Government of Malawi
Ministry of Health

NATIONAL MALARIA STRATEGIC PLAN (2023-2030)

"Towards malaria elimination in Malawi"

National Malaria Control Programme
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March, 2023

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ACKNOWLEDGEMENTS

This National Malaria Strategic Plan for Malawi for the period from 2023 to 2030 (NMSP, 2023-2030) is a product of concerted efforts and contributions from various institutional and individual stakeholders. The Ministry of Health (MoH) is grateful for the support various stakeholders are providing to the National Malaria Control Programme (NMCP).

The MoH would like to thank the Global Fund (GF) and US President's Malaria Initiative (PMI/USAID) for the financial and technical support they continue to provide to NMCP. GF and PMI support to processes leading to the development of this strategic plan (Review Workshops for 2017-2022 MSP period, Bottleneck Analysis Workshops, and MSP Writing and Costing workshops) was indispensable.

The MoH also recognises the direct roles played by the Project Implementation Unit (PIU) and the NMSP 2023-2030 development team. Technical and administrative support by PIU enabled the successful completion of all processes leading to the development and finalisation of this strategic plan.

The MoH extends special gratitude to the technical team which led the process of developing this strategic Plan. The team comprised members from the MoH Department of Planning and Policy Development; NMCP technical team led by the Programme Manager; PIU; PMI; Malaria Elimination and Control Partnership In Africa (MACEPA); Implementing partners (PSI-Impact Malaria, World Vision, Vector Link, BreakThrough Action); The academia; and The Malaria Youth Army Champions which is a CSO grouping under the African Leaders Malaria Allliance (ALMA), just to mention a few. The MoH would also like to specially recognise the technical coordination role played by the Strategic Planning Consultant recruited by PSI-Impact Malaria Project with financial support from PMI. This technical team ensured that the resulting strategic plan is framed in a manner which thoroughly addresses malaria technical issues in line with national and global priorities.

Finally, the MoH would also like to thank district-level and community-level stakeholders who participated in processes leading to the development of this strategic plan. As direct implementers of strategic interventions included in this plan, their inputs were invaluable.

Dr. Charles Mwansambo
Secretary for Health
March, 2023

EXECUTIVE SUMMARY

The National Malaria Strategic Plan, 2023-2030, serves as an overarching guide for the National Malaria Control Programme (NMCP) and all partners on implementation of malaria interventions in Malawi for the next 8 years, from 2023 to 2030. The plan has been aligned to the Health Sector Strategic Plan III, 2023-2030 (HSSP III, 2023-2030) both in terms of strategic areas of focus as laid out in the HSSP III Health Benefit Package (HBP) and implementation approach, as an operational strategy for broad HSSP III intents on Malaria.

The NMSP (2023-2030) builds on successes and experiences during the preceding strategic period (NMSP 2017-2022) while also ensuring alignment to both already existing and emerging strategic directions. The plan has been informed particularly by the vision under the Global Technical Strategy (GTS, 2015-2030) for Malaria of a Malaria free world by 2030 to which Malawi committed. The Universal Health Coverage (UHC) Agenda has also implicitly driven the framing of this strategic plan. This strategic plan reflects intents to address both geographic and financial challenges and inequities when it comes to access to malaria services, by extending service provision to hard-to-reach areas and providing for malaria service provision free of charge at all service delivery points under the public-funded health care system.

Malawi has registered significant progress on reducing malaria-related mortality and morbidity over that past strategic periods. Mortality due to malaria also declined by 61%, from 23/100,000 in 2016 to 9/100,000 in 2022. Malaria incidence also declined markedly during the same period, from 407/1,000 in 2016 to 220/1,000 in 2022 (HMIS). However, challenges still exist which have broadly manifested in fluctuating trends in malaria incidence rates. The Fluctuating trends point to challenges NMCP and partners are facing in sustaining the gains especially on integrated management of malaria vectors which is a central thematic intervention area. Other challenges include limited health worker capacity on novel or updated practices; poor adherence to guidelines, poor ANC service utilization, long commodity procurement lead times, sub-optimal Social and Behaviour Change (SBC) for Malaria, limited data use at all levels, and low fidelity of activity implementation.

Based on promising progress trends over the past decade, the MoH has set the goal of eliminating malaria as a public health concern in Malawi by 2030. This intent is inherent in strategic directions under this strategic plan.

To achieve the goal of malaria elimination in Malawi by 2030, the MoH (through NMCP) and partners have set the following strategic objectives on each of the 7 thematic interventions under malaria programming in Malawi:

1. *Integrated Vector Management*: To increase the proportion of population protected by at least one malaria vector control interventions from 37% in 2022 to at least 90% by 2030
2. *Malaria Case Management*: To increase and sustain the proportion of suspected cases of malaria that are tested from 98% in 2022 to 100% and treat all the confirmed cases by 2030.
3. *Malaria in Pregnancy*: To increase the uptake of at least 3 doses of IPTp from the 2022 baseline of 56% to 80% by 2030
4. *Procurement and Suppy Management*: To sustain annual average stock out rate of less than 1% for all malaria first-line treatment throughout the MSP (2023-2030) period
5. *SBC for Malaria*:
   (a) To increase proportion of caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of the onset of fever from 46% to 90% by 2030
   (b) To increase the proportion of the general population who use an ITN consistently from 55% (MBS 2021) to 80% by 2030
   (c) To Increase the proportion of pregnant women who take IPTp 3+ during pregnancy from 56% (MBS 2021) to 80% by 2030
6. *Surveillance, Monitoring, Evaluation and Operations Research (SMEOR)*: To improve malaria data quality from 94% in 2022 to 99% by 2030 to ensure evidence-based program implementation, policy direction and accountability at all levels of health service delivery.
7. *Malaria Programme Management*: To strengthen program management to support the effective implementation of planned MSP activities from 56% to over 90% by 2030.

The total cost of implementing strategic interventions under each of the above objectives for the entire 8-year period has been estimated at MWK1.1 trillion. Based on indicative funding commitments by major donors for Malaria (Global Fund, PMI and Malawi Government), implementation of this NMSP will face an average financing gap of 51% for the first 4 years (2023-2027). To this effect, NMCP and partners have planned to scale up efforts to mobilise more resources with a particular focus on domestic sources, as guided by the Malawi Health Financing Strategy.

Implementation and monitoring of this strategic plan will be based on the "One Plan, One Budget, One Report" principle by the MoH. Planned Malaria strategic interventions will be integrated into one package of health services, as part of an integrated service provision approach recommended by the MoH for realizing efficiency and cost-effectiveness. In terms of the institutional set-up, this NMSP will be implemented in line with the decentralized architecture, with MOH headquarters only providing policy or regulatory support.

ACRONYMS

ACT	Artemisinin Combination Therapy
ADC	Area Development Committee
AEC	Area Executive Committee
ALMA	African Leaders Malaria Alliance
ANC	Antenatal Care
AS+AQ	Artesunate + Amodiaquine
CHAGs	Community Health Action Groups
CHAM	Christian Health Association of Malawi
CHWs	Community Health Workers
CMED	Central Monitoring and Evaluation Department
CMST	Central Medical Stores Trust
COM	College of Medicine
DDC	District Development Committee
DEC	District Executive Committee
DHA-P	Dihydroartemisinin Piperaquine
DHMT	District Health Management Teams
DHPOs	District Health Promotion Officers
DIP	District Implementation Plan
DOT	Directly Observed Treatment
EPR	Epidemic Preparedness and Response
GDP	Gross Domestic Product
GFTAM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GF-CCM	Global Fund Country Coordinating Mechanism
GHSC-PSM	Global Health Supply Chain – Procurement and Supply Management
GIZ	Gesellschaft für Internationale Zusammenarbeit
GTS	Global Technical Strategy
HBP	Health Benefit Package

HEU	Health Education Unit
HMIS	Health Management Information System
HSAs	Health Surveillance Assistants
HSSPs	Health Sector Strategic Plans
HTSS	Health Technical Support Services
iCCM	Integrated Community Case Management
iCHIS	Integrated Community Health Information System
IMCI	Integrated Management of Child Illnesses
IMSSM	Integrated Malaria Supportive Supervision and Mentorship
IHS	Integrated Household Survey
IPTp	Intermittent Prevention and Treatment in pregancy
IRS	Indoor Residual Spray
ITNs	Insecticide-Treated Nets
IVM	Integrated Vector Management
LA	Lumefantrine-Artemether
LLIN	Long Lasting Insecticide-treated Nets
LMIS	Logistics Management Information System
LSM	Larvae Source Management
LTK	Learners Training Kit
LUANAR	Lilongwe University of Agriculture and Natural Resources
MACEPA	Malaria Control and Elimination Partnership in Africa
MDHS	Malawi Demographic and Health Survey
MIP	Malaria in Pregnancy
MMIS	Malawi Malaria Indicator Survey
MLW	Malawi-Liverpool Wellcome Trust
MoLG&RD	Ministry of Local Government and Rural Development
MOU	Memorandum of Understanding
MPHC	Malawi Population and Housing Census

MPR	Malaria Programme Review
mRDT	Malaria Rapid Diagnostic Test
MSP	Malarial Strategic Plan
MTR	Mid-Term Review
MUBAS	Malawi University of Business and Applied Sciences
NAMS	National Archive for Malaria Slides
NGO	Non-Governmental Organisations
NMCP	National Malaria Control Programme
NMCS	National Malaria Communication Strategy
NMSP	National Malaria Strategic Plan
NSO	National Statistical Office
OPD	Outpatient Department
ORT	Other Recurrent Transactions
OTSS	Outreach Training Supportive Supervision
PAM	Physical Assets Management
PCR	Polymerase Chain Reaction
PEPFAR	Presidential Emergency Plan for AIDS Relief
PFM	Public Finance Management
PIU	Programme Implementation Unit
PMI	US Presidential Malaria Initiative
PPDA	Public Procurement and Disposal of Assets
QA	Quality Assurance
QMD	Quality Management Department
QoC	Quality of Care
RBM	Roll Back Malaria
SADC	Southern African Development Community
SBCC	Social and Behavioural Change Communication
SDG	Sustainable Development Goal

SDP	Service Delivery Point
SHOPS	Strengthening Health Outcomes through the Private Sector
SIAB	Prefabricated Storage in a Box
SLAs	Service-Level Agreements
SMEOR	Surveillance, Monitoring, Evaluation and Operations Research
SOs	Spray Operators
SOPs	Standard Operating Procedures
SP	Sulphadoxine Pyrimethamine
TES	Therapeutic Efficacy Studies
THE	Total Health Expenditure
TWG	Technical Working Group
UNICEF	United Nations' Children's Fund
USAID	United States Agency for International Development
VDC	Village Development Committee
WHO	World Health Organisation

1

INTRODUCTION

1.1. CONTEXT

1.1.1. The National Malaria Strategic Plan (NMSP) within the broader strategic frameworks

In 2022, the Ministry of Health (MoH), in collaboration with partners, developed the Health Sector Strategic Plan III (HSSP III) to govern the implementation of health interventions in Malawi from the year 2023 up to 2030. The HSSP III articulates priorities for health sector in Malawi with Malaria as one of the priority disease areas.

Direct policy and strategic guidance on implementation of malaria interventions is provided by the National Malaria Control Program (NMCP) which falls under the MoH Directorate of Preventive Health Services (DPHS)[1]. The NMCP operationalises broader intents on malaria control in Health Sector Strategic Plans (HSSPs) by developing and implementing malaria-specific national strategic plans (NMSPs). The NMSP 2023-2030 will therefore directly guide the implementation of malaria prevention, diagnosis and treatment interventions as broadly laid out in the HSSP III Health Benefit Package, while also incorporating all other strategic intervention shifts and priorities that emerged at the end of 2022[2].

Besides the alignment with HSSP III, this strategic plan is aligned to other national and international development agendas such as the Malawi Growth and Development Strategy III (MGDS III) and the Global Technical Strategy (GTS) for Malaria, 2016-2030. The GTS by the World Health Organisation (WHO) sets a bold vision for member countries of a malaria-free world by 2030[3]

1.1.2. Overall progress to date and goal for NMSP (2023-2030)

Malawi has registered significant progress towards achieving malaria control over the past strategic periods. Data in the Mealth Management Information System (HMIS) for Malawi show that mortality due to malaria declined by 61%, from 23/100,000 in 2016 to 9/100,000 in 2022. Malaria incidence also declined markedly during the same period, from 407/1,000 in 2016 to 220/1,000 in 2022.

The above broad achievements can be partly attributed to strong investments

[1] See Annex 8.8 for the institutional framework for NMCP within MoH

[2] Includes interventions such as Malaria Vaccine; Seasonal Malaria Chemoprevention; Perennial malaria prevention; IPT in school children; Post Discharge Malaria Chemoprevention; Mass Drug Administration; and multiple malaria first-line treatment

[3] World Health Organization (2015). Global technical strategy for malaria 2016–2030.

in malaria control and improvements in data quality[4].

Based on progress registered, the MoH, through this strategic plan, has set the goal of eliminating malaria in Malawi by 2030. This goal underlies the framing of objectives and corresponding strategic interventions under each of the 7 thematic components[5] of malaria programming in Malawi, presented in Chapter 4. The scope of strategic interventions in this strategic plan has also been informed by the Universal Health Coverage (UHC) agenda that emphasizes on the need for all people to have access to the full range of quality health services they need, when and where they need them, without financial hardship[6], as a basic human right. The MoH and partners under both the HSSP III and MSP (2023-2030) have committed to continue providing an integrated package of health services free of charge at all service delivery points under the public health delivery system. Plans have also been made to extend service delivery points to hard-to-reach areas while ensuring that services targeting most vulnerable population segments such as preganant women and under-five children are given priority.

1.2. BACKGROUND INFORMATION

1.2.1. Geography, Climate and Malaria Transmission

Malawi is a landlocked country bordered by three countries: Tanzania in the north and northeast; Zambia in the northwest and central west; and Mozambique in south east and south west. It has a total surface area of approximately 118,485 square kilometers, of which 24,410 square kilometers are covered by Lake Malawi, Lake Malombe and Lake Chilwa. From north to south, the country stretches 901 kilometers in length while the width ranges from 80 to 160 kilometers.

Administratively, Malawi is divided into three regions, namely the Northern, Central and Southern regions. These regions are subdivided into 28 districts which are further re-organized into 29 health districts. The 28 districts are further divided into traditional authorities (TAs) ruled by chiefs. The TAs are sub-divided into villages, which form the smallest administrative units. In each TA, there is an Area Development Committee (ADC) and

[4] Ministry of Health (2022). 2017-2022 Malaria Programme Review Report

[5] The 7 thematic components are: (i) Integrated Vector Control and Management; (ii) Malaria Case Management; (iii) Malaria in pregnancy; (iv) Procurement and Supply Management; (v) Social and Behaviour Change for Malaria; (vi) Surveilance, Monitoring, Evaluation and Operations Research; and (vii) Malaria Programme Management

[6] WHO (2022). https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)

Village Development Committees (VDC) which are responsible for development activities at the TA and village level respectively.

Malawi lies within the tropics and therefore experiences a primarily tropical climate with three distinct seasons: cool–cold and dry (May to mid-August); hot and dry (mid-August to November); and rainy (November to April). The varying altitude across the different geographic areas provides a wide range of temperatures and corresponding weather conditions. The low-lying lakeshore areas have longer hot seasons with higher humidity levels. The highest temperatures occur in the lower altitude areas of the Shire Valley, and the rains are more prolonged in the north. Temperature levels are lower and rainfall levels are higher with rising altitude.

Malaria transmission is highest during the rainy season (November to April) when there is also an increase in malaria vector breeding sites. Low lying areas which ordinarily experience hot temperatures provide more favorable environment for mosquito breeding hence transmission is also highest in these areas. However, new trends are emerging where even highlands which otherwise have not been good mosquito breeding areas because of associated low temperatures are experiencing increases in malaria transmission.

These new trends have been attributed to increased temperatures in the highlands due to climate change.

1.2.2. Demography

In 2018 Malawi had an estimated population of 18.6 million with an average annual growth rate of 2.9%[7]. According to population projections by the National Statistical Office (NSO), the population of Malawi was expected to reach 19.4 million by 2022 and 23.1 million by 2030. Although the urban population has been increasing steadily, an estimated 81.5% of the population still lives in the rural areas.

In terms of population literacy, which is an important determinant of health care utilization trends, rates are markedly higher among men aged 15 and above (83.0%) than the corresponding women category (68.8%), with the national average standing at 75.5%[8].

1.2.3. Economy and Human Development

The Growth Domestic Product (GDP) for Malawi was estimated at MWK 7.94

[7] National Statistical Office, Malawi Population and Housing Survey, 2018

[8] National Statistical Office, Integrated Household Survey 5, 2019-2020

trillion[9] (US$7.75 billion[10]) in 2022 which translate into annual GDP per capita of MWK 410,316.8[11] (US$400.3) at 2017 constant prices.

Generally, Malawi has registered minimal improvement in Human development with the Human Development Index (HDI) gradually increasing from 0.355 in 2005 to 0.485 in 2018.

1.2.4. Status of Key Malaria Indicators

Significant progress has been made on all key indicators having surpassed the the set targets except for the indicator on confirmed Malaria Incidence (Table 1). Efforts to reduce malaria incidence during the MSP 2017-2022 period achieved a 46% reduction, missing the target of 50%.

Table 1: Status of key malaria indicators

Health Indicator	Baseline (Year)	Achievement (2022)	Target (2022)
Malaria Parasite prevalence: Proportion of population with malaria infection.	24 (2017)	10.5%	15%
Confirmed Incidence (Presumed and confirmed): rate per 1000 persons per year.	407 (2016)	220	204
Outpatient malaria test positivity rate	56% 2015)	39%	32%
In-patient malaria deaths: rate per 100,000 persons per year.	23 (2025)	9	12
Under-five Mortality Rate (U5MR)	63 (2016)	45	48

1.2.5. Organization of the health system

The Malawi health system is organized at four levels or tiers which are linked by a referral system: 1) Community, 2) Primary, 3) Secondary, and 4) Tertiary. The services are delivered through a network of public, non-governmental organizations (NGOs), private not for profit, and private for-profit providers. Table 2 shows the distribution of health facilities by type and ownership.

Overall, the Government owns the largest number of all health facility categories. These facilities constitute the principal service delivery infrastructure through which program-based interventions such as malaria services are provided.

[9] Ministry of Economic Planning and Development. Annual Economic Report, 2021

[10] At the official exchange rate of MWK1025 to 1US$ in 2022

[11] Based on the 2022 population estimate for Malawi by NSO of 19,351,892

Table 2: Distribution of health facilities by type and ownership

Facility Type	Facility Ownership					Grand Total
	CHAM	Govt (MoH)	NGO	Private for profit	Private non profit	
Clinic	7	20	46	233	46	**352**
Dispensary	2	49	1	2	8	**62**
Health Centre	109	364	5	4	7	**489**
Health Post	5	89	1			**95**
Hospital	41	49		9	1	**100**
Grand Total	**164**	**571**	**53**	**248**	**62**	**1098**

Source: Malawi Harmonized Health Facility Assessment (2019)

While the number of private facilities is relatively high, the proportion of services provided in private facilities is disproportionately low (4%) compared to the proportion of services provided in public facilities (94% including MoH-owned facilities and CHAM). The NMCP supplies Malaria commodities to all government and CHAM facilities where with no charges to patients on these commodities.

