facilities reporting no stock-outs of ACTs lasting more than 1 week at any time during the past 3 months	Efficiency and effectiveness of the procurement system	Funders; NMEP; IPs	Trend	Fact sheet	Timely dissemination
Proportion of HF reporting LMIS through DHIS	Effectiveness of reporting system	NMEP	Report	Bulletin	Timely dissemination
Proportion of HFs reporting timely and accurate consumption	Effectiveness of reporting system	NMEP	Report	Bulletin	Timely dissemination
Number of health facilities with electronic inventory management tool	Coverage of electronic inventory management system	NMEP	Report	Bulletin	None

4.3 STAKEHOLDER ANALYSIS

Table 5: Data requirements of stakeholders

Stakeholder	Stakeholder Background (knowledge, experience, etc.)	What information is required?	Why is the information required?	When is the information required?	How will the information be communicated? (format)
External stakeholders					
Funders	The Global Fund to Fight AIDS, Tuberculosis and Malaria (often called The Global Fund or GFATM) World Bank	Funding gap, programme achievements	Judge worth of programme, assess funding needs	Annually (at the end of the planning cycle	Program report, gap analysis report
Technical Aid/Support	WHO UNICEF USAID DFID CIDA	Disease epidemiology and surveillance	Assess progress with interventions	Annually	Fact sheet, program report
Internal Stakeholders					
FMoH/SMoH	Supervising Ministry of NMEP and State programmes	Program data (utilisation, distribution, training, coverage),gap analysis, survey data, financial Data Disease epidemiology, program management	To make informed decisions that will impact on the overall program implementation	Quarterly, annually	Quarterly bulletin, Annual Program Reports, Survey reports
Implementing partners	Malaria Consortium IHVN AFRICARE ARFH JHPIEGO SHI SFH FHI 360 CHAI	Program data (utilization, distribution, training, coverage), gap analysis, survey data, financial data, disease epidemiology, program management	To make informed decisions that will impact on the overall program implementation	Quarterly, semi-annual, annual	Quarterly bulletin, annual program reports, survey reports
Beneficiaries	General populace (children, adults, pregnant women)	Prevention messages management	To inform care seeking behaviour and health choices	Monthly	IEC BCC
Health care workers	Public hospitals (tertiary,	Guidelines	To support delivery	Annually	Guidelines, policies

	secondary, primary), private hospitals, PPMVs	Policy Statistics	of services		fact sheets
CSOs/FBOs (NIFAA)		Policy/guidelines	To support delivery of services	Annually	Guidelines, policies programme reports
Research institutions	Academia, research agencies; pharmaceuticals	Policy/guidelines, OR Agenda	Respond to OR agenda	Annually	Programme reports, NMSP

5.0 DATA QUALITY

Identifying and managing potential risks to the quality of data collected and information used is of utmost importance to programme success. To ensure the maintenance of standards, a complete audit trail of the information flow must be implemented, as and when due. Data quality assessments shall be conducted quarterly on reported data for the quarter under review as part of the quarterly supervisory visits which have the following objectives:

1. To provide clear guidance on how to conduct a data record review/DQA for aggregated health services data from different points of service delivery
2. To describe how to use the NHMIS (malaria) DQA checklists when performing routine data quality assurance.
3. To document the DQA findings and proffer corrective action plans for data quality improvement.
4. To analyse and provide feedback to the relevant stakeholders.

Users of the DQA

- National Malaria Elimination Programme Officers
- State Malaria Elimination Programme Officers
- Implementing Partners
- LGA RBM Officers

Records to be reviewed

- Antenatal and postnatal attendance register
- Immunization summary
- Health facility outpatient department register
- Inpatient care register
- Monthly summary form

Dealing with Data Discrepancies

Where discrepancies are noted, these should be documented in the DQA checklists and the health facility staff designated to the data entry should be notified. Also, the Officer in charge of the Health facility, LGA focal person, LGA Monitoring and Evaluation Officer, State Monitoring and Evaluation officer and RBM manager should be notified.

