

Federal Ministry of Health Abuja, Nigeria

NATIONAL MALARIA STRATEGIC PLAN 2014-2020 MALARIA PROGRAMME REVIEW

AIDE MEMOIRE

JANUARY 2020

Background

The Aide Memoire summarizes the major findings and critical actions emerging from the Nigeria Malaria Programme Review based on the implementation of a fourth-generation and current National Malaria Strategic Plan (NMSP 2014-2020). The aide-memoire is neither a memorandum of understanding nor a legal document. It is a re-statement of the joint commitment of the Federal Ministry of Health and partners, to work together to support and follow up on the implementation of proposed recommendations towards the achievement of the vision of a malaria-free Nigeria.

Malaria has remained a leading public health concern in Nigeria, still accounting for a high burden of illness and deaths across the population, but especially among children under five years of age and pregnant women.

The NMSP 2014-2020 represents sustaining the significant scale-up of key interventions, drawing from a robust evidence base and the experience of previous years. The plan spans of seven years and is aimed at achieving a malaria pre-elimination status (below 5% test positive rate) for the country, as well as a reduction of malaria-related deaths to zero by 2020.

At the mid-point of the NMSP in 2017, a mid-term review (MTR) was conducted that found a low implementation capacity of the National Malaria Elimination Programme (NMEP), there were declines in deaths due to malaria. The MTR noted that the recorded gains were not at a pace initially projected at the start of the NMSP in 2014, underscoring the likelihood that malaria pre-elimination may not be achieved if current implementation arrangements were maintained. Corrective recommendations were made to aimed at getting the programme back on track.

In keeping with WHO recommendations, the Federal Ministry of Health, through the National Malaria Elimination Programme (NMEP) in collaboration with members of the RBM Partnership to End Malaria, reached a consensus on 12th July 2019 to conduct a Malaria Programme Review (MPR). The MPR is a management tool for evidence-based appraisal of a country's malaria situation and programme performance. It affords a more comprehensive and holistic evaluation of the national response for the current strategic plan, the identification of recommendations for future programme strengthening including the development of a new National Malaria Strategic Plan.

Achievements and Results

The goal of the 2014-20 plan was to reduce the malaria burden to pre-elimination levels and bring malaria-related mortality to zero. While these goals were not achieved, substantial declines in malaria prevalence from 2010 values were achieved (42% in 2010 to 23% in 2018).

The percentage budgetary allocation for health by Governments (Federal and States) as a percentage of overall investments have remained low (average of 5-7%) and consistently below the 15% recommended by African Heads of State during the Abuja Declaration of 2001.

Domestic Financing for Malaria Elimination has declined, and the proportion of the budget allocated to NMEP as a component of the FMoH budget reduced from 0.003% in 2016 to 0.0003% in 2019 representing a 10-fold decrease, widening the funding gap for Malaria Strategic Plan. The GoN in the latest replenishment round of Global Fund to Fight HIV, TB and Malaria (GFATM) made substantial contributions to the fund²

The present malaria strategic plan 2014-20 is aligned to health sector development plans; It aims to deploy a combination of appropriate interventions in line with global best practice to reduce morbidity and mortality due to malaria.

The combination of interventions to be deployed at optimum coverage and quality, targeting different points in the vector-human-vector cycle to prevent onward transmission of the disease and illness in populations with significant parasite loads, and an environment with highly efficient vectors.

The mixed results in reduction of burden disease over the period despite substantial efforts of the period of the plan are likely to be the result of a combination of factors, including, but not limited to, sub-optimal coverage on planned interventions, underlying variations in access to care, health-seeking behaviour, broader development, economic indices and climate change. There is a need for further local research to unpack the drivers of change in different contexts to inform optimization of interventions.

An important consequence of progress made against this backdrop is the geographical variation in the distribution of disease calls for a more tailored approach with subnational variation in strategies, with required capacities framed within a broader health sector response especially at sub-national levels.

The prevailing resource constraints will require innovation and identification of efficiency gains, while limitations in available tools in the tool kit for malaria control and elimination persist.