Apart from facility-based service provision, health services are also provided through outreach clinics.

1.2.6. Evolution of malaria control in Malawi

The malaria control in Malawi dates back as far as 1899. The early missionaries used mosquito nets and screening their houses with wire gauze. They also used quinine prophylaxis every other day from 1903. Thereafter, between 1900 – 1949, the main interventions included a) mosquito reduction (periodic clearing of weeds, undergrowth, and bush; filling up of hollows and depressions and draining of roads; screening of water tanks with wire gauze); b) personal prophylaxis: with quinine; use of mosquito nets and screening with wire gauze houses close to the Lake and river; and c) segregation of the general population in native locations. In 1930s, malaria accounted for 56% of all outpatient visits in public facilities while deaths accounted for 15%.

During the post second world war in1950s – 1960s, there was an attempt at using Indoor Residual Spraying (IRS) using Gammexane in the densely populated districts of Zomba and Chiradzulu extending from Lake Chilwa to the Zomba plateau covering 230 square miles and over 43,000 houses [Federation of Rhodesia & Nyasaland, 1956]. This was extended to the Domasi area during the 1956/57 season. However, the Zomba, Chiradzulu, Lake Chilwa triangle area was not extended beyond 1958 due to lack of staff and resources [Federation of Rhodesia & Nyasaland, 1959]. From 1960, it was proposed that a single dose of pyrimethamine (60mg)-chloroquine

(600mg) be given to all immigrant laborers at borders.

In the 1970s, the emphasis was on prophylaxis that was expanded nationwide during which pyrimethamine was replaced by fortnightly Chroloquine (CQ). In Blantyre, Larval source management was being done such as spraying oil along verges and possible mosquito breeding sites and followed the work of 106 "grass-cutters". The Public Works Department maintained drainage systems for storm water. Larviciding using Malariol was reported in Lilongwe [Cheyabejara et al., 1974].

Malawi established its first National Malaria Policy in 1970's and in 1984 established a National Malaria Control Committee. This marked the start of organized effort to prevent and control Malaria in Malawi. Malawi continues to stand out as a pioneer of key changes in Malaria policies.

1.2.6.1. Overview on current malaria control interventions, tools and strategic approaches including their effectiveness and operational feasibility

The Vector Control Interventions currently in place such as the use of LLINs have demonstrated success in terms of coverage and use which can be attributed to the decline in malaria mortality and morbidity. However, the country has not managed to fully implement the Integrated Vector Control Management (IVCM) strategy due to financial constraints. The Implementation and effectiveness of key IVCM interventions has also been affected by the emergence of resistance to pyrethroids.

The Overall implementation rate for planned MSP activities improved from 43% during the 2011-2016MSP period to 56% as reported in the MPR report for the MSP 2017-2022 period.

Access to malaria diagnosis consistently increased to 99% from 60% in 2016. Use of injectable Artesunate for management of severe malaria is highly adhered to in hospitals, except for its parasitological diagnosis using malaria microscopy which is very low. Use of rectal artesunate is very low in Village Health Clinics. Other key cross cutting interventions implemented included SBC, SMEOR and Program Management.

1.3. METHODOLOGY FOR MSP (2023-2030) DEVELOPMENT

The process of developing this strategic plan was consultative at all the key stages. This was done mainly in 6 key stages: (i) Planning; (ii) Situation analysis (End-Term Review of the 2017-2022 Malaria programme, and the Malaria Burden Stratification Mapping for a more data driven intervention targeting approach); (iii) Bottleneck Analysis; (iv) Framing of objectives, strategies, and activities (v) Prioritisation and costing of interventions; and (vi) Stakeholder review, finalisation, and dissemination.

One of the thematic analysis sessions at Crossroads Hotel, as part of desk-based situation analysis

Again, as part of the situation analysis, an external team from WHO joined the process to validate the findings through review of the data and field visits to interact with key partners, service delivery points and the community.

Field data validation and stakeholder interface session at Ulongwe Health Center in Balaka, facilitated by external assessor from WHO.

The situation analysis also involved assessment of the community health system and engagement of community members to gauge the reach of malaria services and community support.

Community interface session at Bululuji Village Clinic in Rumphi facilitated by WHO external Assessor

In terms of involvement of Civil Society Organisations (CSOs), the Malaria Youth Army Champions[12] which is a CSO grouping specifically focusing on malaria under the African Leaders Malaria Alliance (ALMA) was invoved.

Annex 8.7 presents lists of stakeholders who participated in the 3 key workshops that led to the development of this strategic plan.

[12] The Malaria Youth Army Champions will be supporting the NMCP on Social and Behaviour Change (SBC) and advocacy for Malaria.

2

SITUATION ANALYSIS

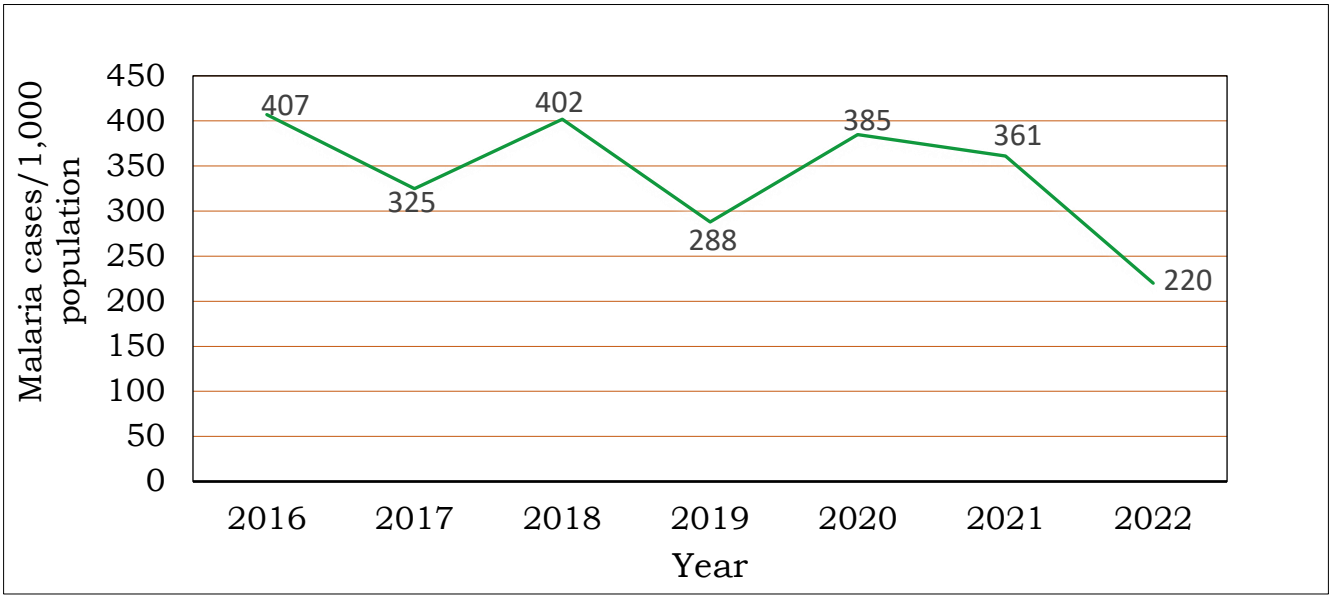
2.1. KEY HIGHLIGHTS OF THE SITUATION ANALYSIS (ACHIEVEMENTS, CHALLENGES AND RECOMMENDATIONS)

The main aim of conducting the malaria situation analysis was to establish evidence based progress and bottlenecks to inform the framing of goals, objectives, and strategic interventions for the next malaria strategic plan. This has a bearing on the prospects of achieving the malaria elimination agenda by 2030. The situational analysis also provides a picture on the role of the various actors supporting the implementation of malaria interventions in Malawi by way of stakeholder analysis

2.1.1. Progress of impact Indicators

Considerable progress has been made on reducing malaria incidence and mortality during the period from 2017 to 2022. Malaria incidence declined from a baseline of 407 per 1000 population in 2016 to 220 per 1000 population by 2022[13] (Figure 1). The target for 2022 was 204.

Figure 1: Trends on malaria incidence rates in Malawi: 2016 – 2022



The fluctuating trend in Figure 1 indicates unstable progress in reducing the Malaria Incidence. It shows unsustained high coverage of preventive interventions mostly vector control and SBC. Such trends propmpted NMCP and partners to commission a study to assess the

[13] Based on data reported in the DHIS2

durability of the nets with findings that an ITN lasts for up to 2 years on average14. This led to a policy change to the 2 yearly Mass Net Distribtion Campaign from the 3-year interval.

The mortality rate due to malaria has more than halved since 2016, decreasing from 23/100,000 to 9/100,000 in 2022 (Figure 2) surpassing the 2022 target of 12/100,000.

Figure 2: Trends on malaria mortality in Malawi: 2016 – 2022

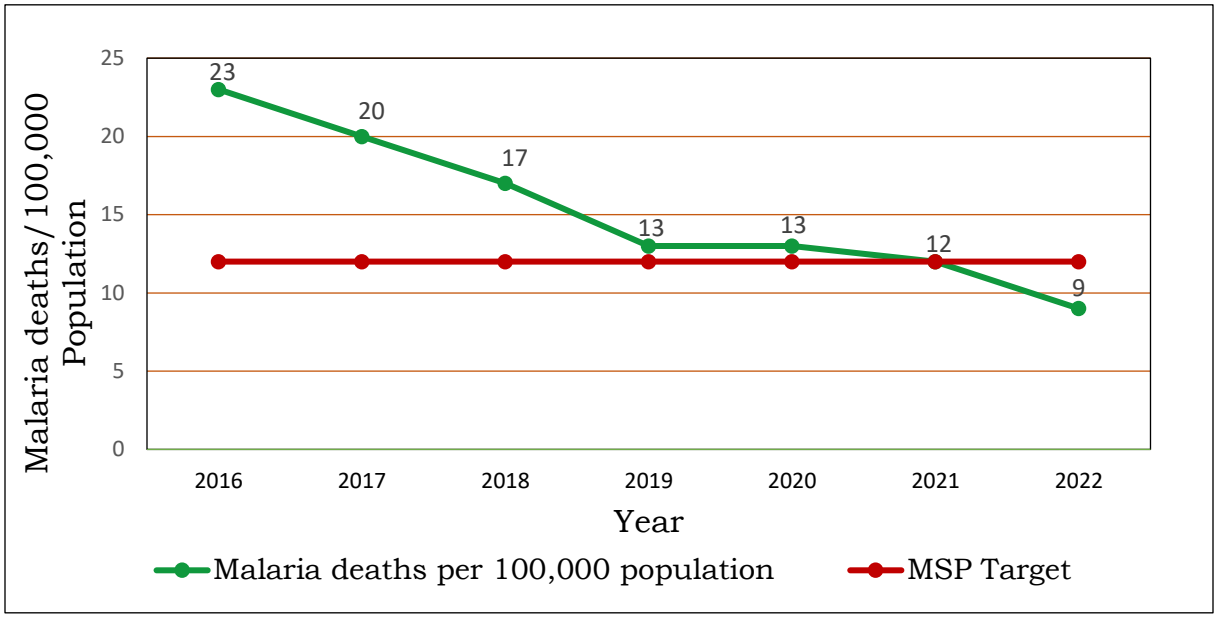
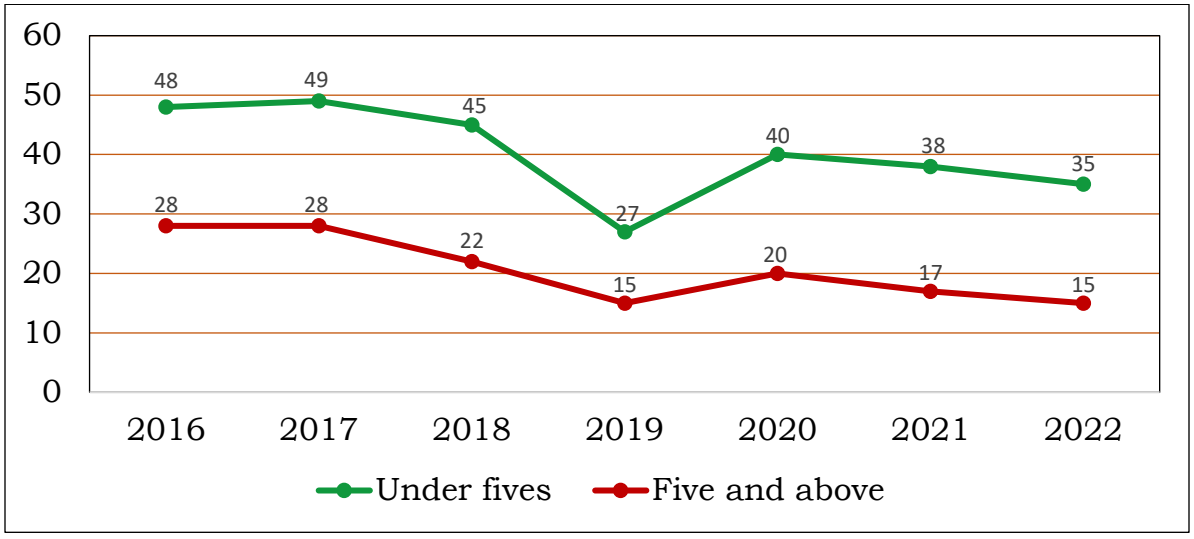


Figure 3: Percentage of deaths attributed to malaria: 2016-2022



[14] Ministry of Health (2021). Net Durability Assessment.

The proportion of deaths attributed to malaria is higher in the under-5 population than all ages (Figure 3). This call for more strategic and programmatic focus on the under-5 prompt access to malaria care and quality of case management while not neglecting malaria interventions targeting the general population .

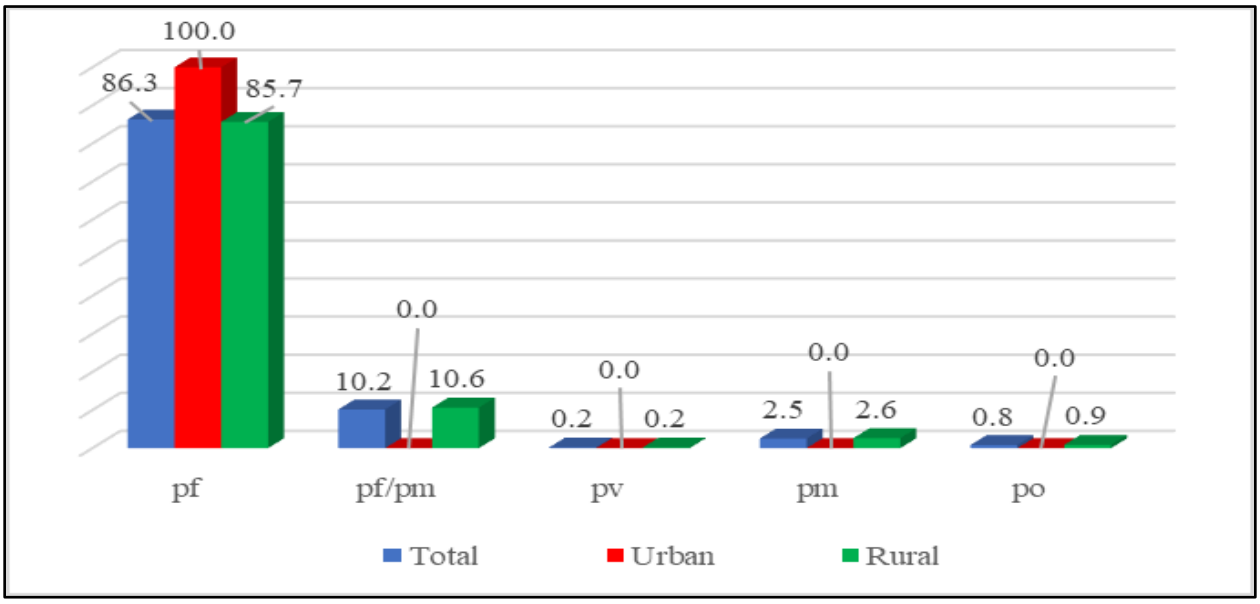
The Ministry of Health acknowledges that the achievements registered so far have been a result of combined efforts by NMCP, districts and numerous partners supporting the scaled-up implementation of malaria interventions in Malawi[15]. However, the Malaria Incidence trend remains a worry and calls for concerted efforts to deploy a vector control strategy or a mix of effective Malaria prevention interventions that can ensure sustained high coverage of vector control.

2.1.2. Epidemiology

2.1.2.1. Prevalence and distribution of malaria parasite species

According to the MMIS 2021, *Plasmodium falciparum* (PF) causes 96.5% of all malaria cases including mixed infections as shown in Figure 4 below

Figure 4: Malaria parasite species by microscopy among under-5 children, MMIS, 2021



[15] Ministry of Health (2021). 2021 Malawi Malaria Indicator Survey (MMIS 2021).

While the percentage of Plasmodium falciparum infections remained relatively constant, there was an increase in mixed infections (Plasmodium falicparum and Plasmodium malariae) from 3.8% of children who tested positive in the 2017 MMIS to 10.2% (Table 3). There was also a slight increase in Plasmodium ovary infections from 0.5% of children who tested positive in 2017 MMIS to 0.8% in 2021 MMIS.

Table 3: Comparison of Malaria species by microscopy among under-5 children, MMIS, 2017 and 2021

	Plasmodium falciparum (mono and mixed)	*Plasmodium malariae (mono and mixed)*	*Plasmodium falciparum* (monoinfections)	*Plasmodium malariae* (monoinfection)	*Plasmodium ovale*	Mixed infections
2017	95.3	8	91.5	4.2	0.5	3.8
2021	96.5	10.4	86.3	2.5	0.8	10.2

2.1.2.2. Other dynamics on malaria vectors

Vector Bionomics

An. gambiae s.l. is the most abundant malaria vector in Malawi. An. arabiensis is the predominant sibling species within the An. gambiae species complex. Over the years, An. gambiae s.s has become rare and less important either due to selection pressure exerted by the malaria vector control interventions or climatic changes which have resulted in drier and warmer climatic weather conditions since this species is adapted to very wet and tropical weather conditions. Only An. funestus s.s. was detected and identified within the An. funestus group of mosquitoes in all six districts (Malawi Annual Entomological report 2020-2021). Both An. gambiae s.l. and An. funestus are widely distributed across the country although their abundance varies from region to region. The sporozoites rate is currently around 1.4% for An.funestus and about 0.3% for An.arabiensis.

There is high and widespread pyrethroid resistance throughout Malawi driven by metabolic resistance mechanisms in both An. funestus and An. Gambiae s.l. vector populations across the entomological study sites. While both species are highly resistant to the pyrethroids deltamethrin, permethrin, and alpha-cypermethrin, they are fully susceptible to pirimiphosmethyl, chlorfenapyr, and clothianidin. Furthermore, pre-exposure of An. *Funestus s.l.* and *An. gambiae s.l.* to 4% PBO restored their susceptibility to pyrethroids

Dynamics of malaria transmission and level of endemicity

Malaria is endemic in Malawi, and transmission occurs throughout the year nationwide. Transmission is greatest during the rainy season, with variation in transmission intensity based on season, topography, population density, rainfall patterns, mosquito prevalence, and current antimalarial interventions being implemented. The predominant malaria species is *Plasmodium falciparum*.