6.0 EVALUATION

Table 6: Evaluation plan matrix

Evaluation question	Indicator	Baseline	Source of information	Collection method	Schedule
Is Nigeria achieving the pre-elimination target?	Malaria parasitaemia prevalence rate Vectorial density Entomological inoculation rate	42% TBD TBD	MIS Vector surveillance reports	Malaria diagnostic tests Exit traps	2015 2018;
What is the coverage and uptake of malaria interventions in Nigeria?	Proportion of households with at least 1 LLIN for every 2 persons Proportion of persons who slept inside LLINs the night before the survey Proportion of U5 who slept inside LLINs the night before the survey Proportion of pregnant women who slept inside LLINs the night before the survey	TBD 22.8% (2010) 28.7% (2010) 33.7% (2010)	MIS, NDHS	Interview	2015, 2017, 2018
	Percentage of Households protected with IRS in the past 12 months	0.7%	Special survey	Interview and malaria diagnosis	2017, 2020
	Proportion of pregnant women who received 3 doses of IPT at ANC	NA	MIS	Interview	2015, 2018
	Proportion of target population of under 5 who received seasonal malaria chemoprophylaxis	TBD	Special survey	Interview	2017, 2020
To what extent has the national malaria response impacted on the communities in terms of lives saved and infections averted?	Cost per case averted Cost per death averted	TBD	Special survey/NHMIS	Spectrum modelling	2017, 2020

Revised Operations Research agenda for 2014-2020NMSP

This is based on outcome of country operational research dialogue held in December, 2014

Case Management

1. What is the effectiveness of the routine monitoring systems of drug efficacy for early detection of parasite resistance emergence?
2. What influence does negative result have on adherence to RDT use by Health Care workers and acceptance by care givers?
3. What are the factors that affect retention of community- oriented resource persons (CORPS)?
4. What is the effectiveness of different distribution systems on access to ACTs?
5. How feasible and effective is a multiple pathogen diagnostic tool for non-malaria fever?

Vector Control – LLINs

1. What is the efficacy and durability of LLIN over time?, Physical integrity, Hole size, Durability, Knockdown effect (6 month basis)
2. What are the other insecticide alternatives, formulations or combinations for LLIN and IRS?
3. What are the new interventions or strategies that can be exploited for malaria elimination (LSM), Environmental Management?
4. What are the strategies or delivery systems that can be exploited to increase LLIN coverage?
5. What are the best options to achieve and maintain LLIN ownership and utilization among susceptible groups?
6. What is the level and spread of insecticide resistance and mechanism in different ecological zones in Nigeria?
7. What is the magnitude of Residual Malaria Transmission in Nigeria?

Malaria in Pregnancy

1. What is the quality of MIP services in the Private sector (where ANC services are provided both for profit and non-profit)?
2. What is the difference in quality of service between states where there has been MIP training versus states where training has not taken place?
3. Will use of SMS/mobile device improve HCW compliance with IPT guidelines?
4. Will SMS reminders improve IPT uptake amongst pregnant women?
5. Is community delivery of SP feasible and acceptable in states with very low ANC attendance?
6. Feasibility and acceptability of screening and treating for all pregnant women using RDT at different levels of care
7. Is there a relationship between the risk perception of malaria by pregnant women, their knowledge of malaria intervention and their preventive practices?
8. What are the socio-cultural barriers that influence IPT uptake?

ACSM

1. Effectiveness and efficacy of the various channels of communication across different ecological regions & geo-political zones?
2. Effectiveness of SMS messaging in BCC as piloted in Lagos

PSCM

1. How efficient is the MCLS system in ensuring availability of malaria commodities at all levels?
2. Will the use of 3PL agents improve the promptness of distribution of malaria commodities as well as the spread of the commodities, as against Push/Pull system?
3. Push vs. Pull system of commodities: which is more effective?

M&E/Surveillance

1. Incentivisation of data management process in health facilities: does it make a difference in quality of data reported?
2. How can we improve the reporting from secondary and tertiary facilities into the routine HMIS?
3. How will increased mentoring & use of data at HF & LGA levels affect the quality of data?