Epidemiological and entomological impact

- Plasmodium falciparum accounts for 94% 98% of infections, Plasmodium malariae accounts for almost 2% of infections, while Plasmodium ovale is rare, accounting for approximately 0.2% of all infections. The mixed infections account for 4%.³
- Nigeria accounts for 25% of the global burden of Malaria and reported the highest absolute increases in case incidence estimates for malaria in 2018 compared with the 2017⁴. There however is a significant decrease in Malaria Parasite Prevalence from 2010 values of 42% ⁵ to 23% in 2018⁶.
- National prevalence figures, however obscure significant and progressive variations across the geopolitical and ecologic zones with the highest prevalence observed in

National Heal Accounts

² Nigeria has contributed a total of US\$28.62 million to the Global Fund to date. The country pledged US\$12 million for the Global Fund's Sixth Replenishment, covering 2020-2022

³ NMEP 2019

⁴ World Malaria Report, 2019

⁵ Malaria Indicator Survey, 2010

⁶ National Demographic and Health Survey, 2018

the North-West and Kebbi State has the highest with 52%. The lowest prevalence of 1.8% was recorded in Lagos State⁷.

- Estimates of Malaria deaths globally reduced from about 400 000 in 2010 to about 260 000 in 2018, the most substantial reduction being in Nigeria, from almost 153 000 deaths in 2010 to about 95 000 deaths in 2018⁴.
- Entomological Inoculation Rate (EIR) varies across the transmission season by vector and ecological zone. These differences may contribute to variations in malaria transmission dynamics across regions⁸.
- Findings during this MPR indicate variations in vector behaviour across the various ecological zones. Indoor biting rates were higher than outdoor biting rates in Akwa Ibom, Bauchi, Ebonyi, and Nasarawa states while in Sokoto (Sahel), evidence of outdoor biting rates exceeding indoor biting rates was established. Evidence of significant outdoor biting is emerging in other sentinel sites⁹.

Vector control

- LLINs were the primary vector control intervention with distributions through mass campaigns, and through routine platforms to pregnant women and children under the age of 5 years in ANC facilities and during immunizations, respectively. Indoor residual spraying (IRS) has been implemented in a few local governments in a few targeted states. ¹⁰ These interventions have been complimented with limited larval source management.
- Within the period covered by this MPR, a total of 127.9 million LLINs were reported to have been distributed through 45 campaigns in 32 states. In addition, 16.3 million LLINs were distributed through the routine system. LLINs durability monitoring shows an estimated median of 5.3 years in Zamfara and 3.2 years in Oyo State, the difference attributable to the difference in net use environment and net handling¹¹.
- Funding for LLINs distribution with very limited Federal and State government contribution. States without donor support have not been able to conduct mass LLIN distribution in the past seven years.
- The proportion of households with at least one ITN for every two persons ¹² rose from 22% in 2013 to 30% in 2018 ¹³. The national strategic target of 80% ownership and use of ITNs for the period under review was not achieved.
- It is noteworthy that the proportion of pregnant women and children under five sleeping under ITN increased remarkably during the period under review. In 2018,

⁷ National Demographic and Health Survey, 2018

^{8.} An average EIR of 147.7 infective bites/person/night for Anopheles coluzzii was found in the Guinea Savannah and 137.4 infective bites/person/night was recorded in the mangrove swamp, but these have varied over time. The highest numbers of infective bites indoors and outdoors were from Anopheles coluzzii and Anopheles arabiensis respectively
9 NMEP reports

¹⁰Pilot projects implemented in Nassarawa, Anambra, Lagos, Jigawa, Rivers and Bauchi states

¹¹ Source NMCP reports

¹² Indicator "least one ITN for every two persons" a proxy for sufficient nets in a household

¹³ National Demographic and Health Surveys

- 58% of pregnant women slept under ITN compared to 16% in 2013, while 52% of children under 5 slept under ITN compared to 17% in 2013.
- While the significant disparity in reported LLIN coverage exists between the states, it
 is evident that the problem is not predominantly a problem of use, but adequate
 coverage. Except for some of the northern states, adequate coverage is indeed the
 main issue that needs to be addressed.
- There is some scepticism expressed among various stakeholders as to the
 effectiveness of ITN in the context of malaria elimination in Nigeria. This includes the
 efficacy, acceptability and uses, however the review, while recognizing the
 limitations of attributing changes to any intervention of reduction to any single
 demonstrated some association between "adequate" net ownership and use with
 decreasing malaria prevalence.
- Programmatic deployment of Indoor Residual Spraying (IRS) and Larva Source Management (LSM) were key vector management priorities for scale-up in the MSP; they, however, remained mostly unfunded or implemented at very limited scale during the period under review. The determination of the measure of the effectiveness of LSM within these pilot studies was challenging to establish due to the very weak evaluation of the projects. Another area of concern is on the accurate reporting of coverage during the implementation of IRS and LSM, which need to be based on the targeted population/house structures.
- Entomological surveillance including monitoring of insecticide resistance has been undertaken extensively by both NMEP and partners with routine collection and reporting of the entomological data from representative sentinel sites¹⁴. There has been, however, minimum evidence that such data is routinely being used to guide current interventions.