An estimated 80 percent of the Malawian population lives in rural areas that have poor access to essential health services and economic drivers (NSO, 2018). Though there is some variation, annually there are around 6 million malaria cases reported (DHIS2). There is quite a bit of variability in malaria incidence across districts, ranging from 156/1,000 population (Chiradzulu) to 880/1,000 (Neno) in 2021. Generally, the districts surrounding Lake Malawi and in the Shire valley continue to experience the highest burden of malaria in Malawi.

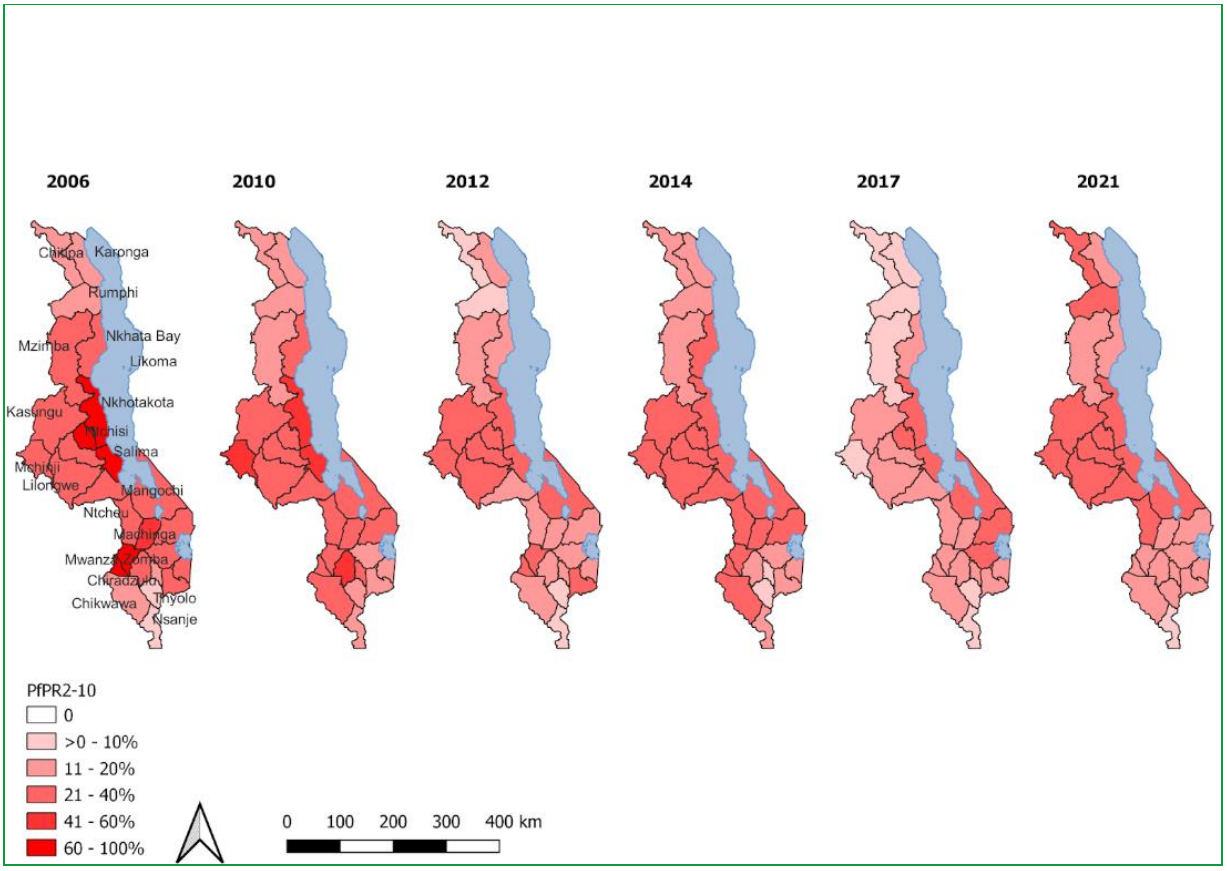
Malaria stratification and mapping

Malaria incidence and prevalence data mapping has been done up to the district level. Malaria risk maps have been produced as depicted in Figure 5 and Figure 6. The maps in Figure 5, which are based on prevalence data only, show sluggish change, on the overall, in terms of malaria risk in all the districts from 2006 to 2021.

Figure 6 shows malaria risk and burden stratification mapping by district for 2022, based on the Malaria burden stratification exercise jointly conducted by NMCP, partners, academic institutions and district health teams in 2022. The aim of the exercise was to generate more scientific evidence on distribution of malaria burden for a more targeted approach under the 2023–2030 malaria strategic plan. This was done through modelling of Malaria Incidence, Prevalence and all-cause mortality data. The analysis has categorised the country into four different levels of Malaria burden (Highest, High, Moderate and Low burden). 10 districts fall in the highest-burden strata (Nkhotakota, Salima, Mchinji, Dowa, Ntchisi, Mwanza, Likoma, Lilongwe, Kasungu, Mangochi); 11 districts are in the high burden strata (Chitipa, Rumphi, NkhataBay, Dedza, Ntcheu, Neno, Thyolo, Nsanje, Zomba, Mzimba, Mulanje); and 8 districts in the moderate burden strata (Karonga, Chikwawa, Balaka, Machinga, Phalombe, Blantyre, Balaka,

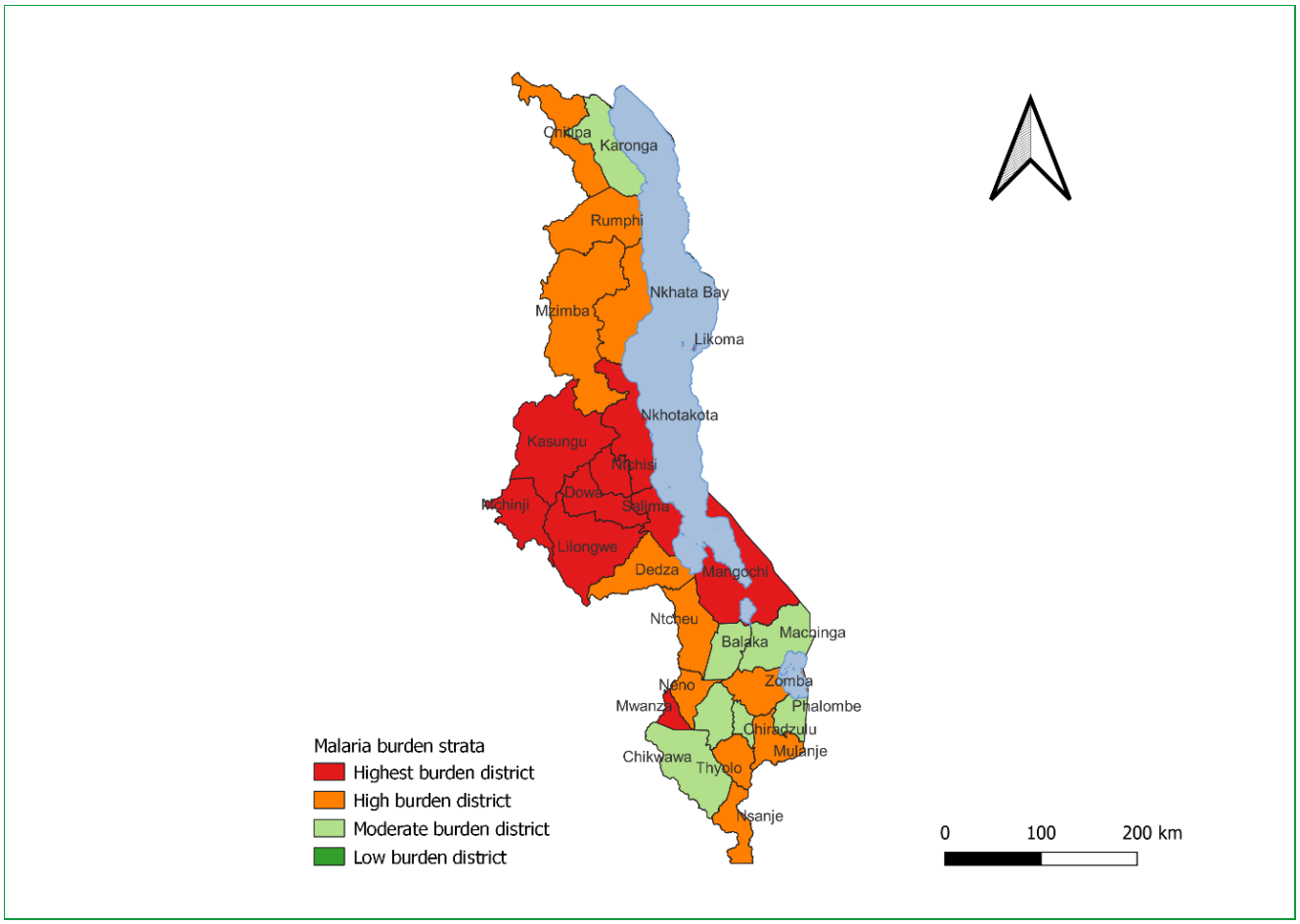
Chiradzulu)[16]. This means that none of the districts in Malawi fall in the low-burden strata.

Figure 5: Trends in malaria prevalence, ages 2 to 10 (PfPR2_10), by district, 2006 to 2021.



[16] Ministry of Health (2022). Malaria Burden stratification in Malawi

Figure 6: District- level malaria burden stratification in Malawi (2022), using malaria incidence, malaria prevalence and all-cause mortality data.



2.2. KEY THEMATIC ACHIEVEMENTS, CHALLENGES AND RECOMMENDATIONS

2.2.1. Integrated Vector Management (IVM)

2.2.1.1. Intervention Context

The objective of the Integrated Vector Control and Management (IVM) in the 2017-2022 Malaria Strategic Plan (MSP) was to increase the proportion of population protected by one or more malaria preventive interventions to at least 90% by 2022.

The NMCP planned to focus on universal access and coverage through deployment of quality Long lasting insecticidal nets (ITNs), targeted quality Indoor Residual Spraying (IRS) in selected suitable epidemiological areas, Vector Bionomics, Larval Source Management (LSM) as a complementary intervention in some communitie and monitoring of new vector control interventions and tools to address insecticide resistance where reported.

2.2.1.2. Progress towards outcome indicator targets on IVCM

Table 4 presents a summary of performance of vector control outcome indicators during implementation of the MSP (2017-2022).

Table 4: Summary of performance of vector control indicators

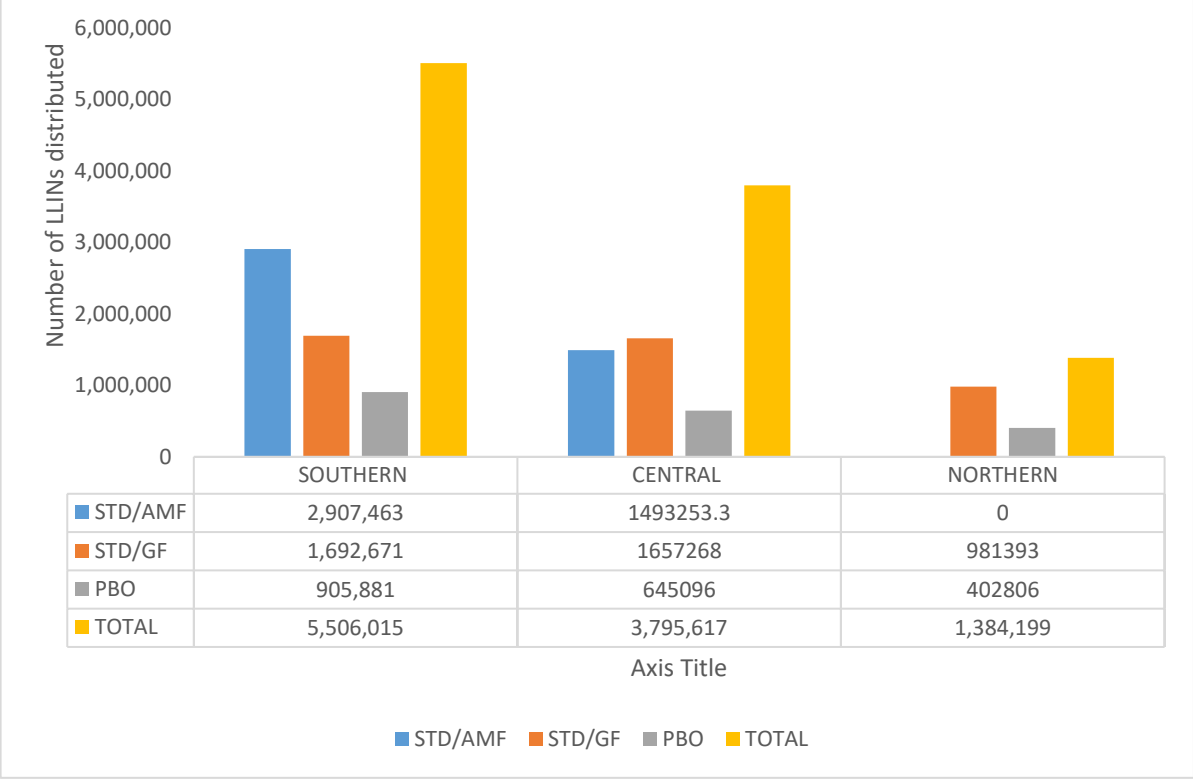
Indicator	Baseline value	year	Target 2017	Attainment 2017	Target 2018	Attainment 2018	Target 2019	Attainment 2019	Target 2020	Attainment 2020	Target 2021	Attainment 2021	Target 2022	Attainment 2022
% of children under 5 years of age who slept under an ITN	67%	2014	75%	68%			85%				90%	53%		
% of pregnant women sleep under an ITN	62%	2014	75%	63%			85%				90%-	49%		-
Proportion of population at risk protected by IRS within the past 12 months in IRS targeted areas			-	-		18%	78%	38%	85%	48%	85%	42%	85%	
Number of infective bites per person per year	183	2015	167	-	151	55.7	135	55.9	119	44.02	103	32.5	90	-
Number of high burden districts implementing IRS	2	2015	5	0-	5	1	7	2	9	4	10	4	11	4
% of households owning at least one ITN	70%	2014	75%	82%	-	-	85	-	-	-	95	55%	-	-
Proportion of household's population who slept under an LLIN the night preceding the survey	53%	2014	60%	55%	-	-	70%	-	-	-	80%	37	-	--

Note: Cells with a dash indicate unavailability of data

Trends on distribution of Long-Lasting Insecticidal Nets (LLINs), 2017-2022

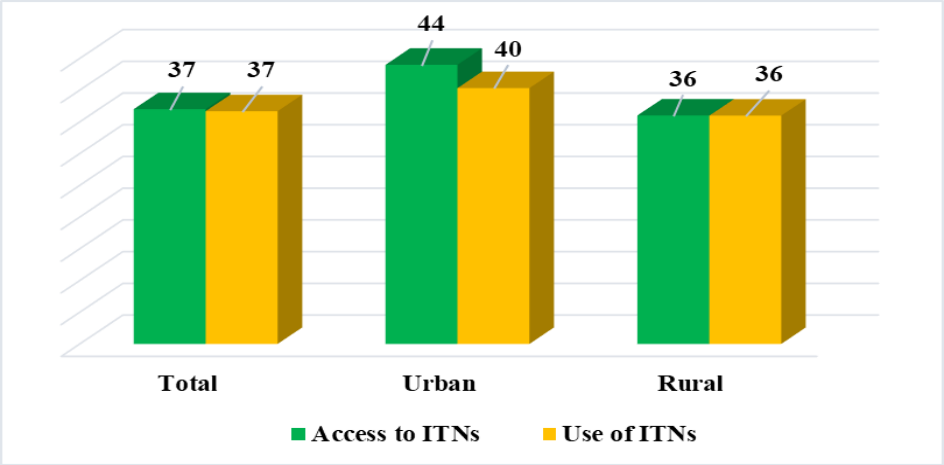
The 2017-2022 MSP aimed at providing 1 net for every 2 people, covering all districts except for where IRS would be deployed, to ensure Universal Access and Coverage for the population at risk. The strategic approach was to provide ITNs to at-risk populations through Mass Campaigns and Continuous Distribution (CD), which the program adopted. Mass ITNs distribution campaigns were carried out in 2018, where 10,685,831 ITNs were distributed in 28 districts, and in 2021 where 7,246,694 ITNs were distributed in 20 districts. Procurement challenges delayed NMCP plans to complete the 2021 mass campaign in the remaining 5 districts. Figure 7 below presents a summary of the complete 2018 campaign in terms the number and type of ITNs distributed by region.

Figure 7: LLINs Distribution by Region, 2018



	SOUTHERN	CENTRAL	NORTHERN
STD/AMF	2,907,463	1493253.3	0
STD/GF	1,692,671	1657268	981393
PBO	905,881	645096	402806
TOTAL	5,506,015	3,795,617	1,384,199

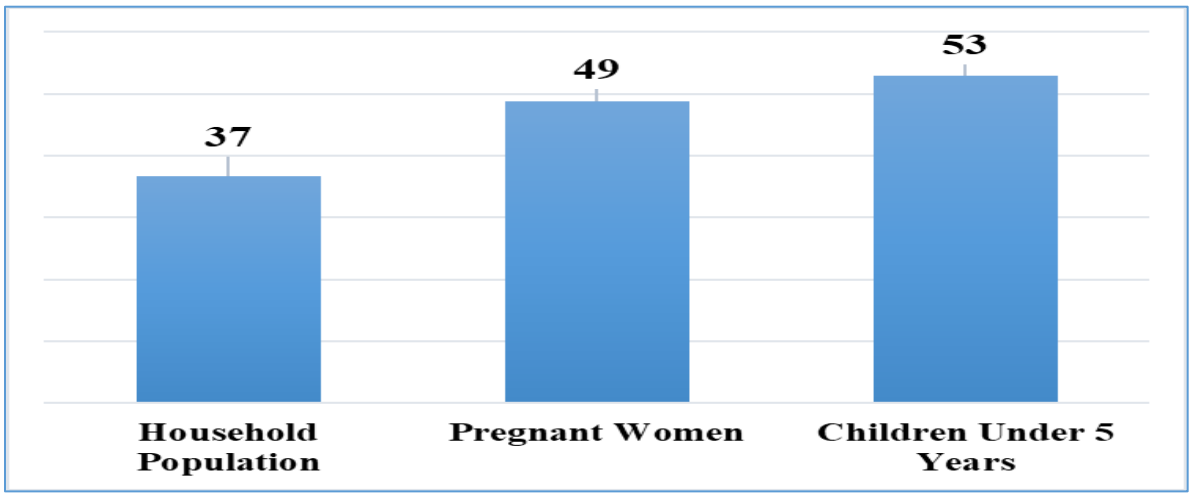
Figure 8: Changes in ITN Access and Use during implementation, 2017-2022



Use of ITNs among population segments at risk

The 2017-2022 Malawi Malaria Control Strategic Plan emphasized activities that promote the use of LLINs every night to prevent malaria. Strategies for ITN distribution in Malawi are (1) free routine distribution to pregnant women through ANC and to new-born at the time of delivery and (2) mass campaigns every three years now changed to two years. Figure 9 shows that the percentage of children under 5 years of age and pregnant women who slept under an ITN decreased from 68% to 53% and 63% to 49% respectively (MMIS 2021).