Program Management & Resource mobilization

1. Develop a business case for states and LGAs for them to use as a guide in mobilizing resources (prepare this as a single leaflet that can easily be shared; consult the existing GMAP2 and business case developed by RBM for Africa Region)
2. Work load analysis to determine how much burden malaria contributes to the work of the healthcare worker: will it make a case for integration of resources in the HF?
3. Is there a Resource Mobilization expert at national or state program level?
4. What is the resource expenditure for malaria program vis-à-vis the business case scenario at national level?
5. How can the private sector be engaged to contribute resources towards malaria programming in Nigeria?

7.0 REPORTING PLAN

Table 7: Reporting plan matrix

Data element	Information Product	Recipient (s)	Frequency
Population level data	Malaria Indicator Survey report, National Demographic Health Survey, Multiple Indicator Cluster Survey	Government of Nigeria Funders, Development partners, research institutions, NGOs	Three yearly, five yearly, two yearly
Health facility indices	Health facility assessment, aggregated health facility reports/ bulletins	FMoH, funders, development partners, research institutions, NGOs	Two yearly, monthly, quarterly
Programme performance	Malaria program performance review, program annual reports	FMoH, funders, development partners, research institutions	Three yearly, annually

8.0 APPENDICES

8.1 INDICATOR REFERENCE SHEET

INDICATOR NAME	RATIONALE	NUMERATOR	DENOMINATOR	FREQUENCY OF DATA COLLECTION	OTHER COMMENTS
INTEGRATED VECTOR MANAGEMENT					
Number of LLINs distributed	To assess programme effectiveness in prevention	Number of LLINs distributed	Not applicable	Quarterly	
Proportion of LLIN campaigns implemented	To assess the timeliness of campaigns	Number of campaign done	Number of campaigns planned	Annually	
Proportion of population who have access to LLIN within their household	To monitor access to LLIN among persons in the households	Number of people living in the households surveyed	Total number LLINs in the households	Three yearly, five yearly	
Proportion of households with at least 1 LLIN for every 2 persons	This indicator willbe used to measure household LLIN possession among the population at risk for malaria at the national level.	Number of households surveyed with at least one LLIN.	Total number of households surveyed	Three yearly, five yearly	
Proportion of persons who slept inside LLINs the night before the survey	To assess LLIN utilization among the population	Number of persons who slept inside LLIN the previous night	Total number of persons in the households surveyed	Three yearly, five yearly	
Proportion of U5 who slept inside LLINs the night before the survey	To assess utilization of LLIN in under 5s	Number of children U-5 who slept inside LLINs the previous night	Total number of U-5 children in households surveyed	Three yearly	
Proportion of pregnantwomenwhosleptinsideLLINs the night before the survey	To assess utilization of LLIN among pregnant women	Number of pregnant womenwho slept insideLLINthe previous night	Total number of Pregnant women in households surveyed	Three yearly	
Number of LGAs mapped	To assess coverage of	Number of LGAs mapped	Total number of LGAs targeted	Annually	