- Ensuring programmatic coverage and use is an essential factor to achieve the desired effectiveness of any vector control intervention. Resources to ensure adequate and timely coverage with appropriate vector control intervention should be sourced.
- The research community to urgently generate evidence (including exploring the use factors) to guide the deployment and uptake of appropriate intervention or mix of interventions as part of Integrated Vector Management.
- There is a need for a revision of considerations and options for the deployment of vector control strategies informed by evidence of what works best in various settings. These factors, taking into consideration local peculiarities, should result in the improved overall cost-effectiveness of vector control within the malaria control strategy.

¹⁴. Context described not inclusive of research settings

- Strengthen Social, behavioural Change Communication (SBCC) associated with vector control interventions, tailored to the local context and informed by proper formative research to improve community participation and ownership.
- Strengthen entomological surveillance: that routine collection and reporting of the
 entomological data from representative sentinel sites to be used for updating
 species composition; biting preferences and biting rates; sporozoite rates where this
 is feasible; and insecticide resistance status.
- Nigeria to consider the use of novel technology solutions and implementation research to improve efficiency in programme delivery

Diagnosis and Treatment

- The National Guidelines for Diagnosis and Treatment of Malaria was updated in 2015. The main changes were an emphasis on the definitive diagnosis of malaria with either RDT or microscopy before treatment and an update on the treatment of severe malaria with artesunate in line with WHO recommendations¹⁵.
- Diagnostics testing with either microscopy or RDT from both public and private health facilities was 14% in 2018, which was significantly lower than the targeted > than 70%.
- The current recommended treatment (Artemisinin-based Combination Treatments-ACTs) remain efficacious in the treatment of uncomplicated malaria.
- Access to ACTs has improved significantly to 52% (from 18% in 2013), achievements; however, progress fell short of the strategic plan target of 100% by 2018 through to 2020.
- Recognizing progress made, it is pertinent to note the significant contribution of the
 private sector in the delivery of care in the country context. While being a broader
 health system factor, this impact significantly on access and quality of appropriate
 case management. Significant variations exist in the distribution and quality of care
 across service delivery categories. Efforts to strengthen regulation through
 engagement at state and federal levels have been reported in the course of the
 programme review.
- During the period of the strategic plan, the end of the Affordable Medicine Facility for Malaria initiative which provides quality-assured medicines and a crowd out effect on non-quality assured medication in the private sector, ended¹⁶. It is unclear how the sudden withdrawal of the initiative may have affected the availability of quality-

¹⁵ NMEP

¹⁶ Project end in 2017

- assured antimalarial medicines in the private sector and its implications on case management.
- There is currently no quality control programme for malaria diagnostics.

- Appropriate diagnosis and treatment of malaria are largely impacted on the overall system access and quality of care, in light of the significant contributions of the Nigeria context of the private sector, a more holistic approach to quality of health care is recommended and is likely to have positive effect on the overall access and quality of malaria diagnosis and treatment in Nigeria
- Establish and maintain a network of reference training institutions to support malaria diagnosis capacity-building efforts and support the quality control system.
- The National Guidelines on Diagnosis and Treatment should be reviewed based on the reports of ongoing Therapeutic Efficacy Test.
- Drug efficacy studies should be conducted more routinely, e.g., biennially as recommended by WHO and should be expanded to include molecular analysis of artemisinin-resistant markers
- Strengthen and sustain collaboration with NAFDAC on the monitoring of substandard drugs and NAPRID on Therapeutic Efficacy Studies
- Strengthen engagement with heath worker registration bodies on providing support to initiatives aimed at Continued Medical Education (CMEs) on appropriate case management

Chemoprevention

Key Issues

- The target of the MSP to achieve 100% uptake of IPTp for pregnant women attending ANC by 2018 through to 2020 was not met. Only 40.4% of pregnant women reported having taken two or more doses of SP in 2018 compared to 14.6% in 2013.
- Some Partners have implemented Seasonal Malaria Chemoprevention in the Sahel region; the need to take same to scale as a complementary prevention strategy should be considered a high priority.