Figure 9: Trends in net use among pregnant women and under-5 children



NMCP response on net durability issues

The program conducted a Net Durability Study in 2019 which revealed that all the brands of ITNs used in the country most of the ITNs were torn beyond level of use by the end of 24 months, leaving the population unprotected during the third year (Net Durability Study final report, November 2019). Thus the GOM made a policy change to increase the frequency of mass campaigns in the country from three years to two years.

Progress (trends) on IRS outcome indicators and targets and programming implications

In the MSP 2017-2022, implementation of IRS was planned to be expanded to 11 districts and to protect 85% of the population at risk in IRS targeted areas by 2022. The deployment of core vector control interventions (LLINs and IRS) would not be combined due to limited resources.

The implementation of IRS started in 2018 beginning with Nkhotakota district, protecting about 14.3% of the IRS targeted population for the MSP. In 2019, IRS was implemented in 2 districts (Nkhotakota and Mangochi) due to funding limitations, covering 38% of IRS targeted population against a set target of 85%. In 2020, IRS was expanded to cover 4 districts, namely Balaka, Mangochi, Nkhotakota and Nkhatabay. These districts were maintained till the end of the strategy, protecting 48% of the population in the IRS targeted districts. Pyrethroid resistance and the high cost of IRS presents a sustainability dilemma

Status of Larval Source Management (LSM) interventions

The WHO recommends that individual countries can implement LSM in situations where larval breeding sites are few, fixed, and findable. Larval source management was planned but not fully implemented due to resource constraints and lack of technical capacity.

Vector surveillance and insecticide resistance management

The program had planned to monitor vector infective bite rates and test novel tools for use in managing insecticide resistance in the country. Although other indicators were not included in the MSP, key vector surveillance indicators such as vector density, sporozoites rate, insecticide resistance, and vector behaviour were being monitored through routine entomological monitoring. Entomological impact indicators were not adequately reflected in the 2017-2022 MSP.

2.2.1.3. Entomological Profile

The review revealed that Malawi successfully came up with the first malaria entomological profile in 2018 through a collation of data from both

published and unpublished entomological study reports by a consortium of experts and stakeholders in malaria entomological work.

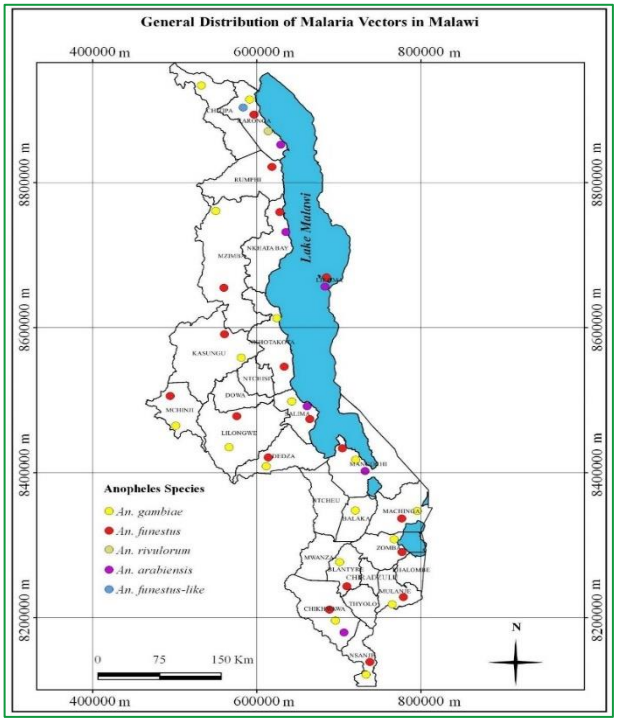
There are five vector species known to transmit malaria in Malawi (Table 5)

with varied distribution across the country (Figure 10).

Table 5: Predominant Malaria Vector species in Malawi (2019)

Primary malaria vectors	Secondary vector species in Malawi	
(a) Anopheles gambiae s.s. *(b) An. arabiensis* *(c) An. funestus* s.s *(d) Anopheles funestus like* *(e) An. rivulorum*	*(a) Anopheles merus* *(b) An. parensis,* *(c) An. Quardrianulatus,* *(d) An. coustani,* *(e) An. maculipalpis,* *(f) An. pharoensis,*	*(g) An. pretoriensis,* *(h) An. rufipes,* *(i) An. sinerens,* *(j) An. squamosus and,* *(k) An. ziemani.*

Figure 10: Malaria Vector Spatial distribution in Malawi (2021)



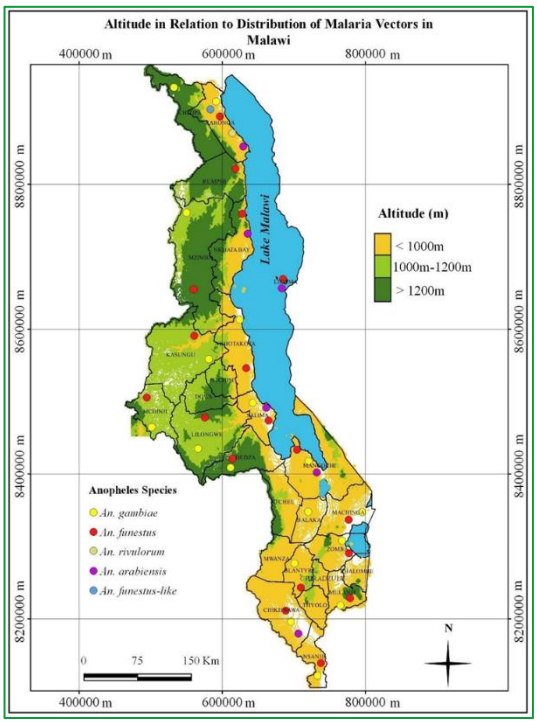


Figure 11: Mean IRD of An. funestus s.l. Collected by PSCs Across Four IRS and Four NON-IRS Districts (17 sentinel sites), July 2021–June 2022

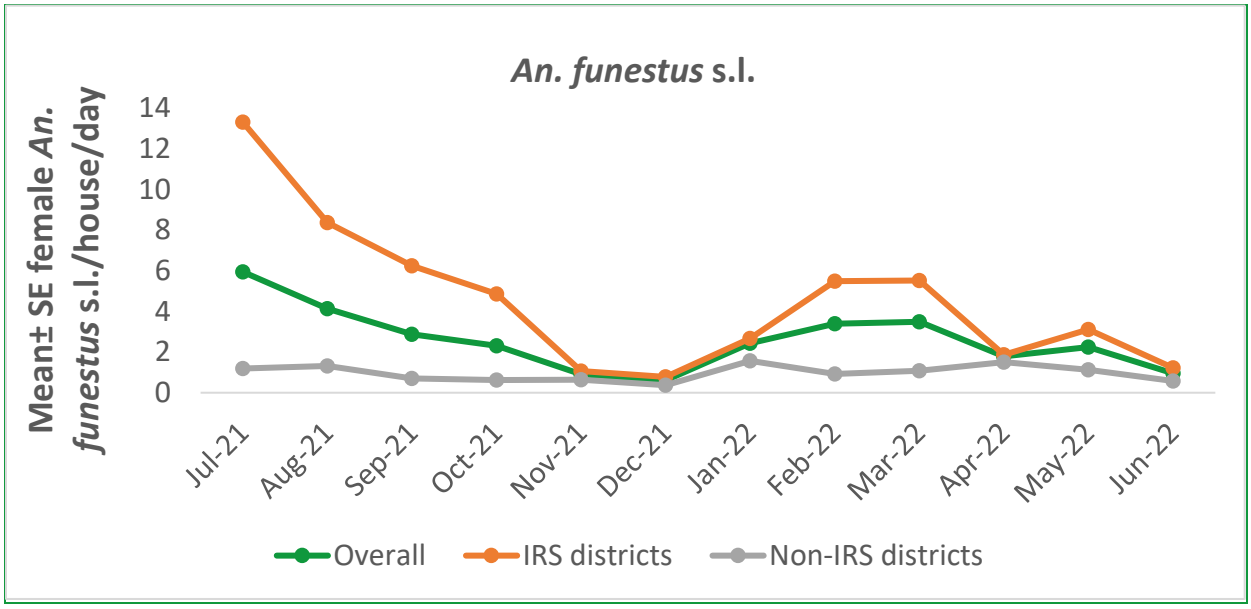
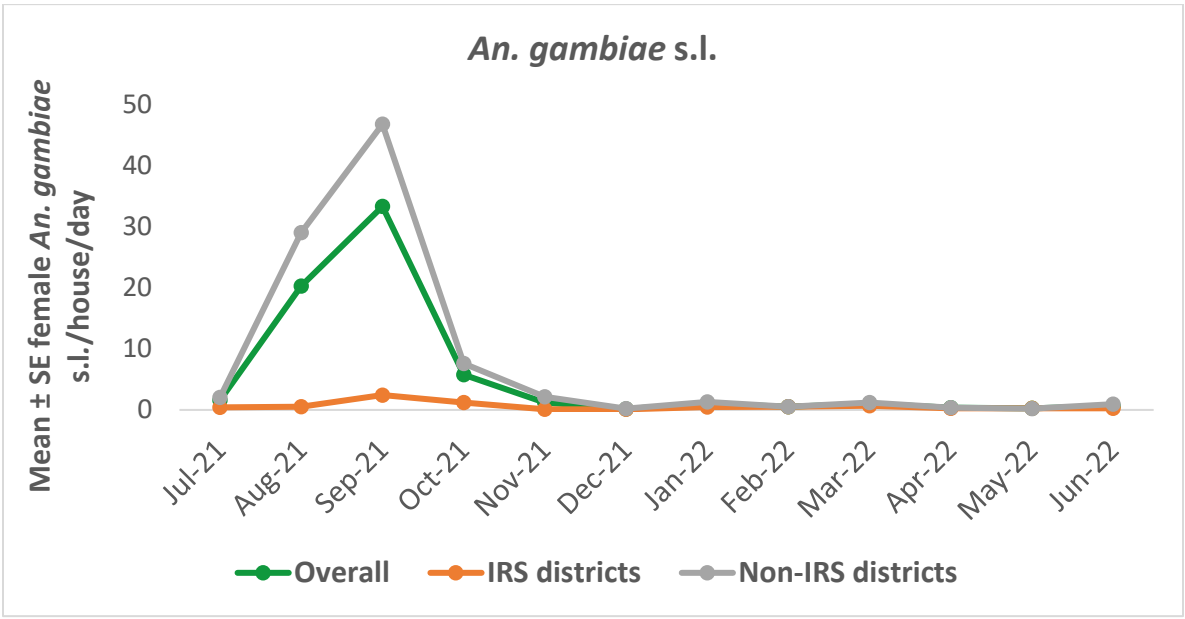


Figure 12: Mean IRD± SE of An. gambiae s.l. Collected by PSCs Across Four IRS and Four NON-IRS Districts (17 Sentinel Sites), July 2021–June 2022



2.2.1.4. Malaria Transmission Intensity

A total of 8,557 *An. funestus* s.l. collected using PSCs, and CDC-LTs, HLCs in the eight districts were screened for *Pf* infection with an overall sporozoite infection rate (SR) of 1.0%. A total of 4,098 *An. gambiae* s.l. from all three collection methods were also tested for *Pf* infection, and the overall SR was 0.3%.

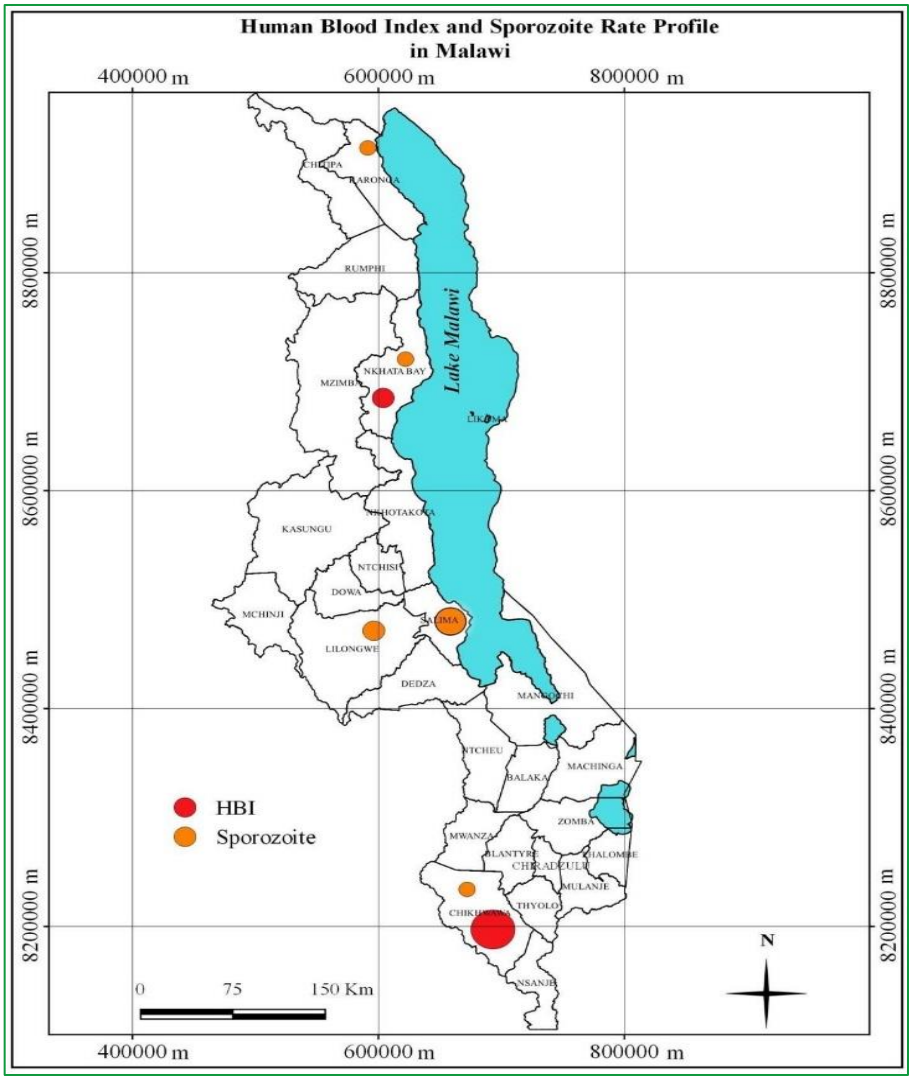
The estimated risk of malaria transmission for the 12 months (annual entomological inoculation rate (EIR)) was highest in Nkhotakota District, at 94.5 infective bites/person/year (ib/p/yr.)), all from *An. funestus* s.l. The second highest EIR was recorded in Nkhata Bay District (27.4 ib/p/yr.; all. from *An. funestus* s.l.) followed by Kasungu (22.0 ib/p/y, all from *An. funestus* s.l.), Karonga (14.3 ib/p/yr.; all from *An. gambiae* s.l.), and Chikwawa (4.7 ib/p/yr.; all from *An. gambiae* s.l..).

In the two IRS districts supported by WVI and MAC with funding from the Global Fund (Balaka and Mangochi) entomological monitoring started in November and data was collected for eight months. Entomological monitoring is continuing in these districts. The estimated risk of malaria transmission for the eight months (ib/p/8 months EIR) was low for both Balaka (*An. funestus* s.l. = 1.2 ib/p/8 months) and Mangochi (no infective bites from either species over the eight months). NB: Low numbers of samples processed from these two districts might have affected the results.

In the IRS districts of Nkhotakota and Nkhata Bay, the estimated risk of malaria transmission over a 12-month period was 94.5 ib/p/yr. in Nkhotakota and 29.4 ib/p/yr. in Nkhata Bay. However, in Nkhotakota, a relatively high (25.5 ib/p/3 months) EIR was observed before spraying (July–September); it greatly declined soon after spraying (October–May) to 5.3 ib/p/8 months before rapidly rising in June (63.8 ib/p/month), nine months after spraying. In Nkhata Bay, a higher EIR, 18.8 ib/p/3 months, was recorded before spraying (July–September) than after spraying (November–June), when the EIR was 10 ib/p/8 months.

In non-IRS districts, there was variation in the monthly EIRs of *Anopheles* mosquitoes. The highest estimated risk of malaria transmission over a 12-month period was observed in Kasungu, a piperonyl butoxide (PBO) net distribution district (22.0 ib/p/yr.), followed by Karonga (14.3 ib/p/yr.), where all three types of nets (PBO, Interceptor G2 (IG2), and Royal Guard) were distributed. The EIRs were lower in Chikwawa (4.7 ib/p/yr.), where IG2 nets were distributed; and in Salima (0.5 ib/p/yr.), where Royal Guard nets were distributed.

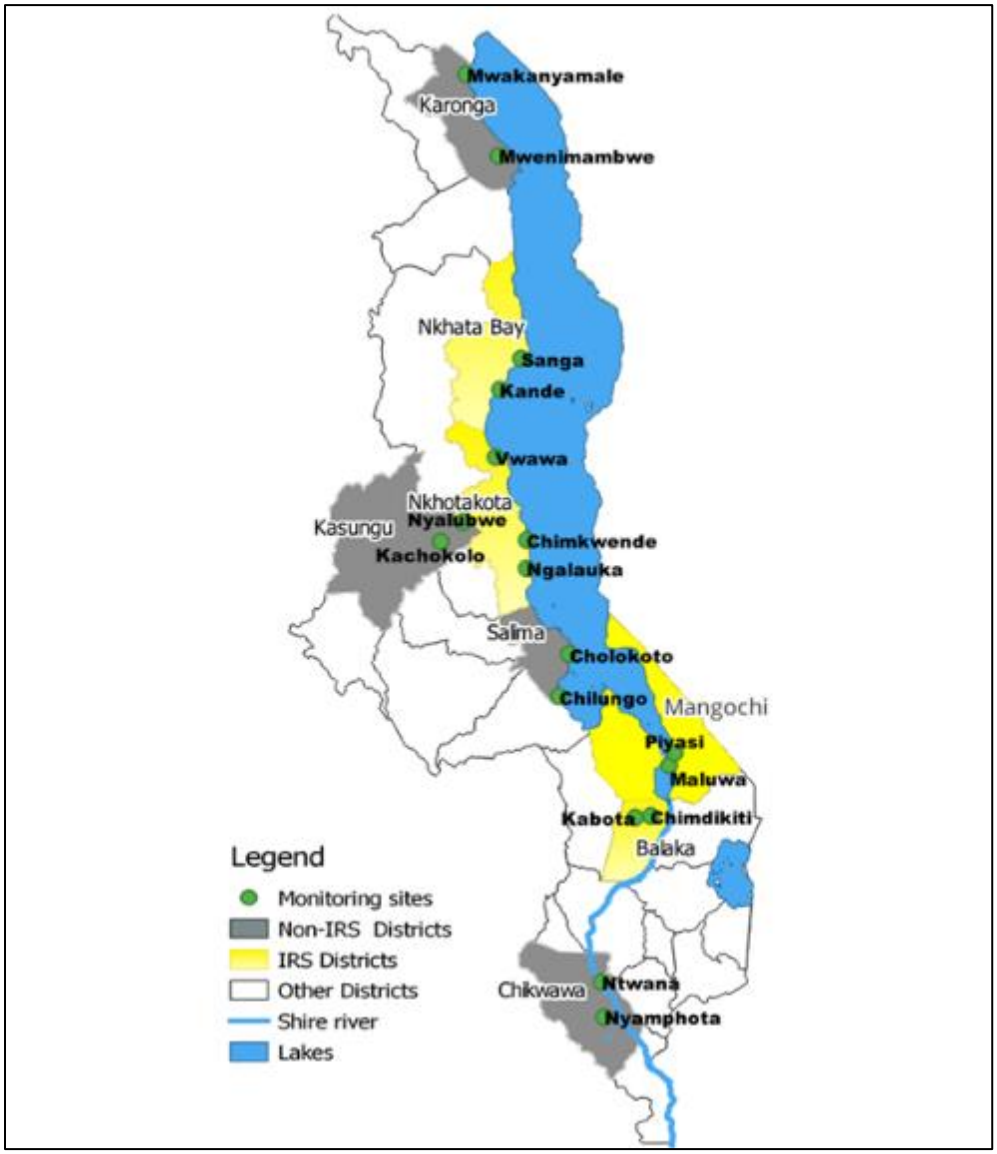
Figure 13: Human Blood Indices and Sporozoites Rate in some parts of Malawi



2.2.1.5. Vector surveillance

The program continues to conduct entomological studies and has since established a national entomological profile that explores vector ecology and behaviour, species composition and distribution and insecticide resistance. It has sentinel sites for the studies and monitoring of the vector bionomics as shown in Figure 14 and Table 6

Figure 14: Existing and proposed entomological surveillance sites



Source: PMI VectorLink Malawi Annual Entomological Monitoring Report, July 1, 2021 – June 30, 2022.