for IRS intervention	IRS intervention		for IRS		
Proportion of population protected by IRS in the targeted area	To assess population protected by IRS	Number of persons whose houses were sprayed	Total population in targeted area	Three yearly	
Proportion of LGAsimplementing IRS	To assess coverage of IRS	Number of LGAs undertaking IRS intervention	Number of LGAs targeted for IRS	Three yearly	
Proportion of structures in the targeted LGAs sprayed with recommended insecticides in the last 12 months	To monitor efficacy of programming with respect to 85% coverage of targeted area	Total number of structures sprayed in the preceding 12 months	Total number of structures in targeted areas	Three yearly	
Number of people trained on IRS	To monitor capacity gaps in IRS intervention	Number of people trained on IRS	Not applicable	Annually	
Number of breeding sites identified in targeted LGAs for larviciding	To identify distinct breeding sites for larviciding	Number of breeding sites identified	Not applicable	Annually	
Proportion of breeding sites in the targeted LGAs treated with recommended larvicides	To monitor coverage of larviciding	Number of breeding sites sprayed	Number of breeding sites identified	Annually	
Number of people trained in LSM	To monitor capacity gaps in LSM intervention	Number of people trained on LSM	Not applicable	Annually	
CASE MANAGEMENT					
Proportion of persons with suspected malaria receiving a parasitological test (RDT and/or microscopy)	To know the coverage of parasitological testing of malaria	The number of persons receiving a parasitological test (RDT and/or Microscopy)	The total number of persons with suspected malaria.	Quarterly	
Proportion of persons testing positive with a parasitological test (RDT and/or microscopy)	To determine the positivity rate of Malaria seen at the health facilities	The number of persons testing positive with parasitological test.	The total number of persons tested with parasitological test.	Monthly	
Proportion of fever cases amongst children U5 tested positive with an RDT and/or microscopy and receivedACT according to the national	To monitor appropriate treatment of confirmed malaria in children U5 years	Total number of fever cases amongstU5 who tested positive with an RDT and/or microscopy and received ACT	Total number of fever cases amongst U5 who tested positive with an RDT and/or microscopy	Monthly	

guideline					
Proportion of fever cases amongst persons ≥5years tested positive with an RDT and/or microscopy and received ACT according to the national guideline	To monitor appropriate treatment of confirmed malaria in persons ≥5years	Total number of fever cases amongst persons ≥5years who tested positive with an RDT and/or microscopy and received ACT	Total number of fever cases amongst persons ≥5yearswho tested positive with an RDT and/or microscopy	Monthly	
Proportion of persons testing positive that receive any other antimalarial treatment (in health facilities)	To monitor total population with any other antimalarial treatment for confirmed malaria	Number of persons with malaria positive result who received any other antimalarial	Total number of fever cases	Monthly	Disaggregate by type of health facility
Proportion of Children under 5 years of age with fever in the last 2 weeks who received ACTs.	To monitor access of ACTs in U5 children	Number of under 5 children with fever who received antimalarial	Total number of U5 fever cases	Three yearly, five yearly	Population based
Proportion of Children under 5 years of age with fever in the last 2 weeks who received any antimalarial treatment according to national guideline.	To monitor use of other antimalarials in U5s children	Number of under 5 children with fever who received other antimalarials	Total number of U5 fever cases	Three yearly, five yearly	Population based
Proportion of pregnant women with malaria who received appropriate and timely treatment according to national treatment guidelines	To monitor appropriate treatment of malaria among pregnant women	Number of pregnant women who received appropriate and timely treatment for malaria	Total number of pregnant women with confirmed malaria	Monthly	
Proportion of persons with confirmed malaria who received ACT	To monitor total population with access to ACT for confirmed malaria	Number of persons with malaria positive result who received ACT	Total number of confirmed malaria cases	Monthly	
Proportion of patients admitted with severe malaria receiving Injectable artesunate treatment at a health facility	To monitor severe malaria case management	Number of persons with severe malaria who received Injectable artesunate	Total number of severe malaria cases	Monthly, activity reports	For consideration during review in lager forum

Proportion of Pregnant women receiving at least 3 doses of SP-IPT	To monitor uptake with chemoprophylaxis for pregnant women	Number of pregnant women who received at least three doses with SP-IPT during ANC visit under direct observation	Total number of pregnant women who completed at least 3 for ANC visits	Monthly	
Number of ACTs utilized by children under 5 years	To assess consumption of ACT by U5s Proxy for number of U5 treated appropriately for malaria	Number of U5s treated with ACT	Not applicable	Monthly	
Proportion of health workers who test cases of fever before treatment with appropriate medicine	To assess effectiveness of case management training	Number of health workers who test cases before treatment with antimalarial	Total number health workers in the facility assessed	Biennially	
Number of RMCGs/PPMVs trained on appropriate management of malaria	To assess effectiveness of case management training	Number of RMCGs/PPMVs perform malaria management appropriately	Total number RMCGs/PPMVs assessed in the community	Biennially	
ADVOCACY COMMUNICATION AND SOCIAL MOBILIZATION					
Proportion of the population who recall seeing or hearing malaria messages during the last 6months	To assess reach of BCC messages	Number of people who recall seeing or hearing malaria messages in last 6 months	Total number of people enumerated	Three yearly	
Proportion of the target population reached with mass media activities about malaria prevention and management.	To monitor awareness about malaria prevention and management and demand creation for malaria commodities	Number of persons reached through mass media	Total population enumerated	Three yearly	
Number of communities reached with sustained Social mobilization/outreach activities	To determine the level of coverage in terms of BCC messages	Number of communities reached	Not applicable	Quarterly	
Proportion of the target population reached through facilities-based	To increase awareness about malaria prevention and management and	Number of person reached through facilities-based-IPC	Total number of persons interviewed	Biennial	Exit interview