- The NMEP to collaborate with the Family and Reproductive Health (FRH)
 department to implement health promotion and peer support interventions to
 enhance early ANC first visits, to improve IPTp uptake among pregnant women,
 efforts should be made to ensure that all eligible health facilities, provide ANC
 services to their clients.
- As the country marches towards fully integrating managed malaria care into universal health care (UHC), taking into account health systems for equitable healthcare access, there is the need for stronger collaboration between NMEP and

- the relevant platforms for service delivery managing care providers to improve access to chemoprevention strategies.
- Improved collaboration between the Department of Family Health and NMCP and SMCPs on optimizing the delivery of IPTp through ANC
- Collaboration with SPHCDA and NPHCDA on the deployment at scale on community-based malaria chemoprevention such as SMC
- Scale-up of SMC to eligible populations

Procurement and Supply Management

Key Issues

- The public procurement and supply chain management system supporting the management malarial medicines and other malarial products is highly complex, with several interconnected product pipelines with both free drugs and drug procured as part of drug revolving funds.
- There is no clarity on the pharma compliant warehouse in most states.
- Overall public procurement of malaria medicines at state and federal levels appear
 to have declined within the period under review. The public sector records from
 LMIS showed discordance in the number of RDT and ACTs supplied; the number of
 RDT provided appear to be much less than the number of ACTs treatments supplied
 in 2018 and 2019. Private sector LMIS remains a challenge for the National Malaria
 Programme.
- Generation and availability of logistics data remain poor, making consumption-based forecasting and pipeline monitoring difficult.
- The Review Team noted the non-inclusion of Artesunate Suppository in the Essential Medicine List (EML) as recommended in the National Standard Treatment Guideline (2015) for pre-referral management of severe malaria.

Recommendations

- Governments of Nigeria at Federal and State levels MUST fund procurement and distribution of Malaria medicine and commodities to ensure continuous availability in the logistic pipeline.
- FMoH and SMoH should sustain the strengthening of the collaboration with the LMIS/LMCU work-stream of the National Products Supply Chain Management Program (NPSCMP). All inventory from various Partners should be domiciled with NMEP for easy access.
- FMoH/NMEP should improve the sustain collaboration with NAFDAC to establish systems for Routine SC sampling of Malaria Commodities.
- An appropriate Accountability Framework to track Malaria Commodity Supply Chain Performance should be developed.

Advocacy, Communication and Social Mobilization

- The 2019 MPR showed discrepancies between ACSM outcome indicators and targets in national plans, results frameworks and surveys; weak monitoring of SBCC activities; inadequate ACSM drivers with limited capacities at the sub-national level and poor follow up on advocacies to track commitments made.
- The observed weakness in the conceptualization and deployment of ACSM activity may have contributed to the failure to achieve related services delivery targets, notably ownership, use or access to malaria prevention and treatment strategies.
- The percentage of children under age five years of age seeking treatment the same or next day rose from 4.2% in 2013 to 37.9% in 2018; however, this did not meet the target set in the MSP under review.
- Funding was identified as a significant challenge of strategic communication for Malaria prevention and treatment in the last five years.
- For success to be achieved would require intensified advocacy to sustain political will at the highest levels of Federal and State structures