Table 6: Sentinel Sites for Entomological Monitoring in Malawi

Sentinel Sites			Latitude and Longitude	Collection Method	Malaria Vector Control Interventions
Region	District	Site			
Northern	Karonga	Mwakanyamale	S 9° 47' 1.7"; E 33° 53' 34.36"	PSC, CDC-LT	PBO nets, IG2 nets and RG nets
		Mwenimambwe	S 10° 20' 24.14"; E 34° 6' 41.62"	PSC, CDC-LT	
	Nkhata Bay	Sanga	S 11° 44' 18.58"; E 34° 16' 5.04"	HLC, PSC, CDC-LT	IRS (sprayed with SS)
		Kande	S 11° 57' 3.3"; E 34° 7' 1.2"	PSC, CDC-LT	
Central	Salima	Chilungo	S 14° 3' 44.41"; E 34° 31' 42.08"	HLC, PSC, CDC-LT	RG nets
		Cholokoto	S 13° 46' 20.77"; E 34° 35' 57.51"	PSC, CDC-LT	
	Nkhotakota	Vwawa	S 12° 24' 54.4"; E 34° 5' 16.44"	HLC, PSC, CDC-LT	IRS (sprayed with FF)
		Chimkwende	S 12° 59' 3.49"; E 34° 18' 13.15"	PSC, CDC-LT	
		Ngalauka	S 13° 10' 38.52"; E 34° 18' 12.84"	HLC, PSC, CDC-LT	
	Kasungu	Kachokolo	S 12° 59' 35.09"; E 33° 43' 4.19"	HLC, PSC, CDC-LT	PBO nets
		Nyalubwe	S 12° 51' 26.44"; E 33° 51' 57.79"	PSC, CDC-LT	
Southern	Mangochi	Piyasi	S 14° 44' 90.21"; E 35° 31' 79.70"	HLC, PSC, CDC-LT	IRS (sprayed with FF)
		Maluwa	S 14° 53' 13.56"; E 35° 28' 56.78"	PSC, CDC-LT	
	Balaka	Kabota	S 14° 89' 07.52"; E 35° 05' 35.12"	HLC, PSC, CDC-LT	IRS (sprayed with FF)
		Chimdikiti	S 14° 88' 32.32"; E 35° 15' 32.05"	PSC, CDC-LT	
	Chikwawa	Nyamphota	S 16° 15' 31.71"; E 34° 50' 17"	PSC, CDC-LT	IG2 nets
		Ntwana	S 16° 1' 18.05"; E 34° 49' 7.16"	PSC, CDC-LT	

Note: PBO = Piperonyl butoxide, IG2 = Interceptor G2, RG = Royal Guard, IRS = Indoor Residual Spraying

Source: PMI VectorLink Malawi Annual Entomological Monitoring Report, July 1, 2021 – June 30, 2022.

2.2.1.6. Key bottlenecks

- Limitations of resources affected IRS national scale up
- Nets have shown a two-year lifespan in terms of physical integrity
- Inadequate funding to implement Larval Source management.
- Some communities not accepting vector control intervention
- Inadequate coordination forthe small-scale IRS implemented
- Unsustained vector control coverage (IRS insecticide residual life lasting <6 months and very low net

ownership in 3rd year after mass net distribution campaign).
- Delays in implementation of net distribution
- Absence of other key entomological indicators in the M&E plan of the MSP

2.2.1.7. *Recommendations*

Table 7 below summaries the recommendation by the review team on vector control interventions:

Table 7: Summary of recommendations on Vector Control

Strategy	Issues	Proposed strategic direction	Rationale	Expected impact
Entomological surveillance	Ill-defined and prioritised indicators	Capacity building of internal VC personnel on Basic Entomology. Development of Ento surveillance strategy that is responsive to country priority needs	Heavy reliance on partner expertise for ento surveillance (unsustainable). Local capacities for generating ento data for decision making. Guided selection and prioritization of entomological indicators based on country context	Sustained entomological surveillance. Informed selection and deployment of effective VC interventions. Guided surveillance system Entomological impact indicators improved
Universal Access to Quality Long Lasting Insecticidal Nets (ITNs)	Compromised net integrity affecting usable life of net Pyrethroid resistance threats	Implement the two-yearly Mass net distribution campaign new policy. Lobby for improved innovative lining of ITNs at the bottom	Ensures sustained vector control coverage leading to effectiveness of ITNs in protecting against malaria Cause of reduced usable	Guaranteed protection from the available ITNs Increased ITN usable life through provision of fabric bottom lining Sustained deployment

Strategy	Issues	Proposed strategic direction	Rationale	Expected impact
		Review and operationalize IRM plan to cover areas where ITNs are deployed considering increase in PY resistance	life is an uncontrollable factor beyond the programme, hence need for innovations Use of PBO ITNs may not be sustainable to cover the geographical target for ITNs due to cost	and effectiveness of ITNs
Indoor Residual Spraying	Low geographic coverage Lack of programme quality monitoring Ill-defined outputs indicators	Define criteria for deployment of IRS Scale up Quality IRS with current efficacious insecticides	Evidence of availability of efficacious tools High impact intervention if well managed Effective on other pests of public importance at H/H level triggering high program acceptance IRM plan priority in ITN targeted areas	Rapid impact on entomological indicators (reduced infective bites and reduction in malaria morbidity) Sustained use of available VC tools
Larval Source Management	Lack of evidence to support LSM funding	Demonstration of effectiveness of non-chemical interventions (IVM)	Potential game changer for outdoor transmission	Complementary intervention that contributed to burden reduction through reduced vector densities at source
Operationalization of insecticide	IRM plan restricted to	Use of IRS with different	Tools used in the IRS	Sustained use of novel VC

Strategy	Issues	Proposed strategic direction	Rationale	Expected impact
resistance management plan	IRS insecticide rotation and lacks strategies to manage resistance in ITN targeted areas	class of insecticide in areas of high pyrethroid resistance	program still efficacious and effective against local vector (confirmed)	tools resulting in improved entomological impact indicators
Integrated Vector Management	Ill-defined IVM indicators Lack of capacity to implement IVM strategy	Capacity building on IVM for Impactive response to challenges of deployment of VC interventions	Ill-defined guidelines on deployment of VC interventions Lack of capacity to implement IVM	Sustainability of program implementation through stakeholder and partner participation Cost efficient use of limited resources through integration of control of vectors of other diseases

2.2.2. Malaria Case Management

2.2.2.1. Intervention Context

Policy interventions on Case management

National Malaria Treatment Guidelines/Diagnostic Guidelines

During the implementation of the 2017-2022 strategic plan, the malaria treatment guidelines were revised in 2020, to incorporate new policy changes. This was necessitated by the new WHO recommendations such as adjustment of dose for injectable Artesunate in children weighing less than 20 kgs, adoption of a new policy from use of field stains A&B to Giemsa for malaria microscopy, change of malaria microscopy reporting system from plus (+, ++, +++, ++++) to parasite density count. The National Malaria Diagnostic guidelines were also revised to incorporate the newly selected mRDTs after an in-country evaluation.

Task-shifting Policy

Task shifting policy was not formulated in the period of 2017-2022 strategic plan. It was found to conflict with the Medical Council legal framework, and therefore agreed not to be pursued. Capacity building to all service providers would continue to improve quality of services.

Age-gap Proposed Expansion Policy

The NMCP proposed to expand implementation of malaria community case management targets from under-fives to all age groups.During the implementation of this strategic plan, the NMCP commissioned a pilot which is ongoing to evaluate the feasibility of implementing this policy in Ntchisi, Salima and Neno. The outcome of this pilot in 2023 will determine the future direction of the proposed policy.

Village Health Clinics Policy

The NMCP in collaboration with IMCI increased the number of village clinics from 4,950 to 6,005. However, based on the current IMCI report August 2022, the number of functional village clinics is 4,181. This puts the gap at 769 village clinics giving a new need for expansion to 1824 village clinics. In 2022, 25% of the 4,181 HSAs staffing village clinics received a refresher training on malaria case management[17]. In 2017 68.8% of the targeted 5504 facility-based health workers received refresher training. In the next Malaria Strategic Plan, in Collaboration with IMCI there is need to make the non-functional village clinics functional, train the new HSAs on IMCI services (Including Malaria Community Case Management) and lobby for more resources for recruitment for more HSAs to cover underserved areas

Diagnostic Capacity

There are two methods used for diagnosing malaria namely, Rapid Diagnostic Tests (mRDT) and light microscopy. The mRDTs are used to confirm uncomplicated malaria at all levels. Microscopy is the gold standard for diagnosing malaria, however, in the national guidelines it is reserved for management of severe malaria and diagnosis of suspected treatment failures.

In-country evaluation of mRDTs is done to select a few mRDTs to use to avoid multiple mRDTs that would cause confusion to the lower cadres entrusted with provision of mRDTs. Three brands of Histidine-Rich Protein 2 Ag Pf mRDTs were selected for use in Malawi and these are Carestart, SD Bioline and First response. Although quality assurance guidelines were developed in 2017 to provide guidance on mRDT and microscopy services, implementation of mRDT quality control system which was included in the Malaria Strategic

[17] See semi-annual report on IMCI Sub TWG September, 2022,and ICCM refresher training report, 2022

Plan 2017 – 2022, was not done due to lack financial support.

All health professionals, support staff (Auxiliary Nurses & Patient Attendants), and tutors from all institutions of higher learning were trained on mRDTs usage (Basic Malaria Refresher Diagnostic Training (bMDRT) Report Academia 2022). However, tutors from all institutions of higher learning were not trained on the entire case management of malaria guideline.

The Program doption of a new policy from use of field stains A&B to Giemsa for malaria microscopy, change of malaria microscopy reporting system from plus (+, ++, +++, ++++) to parasite density count.

Learners Treatment Kit (LTK) a school-based initiative where primary school teachers are selected and trained to improve access to prompt and effective treatment to learners who most often are overburdened with malaria infections, was successfully implemented in Zomba and Machinga on a pilot basis. During the Mid-Term Review of the MSP, roll out to other regions (Central and North) was recommended but resources could not allow the expansion. Following the Malaria stratification and Subnational tailoring exercise, there will be evidence-based guidance for the deployment of the intervention for expansion.

The national archive for malaria slides (NAMS) has been established and fully functional. Linkage of parasitology reference laboratory with other reference labs process was started with FIND, however it has stalled and require review and revamping.

Treatment of Malaria cases

For the period under review, the Malaria treatment guidelines were revised to adopt new changes to malaria treatment as recommended by WHO. The revision included revision of treatment of injectable artesunate in young children from 2.4mg/kg in all children to 3mg/kg in children weighing less than 20 kgs, MoH approved change of first line treatment from AL to DHA-P, yet to be implemented. Currently WHO is recommending multiple first line treatment to delay development of resistance to AL or first line treatment.

Quality of Care (QoC)

Between 2017 and 2020, the program planned quarterly joint laboratory and clinical outreach training and supportive supervisions (OTSS) a quality assurance approach which improves facility performance through observation of malaria testing, clinical practices, facility practices, and provides continuous feedback with development of action plans with health facility providers. Central to OTSS is that supportive supervision and training takes place at the health

facility rather than pulling providers and staff away from their facility and patients.

Therapeutic Efficacy Study

Malawi has been conducting Therapeutic Efficacy Studies (TESs) every 2 years since 2010 to evaluate the efficacy of the first-line antimalarials for the treatment of uncomplicated malaria. Studies for 2010, 2012, 2014 and 2016 consistently showed that Lumefantrine-Artemether (LA) and artesunate-amodiaquine (AS+AQ) were highly efficacious with efficacy levels ranging from 95 to 99%. Due to reduced efficacy of LA (91%) in the Therapeutic Efficacy study of 2019/20, the National Malaria Control Program embarked on consultations to change the first line treatment from LA to Dihydro-Artemisinin and Piperaquine (DHA-P). The main rationale for the change while the efficacy was still above WHO recommendation (90%) was that four years had passed from the previous TES , and there were no indications more funds would be available to do another TES within the MSP 2017-2022 period. The MoH proceeded to change the first line treatment to avoid more treatment failures and preventable deaths. The consultations followed the normal policy change process, and the proposed policy change was approved adopting DHA-P as next first line treatment for Malawi.

The implementation is awaiting resource mobilization since new and more effective drugs are always more expensive than existing less effective first line treatments. The program is currently planning to conduct another TES beginning January, 2023 to assess the efficacy of LA and DHA-P.

Collaboration between NMCP, IMCI and partners

Implementation of malaria case management at community level is through integrated community case management (iCCM) platform where the IMCI unit and NMCP collaborates with iCCM partners, both developmental and implementing partners. Several partners have been collaborating with NMCP and IMCI in the implementation of malaria case management at community level. These partners include World Vision with support from the Global F und, PMI, and Save the Children, among others.

Private Sector Engagement

The Case Management Technical Working Group Vice Chairperson for case management is from the private sector. This deliberate effort has enabled the malaria program to have a two-way channel of information sharing between the private sector and malaria control program. This bi-directional exchange of information

drives national policies on one hand (e.g. the use of Dihydroartemisinin-piperaquine was driven by the private sector as alternate first line treatment since 2017) and good case management practices in private services on the other.

Private sector clinic mapping was last done in 2013 (SHOPS USAID 2013) which indicated 295 private facilities, 54 pharmacies and drug stores.

The NMCP secured funds to train and mentor the private sector in Ntcheu district only. A total of 20 private clinic owners were trained. No additional funding was identified for the remaining 28 health districts. Furthermore, the NMCP implemented supportive supervision of the private sector providers in 10 districts reaching a total 154 private facilities between May and June 2018. However, the percentage mentored and supervised was difficult to calculate as there is no updated private sector clinic mapping.

2.2.2.2. NMCP objective on Case Management (2017-2022)

The NMCP objective in the 2017-2022 MSP on case management was to increase the proportion of suspected cases of malaria that are tested to at least 95% and treat 100% of confirmed cases. Earlier, before MSP 2017-2022 being reviewed, NMCP introduced and rolled out malaria rapid diagnostics test (mRDTs) at health facility and community level through integrated community case management (iCCM) to achieve the same objective. The NMCP has been focusing on quarterly outreach training, supportive supervision (OTSS) and IMSSM in all health facilities, improving knowledge of health workers on diagnosis and management of severe malaria according to treatment guidelines including patient monitoring.

2.2.2.3. Progress towards output and outcome indicator targets

Trends on microscopy services

During the MSP (2017-2022) period, there was a drop on the percentage of health facilities offering microscopy services from 24% in 2016 to 22% in 2022. This was due to an increase in the number of health facilities from 648 in 2017 to 716 in 2022 which was not accompanied by investments in microscopy services.

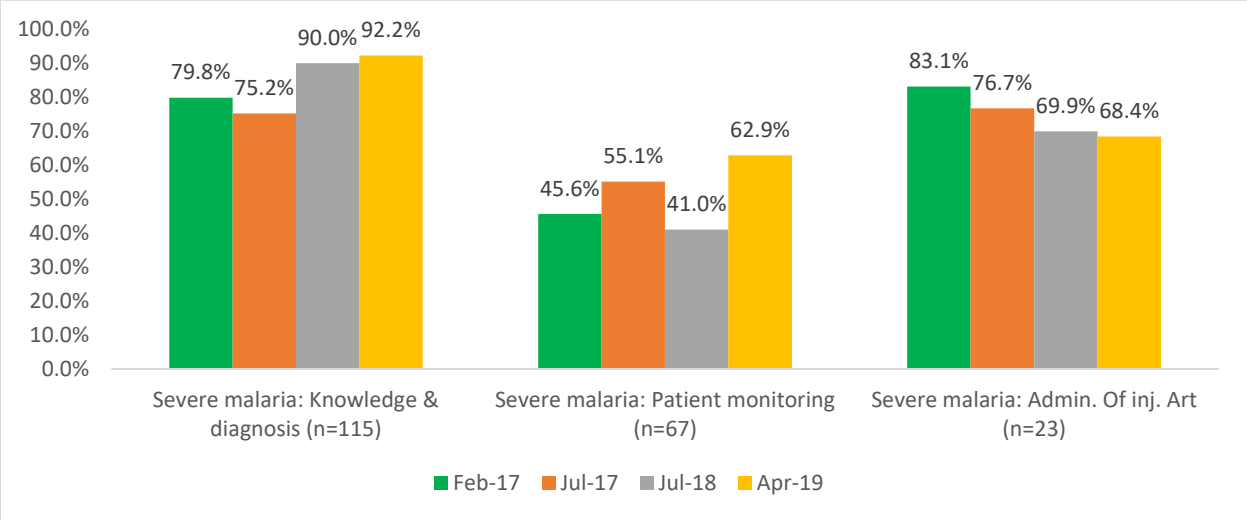
The national archive for malaria slides (NAMS) has been established and fully functional. Linkage of parasitology reference laboratory with other reference labs process was started with FIND, however it has stalled.

Trends in Health Worker Knowledge on Case Management

In terms of health worker knowledge on case management, baseline on knowledge of diagnosis and management of severe malaria in 2017 was relatively low at 79% and improved to 92% following a series of mentorship and training(s) the same year. Overall

patient monitoring of severe malaria has been a challenge; performance has consistently remained low below 70% for the past 4 years due to limited resources (lack of medical equipment and charts), poor documentation, and monitoring frequency. Health workers' performance on administration of injectable artesunate has also been a challenge with a general downward trend over the past four years. This reflects a mismatch between knowledge and practical application as shown in Figure 15 below.