IPC with IECs on malaria prevention and management	create demand for malaria commodities in the facilities through IPC with IEC				
Proportion of the population who can mention AT LEAST two core intervention in malaria prevention or management	To determine the level of knowledge of the target population on core intervention in malaria prevention or management	Number of persons that mention two core intervention	Total population enumerated	Three yearly	
Proportion of the population who know at least one sign or symptom of malaria	To determine the level of knowledge of the target population on signs and symptoms of malaria	Number of person that mention at least one sign or symptom of malaria	Total population enumerated	Three yearly	
Proportion of the population who know the recommended treatment for malaria	To monitor the level of knowledge on malaria treatment	Number of person who mention the recommended treatment for malaria	Total population enumerated	Three yearly	
Proportion of the target population who report getting tested when malaria was suspected.	To monitor demand for malaria testing	Number of people who were suspected of having malaria and tested	Total number of people with suspected malaria	Three yearly	Disaggregated by place of testing
Proportion of persons with fever who go to a healthcare giver/provider for diagnosis and treatment within 24hours	To assess the care seeking behaviour of the population	Number of persons with fever who go to a healthcare giver/provider for diagnosis and treatment within 24hours	Total population enumerated who had fever	Three yearly	
Proportion of health workers with capacity built on IPC on Malaria prevention, diagnosis, treatment and client's rights	To determine number of health workers trained on IPC on malaria prevention, diagnosis and treatment and client's rights	Number of health workers trained on IPC	Total number of targeted health workers	Annually	
Number of advocacy activities conducted with key stakeholders (political leaders, policy makers, private sector) for policy, funding and other resources for	To assess the effectiveness of ACSM branch on malaria control activities	Number of advocacy visits that yield positive results	Not applicable	Annually	

malaria control that yield positive result					
Number of States that establish functional State, LGA and Ward ACSM Core Groups	To assess the functionality of ACSM in states and lower levels To monitor ACSM coordination at the state level	Number of states that have a functional ACSM core group	Not applicable	Annually	
Number of States that have State-specific ACSM Strategic Framework and Implementation Plan	To assess the functionality of ACSM in states and lower levels	Number of states with ACSM strategic framework	Not applicable	Annually	
MONITORING AND EVALUATION					
Proportion of LGAs reporting malaria data through the DHIS	To ensure timely, quality and nationally representative data across the LGAs	Number of LGAs reporting through DHIS 2.0	Total number of LGAs expected to report through the DHIS 2.0	Monthly	
Proportion of tertiary facilities reporting malaria data through the DHIS	To capture malaria data especially confirmed malaria morbidity and mortality through DHIS 2.0	Number of tertiary facilities reporting malaria data on DHIS 2.0	Total number of tertiary facilities expected to report on DHIS 2.0	Monthly	
Proportion of PHCs reporting malaria data through mobile technology	To monitor PHCs reporting malaria data	Number of PHCs reporting malaria data monthly through mobile technology	Total Number of PHCs expected to report malaria data through Mobile technology	Monthly	
Proportion of health facilities with at least one trained health records officer on HMIS	To assess capacity gaps of health record officer on HMIS in facilities across the country	Number of health facilities with at least one trained health records on HMIS	Total number of record officers in health facilities	Biennially	
No of planned ISS visits conducted (yearly)	To monitor quarterly supportive supervision to the State, LGAs and health facilities by the relevant branches of NMEP	No ISS visits conducted	Not applicable	Quarterly	
No of planned DQA conducted (yearly)	To monitor conduct DQA at the States, LGAs	No.of DQAs conducted	Not applicable	Quarterly	