- Revise the National Malaria ACSM strategic document and other ACSM strategic
 documents and manuals based on evidence from the evaluations. The process
 should be inclusive of stakeholders in a bottom-up process, tailored to the context
 and felt needs of the target audience. It should cater to the heart of advocates.
 Strategy/intervention/message design should be about building a deep empathy with
 the target audience and participatory from the bottom up.
- Critical for success is the urgent need to significantly strengthen the capacity and leadership of Social Behavioral Change (SBC) elements of the programme strategy especially at sub-national levels, this strengthening measures will be critical for the success of the malaria programme
- There is an urgent need for strengthening and broadening of the advocacy elements
 of the national malaria programme with innovative approaches to engage, sensitize,
 influence and mobilize various target groups (policymakers, private sector leaders,
 and community leaders) towards improved ownership of the programme.
- Strengthen the technical capacity of ACSM drivers at state and national levels with necessary skills to respond to their mandate. The ACSM branch should be supported to coordinate, generate, analyze and share data on the impact of SBC activities and systematically build evidence for improved uptake of malaria interventions.
- Use of local context-specific evidence from operational research to design context-specific ACSM activities.
- Recognize that partnership is powerful and leverage or integrate with existing structures/programs at the community levels.
- Establish or strengthen social accountability mechanism to promote citizens' engagement and improve public confidence in Malaria interventions.
- Devote time to the identification, training, and support of community-based health workers. (CHIPS CHEWs VHWs) Community involvement in the selection of

frontline workers from the locale increases the likelihood of their acceptability in door-to-door and group education as well as receptivity to their messages

Malaria in Emergency Situations

Key Issue

 Malaria in humanitarian and complex emergencies occupied only little mention in the 2014-2020 strategic plans. Deployments of Malaria interventions in North-East part of Nigeria through other departments and agencies are not visible to the National Programme and are largely unreported.

Recommendations

- NMEP and Partners should develop a concise guideline detailing the implementation of clear malaria prevention and case management strategies in emergencies – including where and how malaria commodities may be obtained. The next MSP should drive the national response
- NMEP and SMEP should work more collaboratively with National Emergency Management Agency (NEMA), the State Emergency Management Agency (SEMA) and other MDAs with responsibility for managing emergencies to put Malaria Prevention and Treatment on the priority lists of these agencies

Surveillance, Monitoring & Evaluation and Operations Research (SMEOR)

Key Issues

- The timeliness and completeness of reporting on DHIS 2.0 platform steadily increased over five years, virtually all the LGAs in the country are currently reporting malaria data. However, data generated from the private sector care providers remains a major challenge.
- Field validation visit to Lagos revealed a high proportion of registered private health facility reporting to HMIS, lessons from the state can drive national strategy for private sector engagement.
- Adoption of mobile technology for data reporting has been slow. Only Lagos and Kaduna States have piloted the use of mobile data capturing device for reporting into the DHIS.
- The National Malaria Operations Research Agenda (NMORA) was developed in 2016 by NMEP in collaboration with development partners, research institutions, the academia and non-governmental organizations; implementation has been slow due to inadequate funding of the malaria research questions. Only 12% (4 out of 33) of the prioritized questions in the NMORA have been addressed between 2014 to 2019 as reported to NMEP

- Making malaria data repositories functional though the development of capacities in the development of malaria bulletins
- The FMoH, SMoH and the Malaria Programme should develop strategies of sustained engagement of private health providers and strengthen their capacity to report Malaria data into the NHMIS.
- To improve data quality, NMEP and Partners should ensure that the capacities of M&E officers at all levels are commensurate with their tasks and facilitate capacity building of persons with responsibility for data collection, retrieval, analysis and reporting. Prioritize the adoption and adaptation of mobile technology for data reporting in the next MSP.
- Continuous advocacy to Department of Planning Research and Statistics (DHPRS) to expedite action on the roll-out of the revised 2018 NHMIS data capturing tools.
- There is a need to prioritize seed funding for Operation Research in support of calls from to academia of relevant research questions to guide the deployment of strategies and adoption of best practices. The Malaria Research Expert Group must be supported to deliver on its mandates.
- Establish a research Technical Working Group with representation from major research institutes and researchers working in the field of malaria.
- Making malaria data repositories functional though the development of capacities required for the maintenance and the development of malaria bulletins.