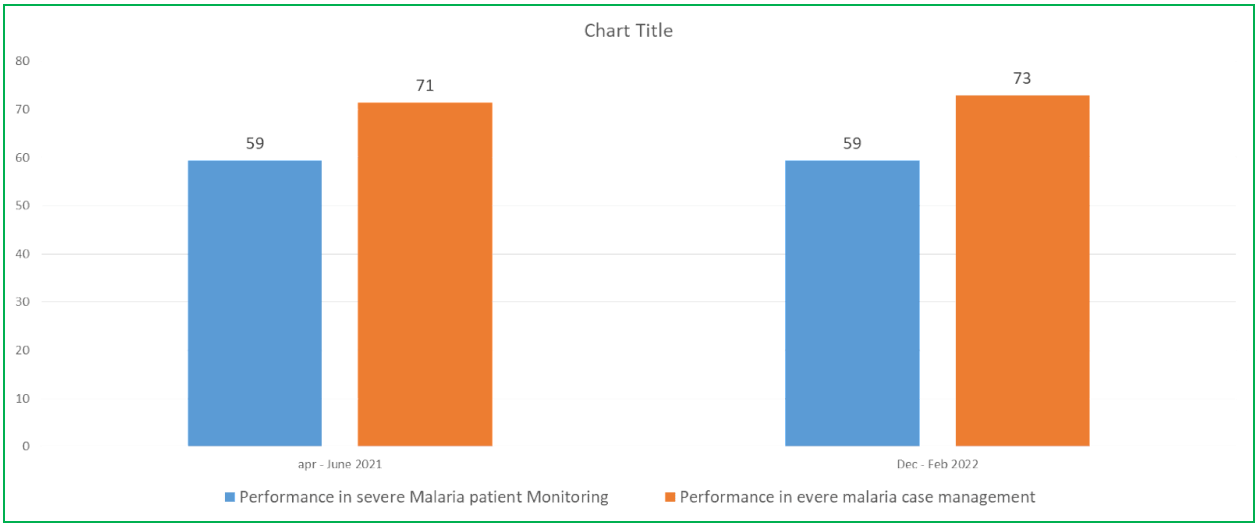
Figure 15: Trends in Management of Malaria according to policy –Health Worker Knowledge and Practical Application interactions



In 2020, the NMCP transitioned from OTSS to integrated malaria support supervision and mentorship (IMSSM) program. The IMSSM is designed to be implemented biannually catering all key malaria interventional areas. So far, three rounds of IMSSM have been conducted (refer to IMSSM report round 1, 2 and 3).

On management of severe malaria (round 2 and 3), the target was set at 95% prior to treatment; this has been achieved by 88% of the districts. Only 71% of health facilities managed severe malaria cases according to national guidelines. Monitoring of severe malaria cases is stagnant at 59% which is concerning (Figure 16)

Figure 16: Management of severe malaria (round 2 and 3) by facilities



Overall, the supervision and mentorship assessments noted good progress and tremendous improvements in health workers' performance in the diagnosis of suspected cases, adherence to management of patients with negative test results, and testing prior to treatment. Despite high knowledge in diagnosis and management of severe malaria, monitoring of such patients has remained challenging due, in part, to lack of appropriate medical devices, documentations, and frequency of patient monitoring. The NMCP and partners need to consider provision of the required medical devices and monitoring tools necessary for monitoring of severe cases and put in place special mentorship visits to consistently poorly performing districts to address these technical implementation challenges.

Trends on out-patient positivity rate

Malawi moved from clinical to parasite-based diagnosis of malaria in 2011, where mRDTs were introduced to support implementation of this policy. At the start of the MSP in 2017, the positivity rate was at 56%. The 2017-2022 strategic plan was set out to reduce the malaria positivity rate to 44% by 2022 but reduced further to 20% by 2022 surpassing the set target. This was due to various program efforts.

Malaria death rate per 100,000 population

The strategic plan had targeted to reduce the malaria death rate by 50% from 23/100000 to 12 per 100,000 population. This has been surpassed with a reduction by 65% now at 8/100,000 population by 2022. There have been several enablers, such as improved community health seeking behaviour from 31% to 56%, improved

supply chain management resulting in constant availability of first line treatment and injectable artesunate, intensified supportive supervision and mentorship to health workers on case management.

Proportion of facilities treating severe malaria cases according to the National Guidelines

The previous strategic plan was set out to monitor the proportion of facilities that are treating severe malaria cases with injectable artesunate and pre-referral treatment according to the national treatment guidelines. Since 2017, the program has not been collecting this information, either through OTSS or DHIS2, therefore this indicator has not been assessed. There was a misalignment of the data source and the indicator in the strategic plan to be addressed in the next strategic plan, to ensure that the program routinely collects consumption data on severe malaria treatment

Proportion of suspected malaria cases that receive a parasitological test at public sector health facilities

Malaria continues to cause a significant public health challenge. The majority of those affected are U/5 children in the rural areas. The 2021 Malaria indicator survey showed that more people in the rural area are affected by malaria than in the urban areas. The program collaborated with IMCI to deliver malaria case management at community level through integrated community case management (iCCM). At community level iCCM is managed by community health workers (health surveillance assistants). The introduction of the mRDTs improved the HSA capacity to parasitologically diagnose malaria from baseline of 67% in 2016, to 100 % in 2022. This was made possible due to a few enablers namely, consistent supply of mRDTs, use of electronic systems for reporting and restocking of supplies. The main challenges have been, lack of consistent and adequate supportive supervision, low coverage of refresher training, significant numbers of underserved areas, and lack of iCCM all age group coverage in the face of an epidemiological shift of malaria burden to the over-five age group.

Proportion of suspected malaria cases that receive a parasitological test in the community

Malaria continues to pause a significant public health challenge. The majority of those affected are U/5 children in the rural areas. The 2021 Malaria indicator survey showed that more people in the rural area are affected by malaria than in the urban areas. The program collaborated with IMCI to deliver malaria case management at community level through integrated community case management (iCCM). At community

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Percentage of confirmed malaria cases that received first-line antimalarial treatment at public sector community and health facilities

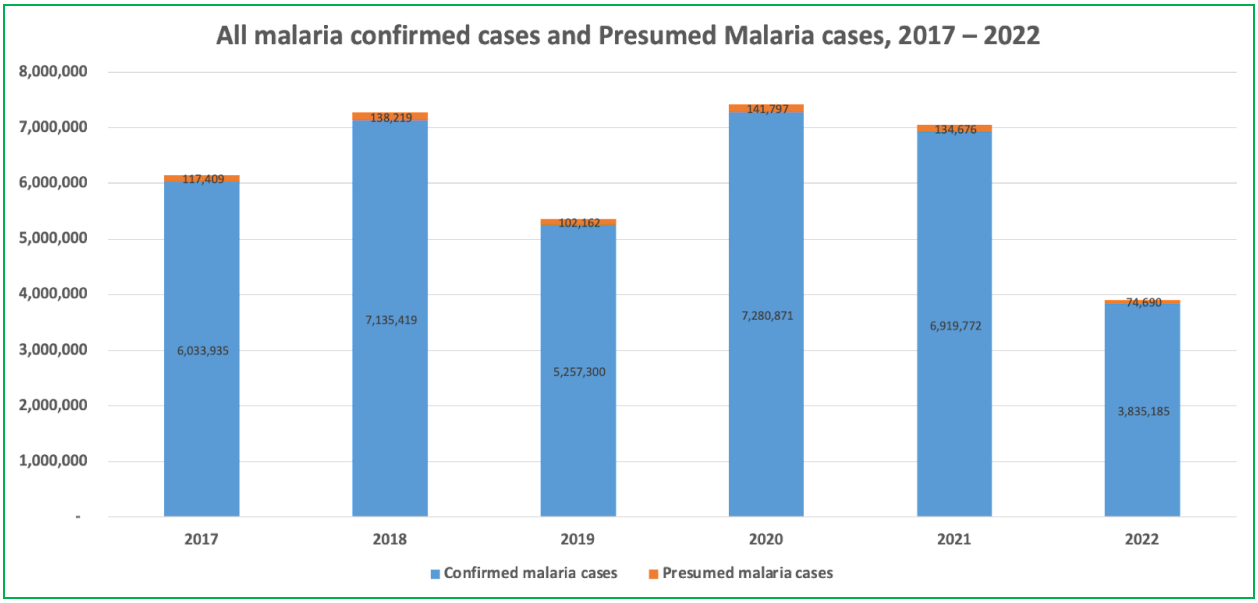
Since 2007 the Ministry has been implementing a malaria treatment policy with Artemisinin-based combination therapy as first line, and second line. Since the introduction of iCCM, the country has been using LA as malaria treatment for under 5 at community level. There has been a steady and constant supply of LA at community level. Throughout the implementation period of this strategic plan, programmatic reports revealed high coverage of first line treatment for malaria for confirmed cases both at facility and community level ranging from 98.5% on average for health facilities and 99.6% on average for the village clinics. Despite the program failing to meet the target of 100%, the coverage for this indicator has been good, considering the number of challenges impacting negatively on achievement of this indicator.

Table 8: Trends in indicator performance, 2017 -2022

Indicator	Baseline	2017	2018	2019	2020	2021	2022
Malaria test positivity rate	56%	54%	53%	47%	57%	51%	20%
Malaria Death rate per 100,000 population	23	23	20	13	13	12	9
Percentage of suspected malaria cases that receive a parasitological test in the public health facilities (data source DHIS 2)	99%	98%	100%	98%	98%	98%	98%
Percentage of suspected malaria cases that receive a parasitological test in the community (data source DHIS 2)	99.7%	97%	98%	99%	99%	99%	98%
Percentage of confirmed malaria cases that received first-line antimalarial treatment at public sector health facilities	97%	100%	100%	95%	99%	97%	100%

Indicator	Baseline	2017	2018	2019	2020	2021	2022
Percentage of confirmed malaria cases that received first-line antimalarial treatment at community	100%	100%	99%	100%	99%	100%	100%
Inpatient confirmed malaria cases	69235	46,099	86,257	47,032	49,249	51,314	25,978
Outpatient confirmed malaria cases	6,245,213	5,870,427	6,910,943	5,108,106	7,089,825	6,733,782	3,734,517

Figure 17: Trends in Malaria confirmed cases and presumed Malaria cases, 2017-2022



2.2.2.4. Key Bottlenecks

The following are some of the key bottlenecks that negatively affected the delivery of malaria case management::

- Verticalization of some of the child health initiatives at community level which has presented challenges towards more coordinated and integrated service delivery
- Non availability of Treatment guidelines in some health facilities
- Limited number of trained laboratory staff in facilities, with most of the lower-level facilities not having Laboratory staff

- Lack of refresher training for providers at all levelsLimited use of pre-referral treatment RAS at community level
- Low coverage for microscopy services.
- Inadequate patient monitoring of severe malaria cases
- Lack of complimentary non malarial diagnostic tools such as Glucometers & glucose sticks, and thermometers.
- Lack of implementation of mRDT quality control system at arrival, and at 6 months intervals at service delivery points and warehouses
- Limited engagement of the private sector

2.2.2.5. Key Recommendations

Based on the challenges and bottlenecks identified during the review, the following recommendations were made:

- Monitor utilization of the tools and guidelines by facilities.
- Consider strengthening diagnostic capacity of lower-level facilities by equipping them with standard laboratory equipment and staff.
- Distribute the updated malaria treatment charts in all health facilities
- Enhance documentation of referred cases of severe malaria as well as the documentation of the pre-referral treatments administered
- Ensure adequate funding for refresher trainings at all levels
- Establish core group of mentors and supervisors and develop terms of reference
- Align indicator on treatment of severe malaria according to guidelines to DHIS 2 as source of data and not OTSS
- NMCP to standardize inpatient case management monitoring tools for severe malaria
- Empowerment of District Councils to take a leading role in the oversight of private practices at district level
- National level to continue providing technical oversight for all private practices.

2.2.3. Malaria in Pregnancy, and other novel interventions

2.2.3.1. Intervention Context

To combat the problem of malaria during pregnancy, the country through the MSP sought to provide support for the delivery of a comprehensive package of interventions to ensure improved pregnancy outcomes and maternal survival. One of the current MIP strategies for the prevention and control of malaria during pregnancy consists of increasing the uptake of Intermittent Preventive Treatment (IPTp) administered through antenatal clinics (ANC). Malawi updated the policy on Intermittent Preventive Treatment during pregnancy, recommends the provision of at least three doses of medicine for IPTp to

pregnant women beginning early in the second trimester at 13 weeks of gestation. The policy further states that all pregnant women be given medicine for IPTp at least one month apart from the initial dose and that it can safely be administered even in labour without safety concerns. The goal of the malaria in pregnancy program is to maximize reduction of malaria in pregnant women using IPTp and LLINs

Novel Interventions: The situation analysis also noted that the MoH and partners started exploring novel interventions on Malaria during the MSP (2017-2022) period. These novel options have not been endorsed at policy level to become national interventions, however they have the potential to approved as key interventions within the life span of the next MSP. The NMCP will embrace new interventions that have adequate evidence to help eliminate Malaria in the country, but would have to go through all necessary policy consultations and approvals. The following are the novel interventions considered.

i. Seasonal malaria chemoprevention (SMC)
ii. Perennial malaria prevention (PMC/IPTi+)
iii. IPT in school children
iv. Post discharge malaria chemoprevention (PDMC)
v. Mass drug administration (MDA)
vi. Malaria vaccine

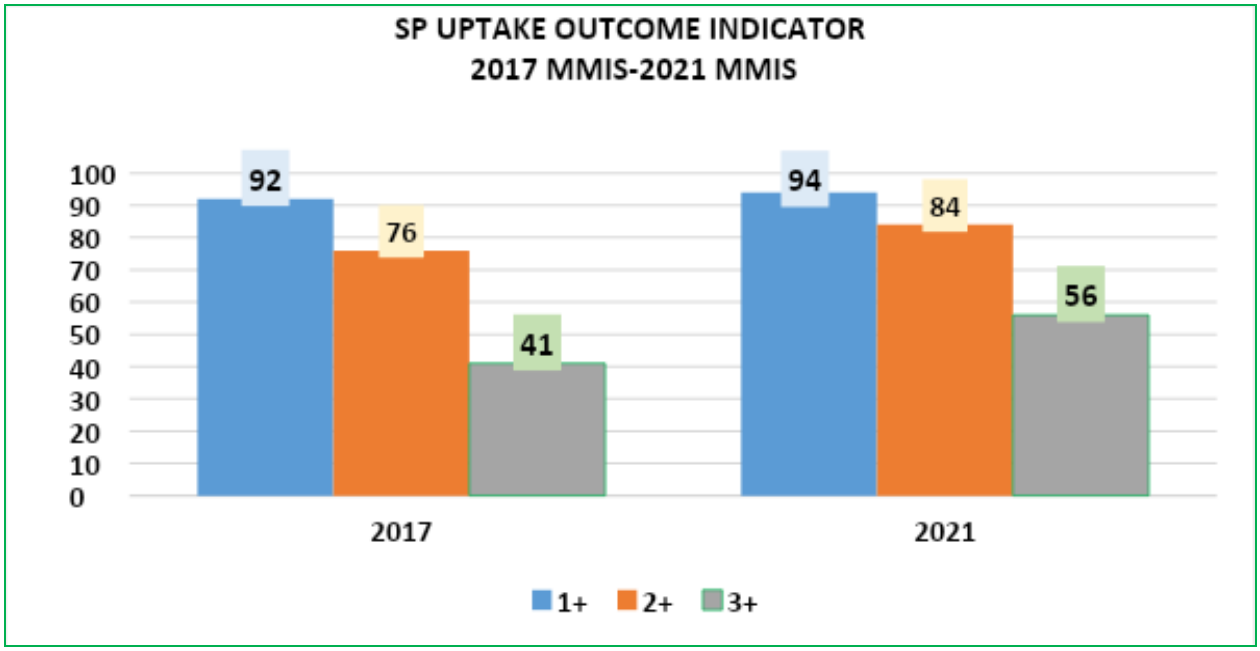
2.2.3.2. Progress towards MIP outcome indicator targets

NMCP and partners have made tremendous progress towards achieving the MSP target of 60% given that IPTp uptake was at 56% in 2021. There is free ANC service in Government and Christian Health Association of Malawi (CHAM) funded facilities. There have been no reported major stock outs of medicine (SP) and LLINs for routine distribution.

However, there is generally late presentation of pregnant women at ANC clinics which has resulted in low uptake of the 2nd and 3rd doses of SP. Inadequate training of health care workers on SP-IPTp guidelines coupled with absence of job aids in facilities has also contributed to missed doses of SP-IPTp. Challenges in calculation of SP-IPTp coverage indicator were also observed and addressed.

Figure 18 shows a national level analysis on changes in SP uptake among pregnant women attending ANC during the period between 2017 and 2022. It shows that the percentage of pregnant women receiving IPTp 1+ increased slightly from 92 % in 2017 MMIS to 94% in 2021. The percentage of women receiving two or more doses of SP/Fansidar increased from 76% in 2017 to 84% in 2021 MMIS. There was an increase in IPTp 3+ from 41% in 2017 MMIS to 56% in 2021 MMIS.

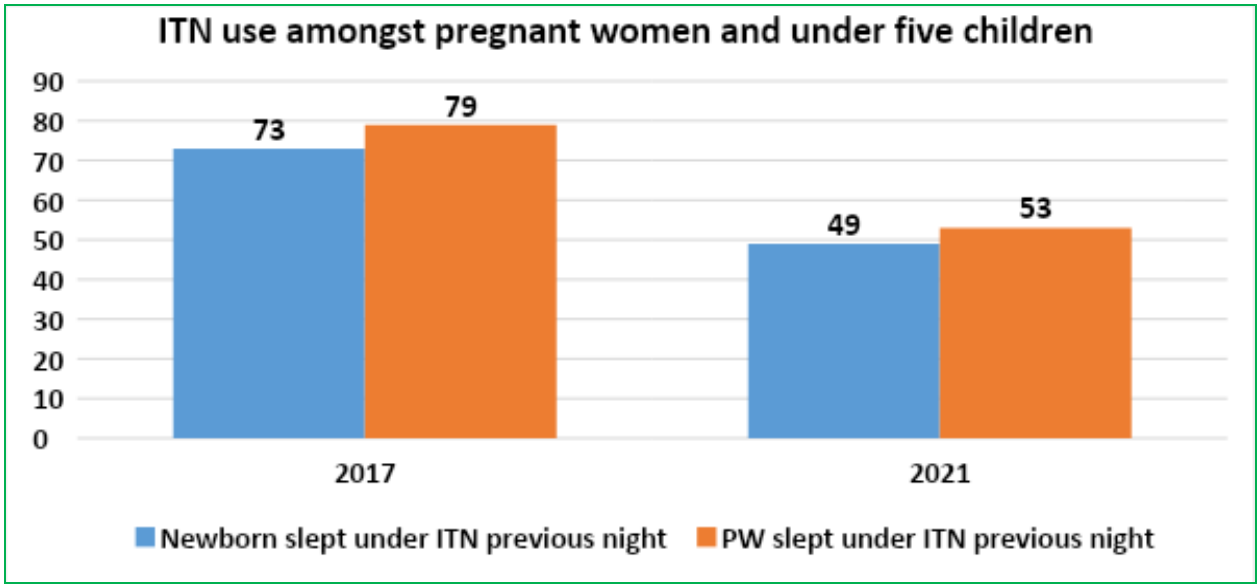
Figure 18: SP uptake among pregnant women attending ANC (2017-2022).



IPTp 3 coverage is generally low. For 2017, the IPTp3 poliy had just been introduced. IPTp3 and coverage picked up in subsequent years.

On ITN use, Figure 19 below shows above an Increase in ITN use amongst pregnant women to 79% in 2017 MMIS and declined to 53 % in 2021 MMIS. As with the children under age 5 the percentage of pregnant women in households with at least one ITN, who slept under an ITN the last night was at 73% in the 2017(MMIS) and decreased to 49% in the 2021 MMIS.