	&HFs				
Proportion of planned Operations Research conducted (yearly)	To measure performance of the programme	No. of operations research conducted	Total No. of Operations Research expected to be conducted	Annually	
Proportion of planned surveys conducted	To measure performance of the programme	No. of surveys conducted	Not applicable	Annually	
Number of sentinel sites established	To monitor progress on Malaria surveillance	Number of sentinel sites established	Not applicable	Annually	
Proportion of sentinel sites monitoring insecticide resistance	To monitor progress on Malaria surveillance	Number of sites monitoring insecticide resistance	Total number of sentinel sites	Annually	
Number of Entomological Technicians trained on vector surveillance	To assess capacity gaps in vector surveillance	Number of entomologists trained	Not applicable	Annually	
PROGRAMME MANAGEMENT					
Number of LGAs with a copy of National coordination framework	To monitor coordination at LGA level	Number of LGAs with National coordination framework	Not applicable	Annually	
Proportion of scheduled TWG-malaria meetings held	To assess program effectiveness and coordination	Number of TWG meetings held	Total number of scheduled TWG meetings	Annually	
Proportion of partners coverage in the malaria programme by states	To monitor gaps in malaria programming at state level	Number of partners working on malaria in a state	Total number of partners working on malaria nationally	Annually	Disaggregated by state and program area
Number of states with costed AOP	To assess the effectiveness of programming at state level	Number of states with costed AOP	Not applicable	Annually	
Proportion of states with at least 80% implementation of annual operation plan	To monitor program performance at state level	Number of states with at least 80% implementation of AOP	Total number of states in Nigeria		
Proportion of States' that hold coordination meetings	To monitor coordination of malaria program in states	Number of states that hold coordination meetings	Total number of states in Nigeria	Annually	
Number of MPR conducted in the lifespan of the NMSP	To monitor programme performance	Number of malaria programme reviews conducted	Not applicable	Mid and end of NMSP review	

Number of states with financial management guidelines	To assess programme effectiveness	Number of states with financial management guidelines	Not applicable	Annually	
Proportion of states with PPP coordination platforms	To assess private sector involvement in malaria programming	Number of states with PPP coordination platforms	Total number of states in Nigeria	Annually	
Proportion of capacity building plan implemented	Monitor the implementation of the capacity building plan	Number of activities in the plan implemented	Total number of activities in the plan scheduled for implementation	Annually	
Proportion of overall malaria control/elimination budget funded by government	To monitor sustainability of funding stream	Budget released to malaria program by Government	Total budget appropriatedin Malaria programme	Annually	
Proportion of overall malaria elimination budget funded by private sector	To monitor sustainability of funding stream	Expenditure on malaria program by private sector	Total expenditure in Malaria programme	Annually	
Proportion of overall malaria control/elimination budget funded by development partners	To assess the effectiveness of advocacy with regard to funding of malaria control/elimination activities	Expenditure on malaria program by development partners	Total budget presented in Malaria programme	Annually	
PROCUREMENT AND SUPPLY CHAIN MANAGEMENT					
Number of States quantification & Gap analysis exercise done	To assess total commodity need in quantities for the country and state specific over a specified period of time	No of States that conducted quantification & Gap analysis	Not applicable	Annually	
Number of states with WHO standard storage facility	To maintain adequate storage of all commodities while preserving efficacy	No of States Stores with WHO good storage best practice	Not applicable	Annually	
Proportion of health facilities reporting no stock-outs of RDTs lasting more than 1 week at any time during the past 3 months	To monitor consistent availability of commodities	Number of facilities reporting no stock-outs of RDTs lasting more than 1 week at any time during the past 3 months	Total number of facilities reporting	Quarterly	
Proportion of health	To monitor consistent	Number of facilities	Total number of facilities	Quarterly	