Programme Management /Implementation Framework

- NMEP and Partners developed and disseminated the Coordination Framework for Malaria Control in Nigeria in 2009. This Framework provides the general guide for internal and external coordination of RBM Partners. The framework may need to be revised and adapted by sub-national governments with a focus on strengthening local operational decision making in implementation and the integration of Malaria interventions into the broader health system.
- Although the RBM Partners and the Malaria Technical Working Group provide a strong partnership for the National Malaria Programme, internal coordination of NMEP branches and with the other Departments and Agencies of Government remains a significant challenge in the period under review.
- Stakeholder and partners in a concerted effort to strengthen the malaria programme, embarked on a self-appraisal to improve approach to malaria programming as part of efforts to ensure high impact as part of the High burden High Impact initiative, key in findings of the initiative identified the need for leadership strengthening at federal and sub-national levels and deep consideration for stratification of intervention mix to local context.
- Significant variations in epidemiologic and health system context in respective states require a different approach to capacity strengthening tailored to the settings, using

- participatory, hands-on approaches; roles and institutional capacities within states are critical for success.
- Private sector engagement across different domains of the Malaria Programme is weak. The PPP framework needs to be reviewed to allow the NMEP leverage on the strength of the private sector for services and financing.
- Critical gaps in implementation framework are fit for purpose engagement mechanism with private sector stakeholders and accountability elements at executive and legislative levels
- The MPR noted consistent improvement in Planning at Federal and State levels, plan implementation is, however, deficient year in year out at both levels. Efficiency in resource allocation and use are also significant issues of activities implementation.

- Review the current Coordination Framework to reflect the emerging realities of broadened Malaria Elimination Stakeholders and to improve sub-national level coordination arrangement that will support Universal Health Coverage
- To address local variations in the mix of capacity needs at the sub-national level, building the capacity of states to adapt and implement national strategies to their context informed by best practice.
- Review the PPP Framework and operationalize an effective PPP coordination arrangement that will leverage on all domains of the private sector strengths.
- A structured KM framework within NMP that would harness lessons identified in resolving implementation bottlenecks as a resource to implementers (National could shift its focus to the harmonization of efforts, technical review and bottleneck resolution).

Future Strategic Directions

- A critical need to increase domestic financing of malaria programme activities at federal and state levels, with investments into areas the improve system resilience and promote sustainability of gains achieved.
- Building on current gains and functional systems and processes
- Strengthen evidence base for operational and strategic decision making; The evidence base should drive strategic direction in terms of strategy mix of strategies especially at sub-national levels
- Significant capacity strengthening of the NMEP, along with defining structures and pathways for better internal coordination with relevant departments or agencies of the FMoH.
- Leveraging on domestic homegrown flagship initiatives aimed at improving universal access to care such as the Basic Healthcare Provision Fund (NHPF) through enhanced collaboration with NPHCDA/SPHCDA

- Urgent need to further strengthening of existing platforms for Federal-State interface and collaboration. The efficient functioning of these platforms would be especially critical to ensure improved leverage of capacities of SMOH and SMEPs.
- Harnessing and reorienting the programme to promote the participation of nonhealth sectors in the national response for malaria
- GoN Strategic catalytic investments to provide active participation of the private sector participation such as deliberate country investment and regulatory concessions toward the development of local institutional production capacities and transfer of technology
- To address local variations in the mix of capacity needs at the sub-national level, a
 review of the current structure and function of the NMEP at the federal levels is
 needed to ensure a progressive shift in focus to building capacity of states to adapt
 and implement national strategies to their context informed by best practice.
- Development of a holistic national TA plan incorporating all partner TA support rather than partner-specific plans.
- Prioritizing collaboration with the research community to urgently generate evidence (including exploring the use factors) to guide the deployment and uptake of appropriate intervention or mix of interventions as part of Integrated Vector Management in the immediate term and all subsequent operational research needs of the programme.

Conclusions

Significant progress was made towards malaria elimination in the period with a reduction in the malaria prevalence from 42% to 23%, along with a reduction in mortality (38%), there overall goal and objectives of the MSP were not on track owing to capacity and resource constraints due to funding challenges experienced in the life of the strategic plan. The concerted efforts of the FMoH through the NMEP and relevant MDAs with support from implementing partners is expected to get the country back on track going forward. The plan to achieve this will be laid out clearly with deliverables, and an accountability framework in the next NMSP based on the findings from the MPR.

Commitment

We, as the Ministry of Health commit ourselves to	and par	tners in t	the Nationa.	l Malaria	Elimination	Programme
NAME Honorable Ministry of Health	-					
NAME WHO Representative representi	ng one U	JN				
NAME USAID Mission director						
NAME Head of Office, DFID Nigeria						

In Abuja, Friday, 24th January 2020