Figure 19: ITN use amongst pregnant women and under five children



2.2.3.3. Key Bottlenecks

The following are the key bottlenecks that were identified both during the situation and bottleneck analysis

- Unavailability of MIP SOPs & job aids in some facilities
- Limited access to ANC services in Hard-to-reach areas
- Limited funding and restricted MIP activity implementation by partners
- Some health workers not trained in new IPTp guidelines
- Delayed 1st ANC attendance by most women due to cultural beliefs.
- Lack of Health sector-wide monitoring of IPTp-SP ANC coverage, beyond public facilities, CHAM facilities and outreach clinics

2.2.3.4. Recommendations

The following recommendation have been made, moving forward, on MIP:

- NMCP & partners should support printing of revised MIP guidelines and health workers' job-aids.
- DHMT should facilitate outreach clinics in all hard-to-reach areas.
- Engage community leaders in sensitization of early initiation of ANC
- Build capacity amongst ANC service providers on data collection, MIP and Safe motherhood for improved data quality and MIP services.
- NMCP should engage all pre-service institutions and train lectures/tutors on inclusion of revised guidelines into their training curricula
- NMCP/Partners for more advocacy for funds to strengthen BCC activities using various channels at national district and community level.
- NMCP/DHMT to train/monitor health service provider compliance to guidelines in addition to adopting positive attitude towards clients
- Explore public private partnership arrangements aimed at extending coverage of MIP services

2.2.4. Procurement and Supply Management for malaria commodities

2.2.4.1. Intervention Context

The National Malaria Control Program provides direct oversight for all activities relating to the procurement and supply management (PSM) of malaria commodities and supplies in Malawi. The funding of malaria commodities in Malawi is largely by donors, The Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), and President's Malaria Initiative (PMI),

Pooled Procurement Mechanism (PPM) and the USAID Global Health Supply Chain-Procurement and Supply Management (GHSC-PSM) program. Even though a fully integrated health commodity supply chain system is ideal, Malawi currently operates a parallel supply chain (PSC) for both warehousing and distribution of malaria commodities using Third Party Logistics (3PL) service providers in addition to the government mechanism through CMST.

The primary objective of Procurement and Supply Management (PSM) in the Malaria Strategic Plan (MSP) implemented from 2017 to 2022 was to reduce the annual average stock out rate of all LA from 7% in 2016 to 3% in 2022.

2.2.4.2. Progress towards MSP PSM outcome indicators

The indicator primarily focused on inability to treat (stockout of all presentations of malaria first-line treatment). The assessment concluded that the outcome indicator was appropriate, and the results were very high throughout the implementation period. Table 9 and Table 10 below present the outcome indicators results over the implementation period.

Table 9: Objective level performance of malaria PSM outcome indicator

Indicator	Baseline	Target	Achievement	Data source	Frequency
Annual average stock out rate of first line anti-malarials	7%	3%	0.3%	OpenLMIS	Annual

Table 10: Performance of malaria PSM outcome indicator

Indicator	Baseline	Target	Achievement	Data source	Frequency
Percentage of facilities with no stock outs of first line anti-malarials in the last three months.	93%	97%	99.6%	OpenLMIS	Quarterly

An assessment was conducted at district level to confirm how district-level trends are supporting the national-level picture on the remarkable progress which has been made on reducing stock-outs. As of 2021, districts had made remarkable progress on reducing stock outs as shown in Table 11: Sample performance trend on reduction of stock outs (Ntchisi). Similar progress trends were observed in other districts which were assessed.

Table 11: Sample performance trend on reduction of stock outs (Ntchisi)

Description of PSM indicator	2017 Base line	2021 Performance	Target	Data source
% HF with **no stock** outs of all LA formulations ≥ 3 days	85% (11/13)	100 % (15/15)	100%	OpenLMIS
% HFs with **no stock** out of mrdt for ≥ 3 days	69% (9/13)	100 % (15/15)	100%	OpenLMIS

Even though there were no stock availability baseline and targets established for mRDTs, LLINs and Sulphadoxine Pyrimethamine (SP) in the MSP, the country has a set target for availability of all health commodities which is at 95%. The program performance for mRDTs, LLINs and SP have also been significant as presented in Table 12

Table 12: Performance of mRDT, LLINs and SP outcome indicators

Product Name	Baseline	Target	Achievement	Data source	Frequency	Comments
mRDTs	92%	95%	99.1%	OpenLMIS	Annually	
LLINs	N/A	95%	96.7%	OpenLMIS	Annually	LMIS tracking of LLINs started in 2018
SP	85.5%	95%	96.1%	OpenLMIS	Annually	

2.2.4.3. Key Bottlenecks

There were a few constrainers observed that attempted to slow down on progress registered under the PSM component in spite of the huge achievements on reduction of stock outs presented above:

- The current LMIS is not capturing some key data elements i.e., batch numbers and expiry dates.

- Sub-optimal inter-operability between the DHIS2 and the LMIS system
- Over-issuing of LA from drug stores above the accepted standard of 1.15.
- Management of AL presentations (positive and negative adjustments) remains a challenge
- Bureaucracies in government procurement processes through the Public Procurement and Disposal of Assets (PPDA) has at most times led to delayed procurements, hence negatively impacting on service delivery.
- COVID-19 pandemic, restricting travels to conduct field supervisory activities. The pandemic also contributed to delays in shipment of commodities disrupting shipping schedules of malaria commodities.
- Irregular supportive supervision and mentoring of health facility personnel on PSM due to inadequate funding for supervisory activities.

2.2.4.4. Recommendations

Findings on challenges and bottlenecks presented above led to the following recommendations:

- Continue strengthening PSM routine supportive and mentorship supervision at district level to maintain logistics data quality.
- Roll out a stock management module to all facilities to allow capturing of missing key data elements i.e., product batch numbers and expiry dates.
- Lobby for more funding for PSM activity implementation.
- Provide in-service training in transparency and accountability guidelines to newly recruited service providers.
- Enhance collaboration and coordination among the key stakeholders at a national, and district levels for sustaining the achievements registered during the review period
- Continue strengthening data quality assurance and regular data reporting and information sharing among the stakeholders to achieve greater efficiency and problem-solving synergy
- Training of pharmacy staff on consumption-based distribution of malaria commodities to minimize expiries and avoid stock piling at service delivery points

2.2.5. Social and Behaviour Change Communication

2.2.5.1. Intervention context

Social and Behavioural Change Communication (SBCC) is one of the key components of Malaria programming in Malawi. This is in cognizant of the fact that human behavior is a determinant of health care utilization rates through both positive and negative health behaviours or actions. The uptake and utilization of malaria prevention interventions and

curative services offered at all levels of service delivery depend on community engagement, acceptance, and involvement. The SBCC component of the MSP sought to encourage positive behaviours that support utilization or uptake of both preventive and curative malaria interventions

The main objective of the SBCC component of the Malaria strategic intervention in Malawi was to increase the proportion of caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of the onset of fever from 31.2% to 50% by 2022. To achieve this objective, the NMCP through the MSP (2017-2022) lined up strategies and activities for implementation during the period under review. The NMCP planned to implement these strategies and activities in collaboration with the Health Education Services (HES), other government ministries and agencies, development and implementing partners, researchers, and civil service organizations.

2.2.5.2. Progress towards MSP SBCC outcome indicators

Progress and performance towards implementation of SBCC outcome indicators contained in the MSP were assessed by reviewing all indicators across thematic areas. During the period under review, indicators on ITNs in terms of use decreased, while those on knowledge and message recall remained high. Furthermore, appreciable improvement was noted on indicators related to IPTp3 and health seeking for treatment in under five children as shown in Table 13.

Table 13: Progress on key SBC indicators, 2017-2022.

Indicator	Baseline 2014 (MIS)	2017 (MIS)	2018 (MIS)	2019 (MIS)	2020 (MIS)	2021 (MIS)	2021 (MBS)
% of household members who slept under an ITN the previous night		55	N/A	N/A	N/A	37	
% of children under 5 who slept under an ITN the previous night	87	79	N/A	N/A	N/A	53	
% of pregnant women who slept under an ITN the previous night	85	73	N/A	N/A	N/A	49	
% of pregnant women who received 3 doses of SP/Fansidar for prevention of malaria	13	41	N/A	N/A	N/A	56	
% who sought treatment the same or next day (within 24hrs)		31	N/A	N/A	N/A	46	

Indicator	Baseline 2014 (MIS)	2017 (MIS)	2018 (MIS)	2019 (MIS)	2020 (MIS)	2021 (MIS)	2021 (MBS)
% of people who know mosquito net as a malaria prevention method	84	87	N/A	N/A	N/A	92	
% of people who recognize fever as symptom of malaria	72	71	N/A	N/A	N/A	74	
% of people who reported bites as a cause of malaria	82	85	N/A	N/A	N/A	87	
% of people who heard a malaria message	93	96	N/A	N/A	N/A	97	

By the end of 2021, the IPTp3 target indicator of 50% was surpassed with a 56% achievement. This was a key achievement considering that the indicator had stagnated at 31.2% for more than four years as indicated by previous malaria indicator surveys for 2014 and 2017.

The major challenge in Malaria prevention in Malawi related to SBCC is translating the high knowledge levels to behaviour change. Awareness and Knowledge on malaria prevention have remained high, at more than 90 per cent (>90%) for quite a long time. While high awareness and knowledge of Malaria prevention is high and a prerequisite for behaviour change, there is a need for actual corresponding positive behaviour change. The behavioural thematic objective and indicator were purposively chosen to ensure the desired change is invested in and progress accurately measured. More indicators could be planned for the next MSP to help measure behaviour change as high awareness and knowledge on malaria prevention is sustained.

2.2.5.3. Key Bottlenecks

The following were key bottlenecks on SBCC:

- Inadequate knowledge of standardized tools for SBCC reporting among health workers and partners
- Unavailability or complete absence of guides and toolkits in some of the facilities visited
- Limited number of partners supporting SBCC
- Inadequate prioritization of SBCC interventions and limited funding to support SBCC activities.
- Continuing low risk perception
- Inadequate involvement of DHPOs in Malaria reviews and other activities

- Inadequate SBCC interventions targeting service providers at HF and Community levels

2.2.5.4. Recommendations

The following recommendations have been made in light of the issues on the SBCC component of MSP (2017-2022) highlighted above:

- NMCP/Partners to lobby for more funds to strengthen SBC activities using various channels at district and community level.
- NMCP/DHMT to engage community local leaders to mobilize and sensitize the community on need for early ANC attendance and referral.
- Expand scope of partners in SBCC at district level to expand coverage of SBC interventions
- Integrate malaria SBCC messages & activities in other program activities
- Develop evidenced-based National SBC Malaria Strategy that will facilitate, guide, and maintain high knowledge, translate high knowledge levels to adoption and sustain positive key behaviours.
- Provide clear and robust SBCC outputs and outcomes with baselines and realistic targets;
- NMCP and partners to provide a clear plan for the financing of the SBCC interventions in the successor MSP.
- In addition to the MIS and MBS, need to commission SBC studies for generation of evidence on specific barriers to guide the malaria programme effectively implement data driven SBCC interventions
- Adopt global best practices and toolkits for measuring impact of our SBCC interventions, beginning at the design stage
- Review of SBC tools to improve reporting and tracking of SBC interventions at all levels, from service delivery points to central level
- Standardize guidelines, training/orientation manuals and toolkits to guide implementers on SBC approaches for social mobilization, community engagement, community advocacy, media engagement etc.

2.2.6. Malaria Surveillance Monitoring, Evaluation and Operations Research

2.2.6.1. Intervention context

The NMCP developed a comprehensive malaria surveillance, operation research, and monitoring and evaluation plan which has been implemented between 2017 and 2022. The key interventions included data quality improvement focusing on timeliness, accuracy and completeness through capacity building, mentorship and supportive supervision at all levels; strengthening coordination through the implementation of the 'three ones' principle; harmonization of activity planning across all malaria stakeholders; developing and implementation of a learning agenda

and information sharing as a key instrument for guiding implementation of research priorities of the program.

Effectiveness of programme implementation is tracked through programme monitoring and evaluation reports which are produced annually. For selected key programme outcome and impact indicators like Malaria Prevalence, the program conducts household surveys. Below is a list of reports for surveys that have been conducted during the 2017-2022 MSP implementation period:

- Malaria Indicator Survey 2017 and 2021 reports
- Malaria Behaviour Survey 2021 reports
- Therapeutic Efficacy Study 2019 reports
- Annual HIMS reports
- Mid-Term Program Review report 2019

2.2.6.2. Progress towards MSP SMEOR outcome indicators

Based on output and outcome indicators, substantial progress has been achieved on data quality improvement since the start of MSP implementation in 2017. The integrated malaria mentorship, supervision was conducted twice a year, covering 100% of the total facilities in the country. Table 14 shows that on data completeness, the Proportion of monthly malaria reports submitted of all expected reports improved from 91.7% (baseline) in 2017 to 98.32%, On timeliness, the proportion of malaria reports submitted on time improved from 53.9% to 91.6%, while on accuracy, the proportion of facilities with matching indicator values also improved from 7% to 97% in 2022. These scores on the individual dimensions of data quality give an overall quality score of 95.6%.

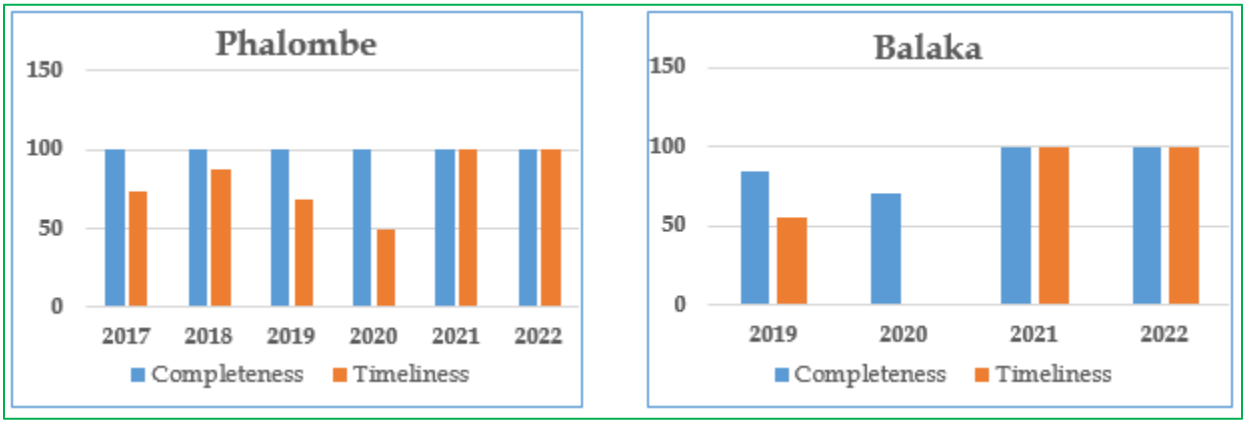
Table 14: SMEOR indicator performance

Data Quality	Indicator	Baseline	2017	2018	2019	2020	2021	2022	Target	Comments
Completeness	Proportion monthly malaria reports submitted of all expected reports	91.7%	92.4%	97.0%	97%	92.51%	96.92%	98.32%		
Timeliness*	% monthly malaria reports submitted by 15th of next month of all expected reports.	53.9%	55.2%	77.2%	69%	40.51%	87.34%	91.60%	95%	Need for district team to manage linkage of facilities to DHIS2.
Accuracy	% of submitted monthly malaria reports that can be validated 100%	7%	6%	40%	60%			97%	60%	Marginal error rate differs in standardized WHO data quality tools. Strict definition of accuracy will unduly cause external concern about and underestimate data quality.

The Ministry of Health uses the DHIS2 as the main aggregated data platform in the health sector to manage all aggregate data. NMCP has made significant contributions to the DHIS2 to ensure improvements not only to malaria but all data management system.

At district level, based on the districts assessed, significant improvements had also been registered which had fed back into the national picture. Challenges still exist, as the general picture emerging is that districts continue to score less than100% in at least one of the data quality elements, as represented by the analysis done for Phalombe and Balaka in Figure 20 below

Figure 20: Trends in data quality in districts (2017-2022)



Some of the facilities assessed still face challenges on proper data capturing and management, with suboptimal patient flow resulting in a few cases not documented either in the OPD or LA register.

The capacity of data clerks in some facilities need support. These data clerks have not received any formal training, only on-job training. However, significant improvement was observed among some of the ANC providers that had received training on the comprehensive filling of the new ANC registers to capture the IPT and LLINs dispensed.

Lastly, the assessment also found out that little emphasis on data utilization for decision making at the different levels of implementation and service delivey points (i.e district, facility and community level). This was compounded by limited feedback mechanisms and data disaggregation which would facilitate decision makng.

2.2.6.3. Key bottlenecks

Some of the key bottlenecks on SMEOR during the period under review include the following:

- Inadequate resources to support district level data quality management (i.e internet connectivity).
- Inadequate data ownership and utilization at service delivery point (SDP) level to make informed decisions.
- Effects of COVID-19 as a public health emergency which disrupted implementation of program activities.
- HMIS does not include data from all private sector
- Intervention targeting was not fully based on evidence. There was no malaria stratification data, therefore, allocation of malaria interventions not been well informed. With resource limitations, stratification remains an important programming aide for tailored interventions.

2.2.6.4. Recommendations

The following recommendations were made for NMCP and partners to implement if they are to make significant progress beyond that registered during the MSP 2017-2022 period:

- Explore alternative data sources like modelled data if routine sources not adequate. e.g., use of modeling to estimate parasite
- prevalence at district level to support decisions on targeting interventions.
- Add a second data accuracy indicator used at central level, based on the standardized WHO data quality tool, alongside the currently used data accuracy and include specific indicators on data.
- Ensure that prediction or monitoring of malaria epidemics is included Start reporting of malaria services data from Central hospitals and private sector into the DHIS2
- Institutionalize standard approaches for determining denominators at community level to improve accuracy of malaria incidence data at that level.
- Facilities need to properly document ITN entries in all the recommended registers
- Consider capacity building on data and records management, and facilities to designate storage space for registers and reports.
- Prioritize provision of data bundles to data clerks to ensure reports are submitted on time
- Conduct quarterly data reviews in all districts in conjunction with health facility staff to strengthen data use for decision making including EPR
- Promote the scale up and utilization of digital data collection, reporting and management systems from the

community level with improved catchment areas/denominators

- Improve targeting of interventions across different geographic areas by routinely conducting malaria burden stratification and geographic intervention tailoring

2.2.7. Malaria Program Management

2.2.7.1. Intervention context

The NMCP continues to provide aimed at improving malaria program performance. This mandate is enshrined within the MoH institutional structure. The Program Manager as leader at NMCP is a member of the Senior Management Team and participates in key health care management decisions. This has ensured support for malaria interventions by MoH leadership especially when the program needs policy and programmatic changes that require endorsement by the MoH.

However, NMCP's overall malaria program management support has been limited by lack of filled positions for some of the key technical cadres. The MoH functional review approved 17 out of the 26 proposed positions for NMCP. All approved positions except that of Deputy Director (Program Manager) are yet to be filled.

During the 2017-2022 MSP period, NMCP's objective on malaria program management was to improve the capacity to implement planned activities in the MSP. NMCP continued to strengthen program management as a crucial component of the national malaria control program performance.