facilities reporting no stock-outs of ACTs lasting more than 1 week at any time during the past 3 months	availability of commodities	reportingno stock-outs of ACTs lasting more than 1 week at any time during the past 3 months	reporting		
Proportion of HF reporting LMIS through DHIS	Functionality of LMIS/DHIS system	Proportion of HF reporting through DHIS	Total number of health facilities	Monthly	
Proportion of HFs reporting timely and accurate consumption data	To monitor consistent availability of commodities and utilization and pipeline monitoring	Proportion of HF reporting timely and accurate consumption	Total number of health facilities reporting	Monthly	
Number of HCW trained on MCLS	To assess capacity to capture LMIS data and data management.	No of persons trained on MCLS	Not applicable	Quarterly	
Number of health facilities with electronic inventory management tool	To assess progress in roll-out of electronic inventory management	Number of HFs with electronic inventory management	Not applicable	Biennially	
Proportion of public health facilities with a functional microscopes	Availability of functional microscopes in health facilities	The number of functional microscopes in health facilities	The total number of health facilities (secondary or tertiary)	Yearly	
Proportion of product batches tested in previous year that met national and international control standards	To monitor product efficacy	Number of batches tested that met national and international control standards	Total number of batches tested	Annually	Disaggregate by suppliers

8.2 ACTION PLAN

S/N	ACTIVITY	Responsible	2015				2016				2017				2018				2019				2020			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Roll out harmonized integrated supportive supervision tools (ISS) to states	NMEP																								
2	Conduct integrated supportive supervision by National, State and LGA teams utilizing harmonized ISS tools	NMEP																								
3	Conduct training on DQA for M&E staff at all levels to conduct data quality checks prior to transmission	NMEP																								
4	Conduct quarterly Data Quality Audits by the National Malaria Program	NMEP																								
5	Convene operational research stakeholder meeting to identify and set research priorities	NMEP M&E																								
6	Conduct of approved OR protocols	Academia																								
7	Documentation and dissemination of OR findings to inform program implementation	NMEP Academia																								
8	Rationalize and harmonize data collection tools for use in public and private health facilities	DHPRS NMEP																								
9	Support finalization of community data tools to ensure that malaria data at community level	DHPRS NMEP																								
10	Print and distribute the revised tools	NMEP																								
11	Support training of health records officers, PPMVs and community health service providers on the revised tools	DHPRS NMEP																								
12	Support roll out DHIS 2.0 to all Local Government Areas	DHPRS																								
13	Train M&E officers at LGA level, and records officers at tertiary facilities on DHIS2	DHPRS																								

14	Roll out mobile technology to health facilities for data capture, in conjunction with Partners	DHPRS
15	Logistic support for use of mobile technology	NMEP
16	Training of M&E officers at facility, LGA, State and National levels with emphasis on completeness of reporting and capabilities towards the demands of the pre-elimination goal	NMEP
17	Mainstream M&E curriculum in schools of health technology/medical records to build knowledge of DHIS2.	DHPRS FMoH
18	Increase sentinel sites to at least one in each state with consideration for locations where there are already inputs from other partners or departments	NMEP
19	Scale up surveillance at human, vector and parasite levels including special training for the preceding pre-elimination period (2018-2020).	NMEP
20	Conduct program impact evaluation	NMEP M&E
21	Conduct Malaria Program reviews (MPR) in 2016 and 2019.	NMEPM&E
22	Revise the NMSP to align with new NHSDP in 2016	NMEP PROGRAM
23	Conduct Malaria Indicator Survey (MIS)	NMEP M&E
24	Conduct Health Facility Survey	NMEP M&E
25	Conduct Rapid Impact Assessment	NMEP M&E
26	Compile and review malaria data from NDHS	NMEP M&E
27	Strengthen the existing linkages between the malaria programme and the larger ATM network	NMEP
28	Improve coordination with DHPRS	NMEP
29	Conduct TWG meetings	NMEP M&E
30	Recruit 18 field officers to increase coverage to one per state	NMEP

8.3 COSTING OF M&E PLAN

Activity	2014	2015	2016	2017	2018	2019	2020	Sub-total (USD)
Roll out harmonized integrated supportive supervision tools (ISS) to states	Already implemented	65,000	0	0	15,000	0	0	**80,000**
Conduct integrated supportive supervision by National, State and LGA teams utilizing harmonized ISS tools		375,000	390,000	400000	410000	420000	430000	**2,425,000**
Conduct training on DQA for M&E staff at all levels to conduct data quality checks prior to transmission		350,000	155,000	0	0	55,000	0	**560,000**
Conduct quarterly Data Quality Audits by the National Malaria Program		320,000	325,000	330,000	335,000	340,000	350,000	**2,000,000**
Convene operational research stakeholder meeting to identify and set research priorities		25,000	25,000	25,000	25,000	25,000	25,000	**150,000**
Conduct of approved OR protocols		100,000	100,000	100,000	100,000	100,000	100,000	**600,000**
Documentation and dissemination of OR findings to inform program implementation		120,000	125,000	130,000	135,000	140,000	145,000	**795,000**
Rationalize and harmonize data collection tools for use in public and private health facilities		130,000	0	0	0	0	0	**130,000**
Support finalization of community data tools		15,000	0	0	0	0	0	**15,000**
Print and distribute the revised tools		125,000	45,000	45,000	45,000	45,000	45,000	**350,000**
Train health records officers, PPMVs and community health service providers on the revised tools		450,000	350,000	250,000	250,000	100,000	0	**1,400,000**

Support roll out DHIS 2.0 to all Local Government Areas	400,000	250,000	100,000	100,000	100,000	100,000	**1,050,000**
Support training of M&E officers at LGA level, and records officers at tertiary facilities on DHIS2	250,000	145,000	0	0	0	0	**395,000**
Roll out mobile technology to health facilities for data capture, in conjunction with Partners	750,000	474,000	474,000	474,000	474,000	474,000	**3,120,000**
Logistic support for use of mobile technology	57,000	14,000	14,000	14,000	14,000	14,000	**127,000**
Training of M&E officers at facility, LGA, State and National levels with emphasis on completeness of reporting and capabilities towards the demands of the pre-elimination goal	600,000	250,000	150,000	150,000	0	0	**1,150,000**
Mainstream M&E curriculum in schools of health technology to build knowledge of DHIS2.	67,500	25,000	0	0	0	0	**92,500**
Increase number of sentinel sites to at least one in each state with consideration for locations where there are already inputs from other partners or departments	250,000	250,000	250,000	250,000	0	0	**1,000,000**
Scale up surveillance at human, vector and parasite levels including special training for the preceding pre-elimination period (2018-2020).	125,000	150,000	175,000	200,000	250,000	300,000	**1,200,000**
Conduct program impact evaluation	0	0	0	0	0	650,000	**650,000**
Conduct Malaria Program reviews (MPR) in 2016 and 2019.	0	350,000	0	0	350,000	0	**700,000**
Revise the NMSP to align with new NHSDP in 2016	0	0	45,000	0	0	0	**45,000**

Conduct Malaria Indicator Survey (MIS)				180,000			200,000	**380,000**
Conduct Health Facility Survey		154,000	0	160,000	0	170,000	0	**484,000**
Conduct Rapid Impact Assessment		0	583,400	0	0	590,000	0	**1,173,400**
Compile and review malaria data from NDHS		0	0	24,000	0	0	0	**24,000**
Strengthen the existing linkages between the malaria programme and the larger ATM network		45,000	45,000	45,000	45,000	45,000	45,000	**270,000**
Improve coordination with DHPRS		0						
Recruit 18 more field officers		120,000	245,000	370,000	380,000	390,000	400,000	**1,905,000**
Total (USD)		**4,893,500**	**4,296,400**	**3,267,000**	**2,928,000**	**3,608,000**	**3,278,000**	**22,270,900**

8.4 LIST OF CONTRIBUTORS TO THE M&E PLAN DEVELOPMENT

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