2.2.7.2. Progress towards desired outcomes

Program capacity to implement

The Program's capacity to fully implement each planned activity during the period under review was at 56%, an improvement from 43% registered during the preceding MSP period (2011-2016). Much as this was an improvement, the rate of activity implementation was low according to WHO rating (>90% High, 75-90% Moderate, <75% low).

A detailed summary on activity implementation rates during the MSP 2017-2022 period is presented in Annex 8.5

Support on policies and guidelines

Malawi developed its National Malaria Policy in 1970, which has guided Malaria Control in Malawi over years but needs revision. The National Malaria Control program being a Public Health Program is regulated by the Public Health act which covers all disease control in Malawi. Below the Public Health Act, MoH operations are guided by the Health Sector Strategic Plan (HSSP) and the Malaria Program is specifically guided by NMSPs which align with the HSSPs. The MoH has developed the successor strategic plan to HSSP II, the HSSP III, covering the period from 2023 to 2030 with some

policy and strategic direction changes, to which this plan is aligned.
The available key policy documents include:

- Malaria Strategic Plan 2017-2022 (being reviewed and revised) to cover the period 2023-20230
- Malaria Communication Strategy
- National Malaria Diagnostic guidelines
- National Malaria treatment guidelines (yet to be published)
- Integrated Vector Management Strategy
- Insecticide Resistance Management Plan
- Net distribution guidelines
- Malaria commodity Transparency and accountability guidelines
- Malaria Research Agenda (yet to be endorsed by MoH)
- National Malaria Policy (Yet to be revised)

The 2017-2022 MSP set out to support districts with operational guidelines and protocols that are thematic based to guide quality service delivery. However, the MPR found out that these tools and guidelines were not readily available in the departments they are supposed to be used or displayed in most of the districts assessed.

Appropriateness of program structure/management systems

Placement of NMCP within the MOH hierarchy.
The MSP (2017-2022) developed an HR structure mostly focusing on the national level with the district level structure expected to be defined by the district council thus aligning to the decentralization agenda.

NMCP staffing base at national level has been augmented by Global Fund through placement of Global fund supported officers at NMCP offices who work closely with the PIU to facilitate the implementation of Global Fund activities. NMCP still needs these officers to be part of its national-level technical and administrative support team.

Linked to the national level structure at district level are Malaria Coordinators two per district, their involvement in the District Health Management system is through the extended District Health Management Team. This is not a core decision making team but participates in DHMT planning and implementation thus limiting the level of influence and leadership for advancing the Malaria programme agenda within the district health priorities and plans (including coordination and programme monitoring).

Availability and viability of programme governance and coordination

Oversight and guidance

The National Malaria Control Program (NMCP) has a rich team of stakeholders who meet quarterly to appreciate program progress and discuss and make resolutions on any strategic and technical issues experienced in the course of Malaria programme delivery, policy, advocacy and resource mobilization. The Malaria stakeholders are the first group to be consulted for any policy change proposals for consensus before the consultations proceed to the Technical Working Group and Malaria Advisory group. The NMCP also enjoys support from various thematic Technical Working Groups, on various technical issues, where it serves as secretariat. These TWGs provide thematic technical oversight and guidance for Malaria control in Malawi. The Chairperson of any TWG is elected by the group and cannot be from the NMCP secretariat.The TWGs hold quarterly meetings and have mostly remained on course in conducting the planned quarterly meetings including during the COVID19 pandemic when meetings had to be done virtually. NMCP assigns lead Thematic Officers to each TWG to coordinate all meetings with the TWG chairpersons. All TWG meetings are called by NMCP after consultations with the chairperson. The NMCP also conducts Partners coordination meetings, to ensure partners are implementing in compliance with the government policies and for impact in the interest of Malawians. For Major Policy changes, the consultations go beyond the TWGs to the Malaria Advisory board which advises the NMCP and MOH on the way forward using their expertise. After all the consultations, the Ministry makes the final decision which could be in line or not with the group's consultations outcome.

At district level, oversight for Malaria programming is done by the District Health Management Team, in consultation with the District Malaria Coordinators. The Malaria Coordinators sit within the extended DHMT, lower to the core DHMT. This positioning limits their capacity to influence and command coordination with partners at district level.

Linkages within the Ministry of Health and Child Care (MOHCC)

The NMCP collaborates with other MoH departments and units relevant to the priorities for Malaria programming. The MIP closely collaborates with the Department of Reproductive Health. Community Case Management of Malaria is done in liaison with the IMCI Unit, Malaria Diagnosis overseen by the National reference laboratory, the Malaria Procurement and Supply chain Management team collaborates with Health Technical Support Services (HTSS), the Monitoring and Evaluation is done with collaboration with Central

Monitoring and Evaluation Division (CMED), Program Management is done with collaboration with the office of the Director of Preventive Health Services, the Secretary for Health, Human Resource, Planning and Finance. Social behaviour Change and Communication (SBCC) collaborates with the Health Education Services. Operational Research is done with the Research Unit, and the Epidemic Preparedness and Response with the Integrated Disease Surveillance and Response (IDSR) under Public Health Institute of Malawi. The Quality Management Department (QMD), collaborates with NMCP and other departments on Integrated supervision for improved service delivery. The NMCP and integrated Management of Childhood Illnesses (iMCI) department have to collaborate more on transitioning the iMCI algorithm to the integrated Community Health Information System (iCHIS) to facilitate proper articulation and integration of Malaria module as part of iMCI algorithm for Malaria diagnosis and treatment in the digital health programming.

Linkages with other key stakeholders

NMCP is a policy holder and secretariat for all malaria stakeholders. It has an updated mapping of key stakeholders in Malaria programming in Malawi. NMCP coordinates with the stakeholders through the Malaria Stakeholders meetings. The program established the inter-ministerial/multi-sectoral stakeholders' group, an orientation was done to malaria issues, however, due to advent of COVID 19, the momentum and touch was lost . Revitalization of this should be a priority. The NMCP has great links with the academia and research institutions like College of Medicine (COM), Malaria Alert Center (MAC), Malawi Liverpool and Welcome Trust (MLW), Malawi University of Science and Technology (MUST), Malawi University of Business and Applied Sciences (MUBAS), Lilongwe University of Agriculture and Natural Resources (LUANAR) and University of Malawi, that support the research and training. The NMCP also has Multilateral donors and partners like USAID/PMI, GF, WHO, MACEPA, UNICEF and GIZ that support it on various aspects of the program financing. The NMCP has implementing partners like World Vision and other Non-Governmental Organizations. Though there are clear platforms for stakeholder engagement at national level, gaps do exist on stakeholder coordination platforms at district level despite the existence of the District Malaria Coordinators.

Programme monitoring mechanism

NMCP monitoring mechanisms are done through a structured system from the data generation points (point of care), to central level. From the data generation points, data is transmitted to the next level through hard copies

with efforts underway to digitalize the process. After the data reaches the district health Information Management Systems office, it is entered into the District Health Information System (DHIS2). Once data enters the DHIS2, it can be accessed by anyone who has the rights to the system, however, the system is under the custody of the Central Monitoring and Evaluation Division (CMED). Data can be manually analyzed at data generation points followed by interpretation and decision making. At district level, the Malaria coordinators and HIMS officers have been fully trained to analyze data, generate graphs, and make interpretations for the DHMTs. Recent efforts have seen Malaria and TB scorecards being developed and incorporated into the DHIS2 System for easy analysis and visualization of data within the system by DHMT members. All these are being done to improve the timely monitoring and decision making at district level. At NMCP level, the data is accessed through DHIS2 by the M & E team that analyzes and interprets the data for program decision making.

MoH is in the process of transitioning the community health service delivery and monitoring to Integrated Community Health Information System (iCHIS) to support care and management and facilitate improvements in data management and reporting at community level. NMCP conducts quarterly integrated supportive supervision to districts as part of monitoring and reinforcing adherence to standard guidelines.

Availability and viability of partnership and donor coordination mechanisms

The NMCP continues to maintain a good partnership with several stakeholders in its quest to lead, support implementation and ensure achievement of the MSP strategic impact indicators. Such partnership is done at all levels, that's at national and district levels, and includes partnerships with agencies within the Ministry of Health, other line ministries and non-state health partners. The NMCP delivers its programs with support and in partnership with private sector, civil society, communities, academic research institutions, development Partners and other International NGOs.

The NMCP is well supported by Global Fund and PMI who are major donor and implementing partners with strong in-country presence and direct coordination support. The Ministry of Health serves as a principal recipient for Global fund grants and coordinates the implementation of grant activities through Country Coordinating Mechanisms (GF-CCM) and Project Implementation Unit (PIU). The PIU carries out financial management, provides quality assurance, oversight, monitoring and evaluation, and

guidance on routine management of the projects funded under Global Fund

Supporting systems

Several systems within the Ministry of Health continue to support the NMCP in program delivery at different levels. Such systems like the case management at OPD and IPD at health facilities, malaria diagnosis by National Reference Laboratory and district laboratory services, that support with trainings, QA/QC of diagnostic materials, iMCI that supports with community case management, Health Education Services that supports with social and behavior change communication (SBCC) activities, District Health Information System supports with data management, monitoring and evaluation through the HMIS and DHIS2 capturing key malaria indicators, Health Technical Support Services (HTSS) through Logistical Management Information for commodity stock management System, the DHMT through appointment and oversight over district Malaria coordinators.

Coordination.

The NMCP leads program delivery of activities outlined in the MSP through coordination platforms with several partners implementing health and non-health projects. The NMCP maintains a map of its stakeholders that includes details of name, area of interest and site of implementation. The NMCP is a policy holder of all Malaria activities in Malawi and serves as a secretariat which is a coordination point to all malaria stakeholders, Thematic Technical Working Groups (TWG), and Malaria Advisory group. Coordination meetings for stakeholders and TWGs are planned quarterly, while the Advisory when need arises.

An assessment on coordination and integration of services has shown that there is verticalization of service provision at the community level. This has posed coordination challenges between MOH programs and departments.

Delivery of appropriate inputs, outputs, or services

Availability of up-to-date MSP

The NMCP has an up-to-date Strategic Plan and M&E Plan that are used in guiding and standardizing the implementation of the malaria control interventions in Malawi. The MSP under review covered planned activities from 2017 to 2022 and was aligned to the Health Sector Strategic Plan II.

Availability of up-to-date M&E plan and implementation guidelines.

In addition to the updated MSP, the NMCP also has a number of policy documents and guidelines that include the following; Health Sector Strategic Plan III (2023-2030), Malaria Strategic Plan 2023-2030 (this plan), Malaria Communication Strategy, National guidelines for the diagnosis and

treatment of malaria, Insecticide Resistance Management Plan, Net distribution guidelines, Malaria commodity Transparency and accountability guidelines, Malaria Rapid Diagnostic guidelines, Malaria Indicator Survey Report, Drug Efficacy Monitoring Report and the Malaria Research Agenda.

The NMCP utilizes a Malaria Monitoring and Evaluation Plan that was developed in line with the 2017-2022 strategic plan to support implementation of MSP. The program utilizes national routine sources as the main source of data to monitor the implementation of the MSP. Such data sources include the HMIS which operates through the DHIS platform and the program specific data sources and population-based surveys such as end user verification supervision, malaria indicator survey among others. The program data from DHIS is reviewed on a monthly, quarterly, and annual basis to check on validity, quality, and completeness.

The NMCP does conduct annual review meetings, where NMCP and its partners review activities and develop annual implementation plans before the start of each new financial year. During the implementation of the current strategic plan, two malaria indicator surveys were conducted, in 2017 and 2021, whose results provided input to the final evaluation of the strategic plan using the performance framework. The NMCP conducted a Mid-term review (MTR) in 2019 that provided a comprehensive assessment mid-way through implementation of the plan.

The NMCP in its efforts to monitor the strategic plan, also took advantage of other surveys that included the MICS, MDHS and operational research findings in assessing its progress towards the achievement of the MSP set targets.

2.2.7.3. Malaria Program Financing

Trends of budgetary allocation to the health sector within national budget

The Malawi Government has been allocating funding to the health sector annually. The expected resources from the government go towards capital expenditure, recurrent cost of healthcare facilities and remuneration. The capital health allocation has been spent on construction of health facilities, improving health infrastructure, and procurement of medical equipment, while funding for the drug budget has been spent on procurement of medicines and medical supplies, other recurrent allocation has been spent on running costs of health facilities and other operations, while remuneration has been spent on staff salaries. Salaries of healthcare staff responsible for delivering healthcare services are mostly covered by the government, while a small proportion by Global Fund and USAID.

Table 15 below shows the Malawi government expenditures on health as a portion of the total government budget.

Table 15: Total Health Budget proportion of the total Government Budget

FINANCIAL YEAR	TOTAL GOV BUDGET	TOTAL HEALTH BUDGET*	PERCENTAGE
2016/17	1,171,069,830,000.00	119,100,845,252.00	**10.2**
2017/18	1,301,227,000,000.00	124,999,333,345.90	**9.6**
2018/19	1,429,662,447,006.00	142,840,736,020.00	**10.0**
2019/20	1,359,117,097,525.25	134,552,592,654.99	**9.9**
2020/21	2,190,000,000,000.00	204,700,000,000.00	**11.5**
2021/22	1,990,000,000,000.00	187,200,000,000.00	**9.4**
2022/23	2,840,000,000,000.00	283,570,000,000.00	**10.0**

**The Total Health Budget includes Both Central and Local Government allocated budget.*

Trends on budgetary allocation to malaria programming within the health sector

Government financial allocations to the NMCP are at less than 1% of the MOH budget (Table 16). This is likely an underestimation of total Government spending on Malaria control since personal emoluments for NMCP staff and all other staff involved in delivery of malaria interventions in health facilities, infrastructure, & plants and other health system support budgets that benefit NMCP in its implementation are not costed. There is a need for a robust analysis of the cost of all financial and non-financial contributions from the government to show a clear picture of the total government contribution towards malaria control in Malawi rather than just an operational budget.

Table 16: NMCP Budget Proportion of the Central Level Health Budget in MWK (ORT Budgets)

FINANCIAL YEAR	MOH Budget*	NMCP	PERCENTAGE
2016/17	17,322,506,440.00	252,089,522.00	1.5
2017/18	18,954,884,353.00	211,115,651.00	1.11
2018/19	22,437,508,570.00	204,740,651.00	0.91
2019/20	32,985,468,505.00	305,160,356.00	0.93
2020/21	31,580,657,258.00	238,988,456.00	0.76
2021/22	27,386,351,809.00	161,151,965.00	0.59
2022/23	35,969,000,000.00	66,627,450.00	0.2

**The MOH Budget excludes Personal Emoluments, Development budget and district health budgets.*

Trends of partners' financial contribution to malaria programming

The Global Fund and PMI are the main external funding partners for malaria control in Malawi (Table 17 andTable *18*). They routinely commit enormous financial and technical resources and continued to do so during the period under review as indicated in subsequent tables.

Table 17: Global Fund Budget Allocation in USD per Module

Module	2017	2018	2019	2020	2021	2022
Vector control (LLINs)		19,877,379	50,255	-	44,937,809	12,052,832
Case management		9,936,751	8,263,675	7,901,263	7,555,976	4,342,507
RSSH: Community		810,206	407,000	-		
RSSH: HMIS and M&E		680,991	917,801	-	1,880,970	1,173,394
RSSH: PSM (Warehousing)		10,221,413	1,714,653	1,381,257		
Program Management		1,522,648	1,044,213	993,942	658,172	317,959
COVID 19		-	-	347,297	1,349,501	1,458,116
Malaria	16,282,087					
TOTAL	**16,282,087**	**43,049,389**	**12,397,597**	**10,623,759**	**56,382,428**	**19,344,807**

Table 18: PMI Budget Allocation in USD per key intervention

INTERVENTION	2017	2018	2019	2020	2021	2022
Vector Monitoring and Control	9,257,765	6,499,000	8,280,000	8,814,000	9, 450,625	8,022,980
Malaria in Pregnancy	658,000	658,000	690,000	760,000	300,000	678,000
Case Management	6,740,000	7,349,000	8,510,000	5,596,000	6,492,075	7,388,020
Supply Chain and Management	N/A*	N/A	N.A	3,020,000	2,932,625	2,580,000
Social And Behavior Change Communication	1,550,000	1,600,000	1,610,000	1,510,000	825,000	890,000
Surveillance, Monitoring, And Evaluation	1,089,000	1,460,000	1,150,000	1,060,000	1,449,675	1,425,000
Health System Strengthening / Capacity Building	550,000	500,000	460,000	770,000	550,000	410,000
Operational Research	85,235	0	0	0	0	0
In-Country Staffing And Administration	2,070,000	1,934,000	2,300,000	2,470,000	2,000,000	2,606,000
Total Funding	**22,000,000**	**20,000,000**	**23,000,000**	**24,000,000**	**24,000,000**	**24,000,000**

*Cells with 'N/A' indicate that investments from these technical areas were incorporated into other budget lines

Trends on district-level financing for Malaria interventions.

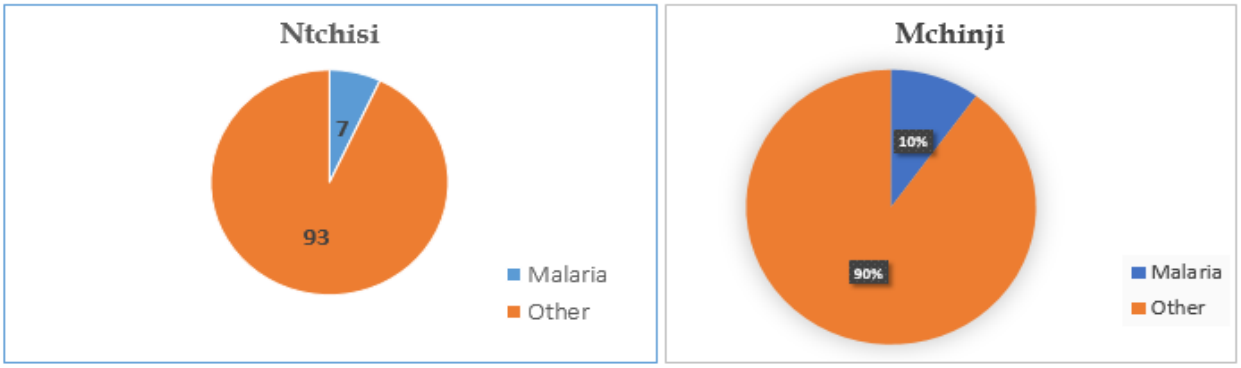
District Health Planning, Financing and implementation is the responsibility of the Ministry of Local Government and Rural Development (MoLG&RD), which also oversees the operations of other sectors at district.

An analysis of District Implementation Plans (DIPs) and the corresponding budget allocations to respective health interventions found out that Malaria activities are included in the DIPs. However, a common feature across districts was that DHMTs do not allocate funds under the annual resource envelope from government to malaria activities. Malaria program activities are predominantly funded by partners in all the 6 districts visited.

The share of Malaria budget in the overall DIP budget in some of the districts assessed was less than 10% and this is likely the trend in many other districts (Figure 21). This may be indicative of a context in which malaria is not given the attention it

deserves given the relative size of its burden. Malaria falls under Clinical Services, but budgeting and resource allocation are skewed towards other clinical services.

Figure 21: Proportion (%) of DIP funding allocated to Malaria activities in Ntchisi and Mchinji



Malaria Expenditure Analysis in the context of need-based budget

Trends on the proportions of annual budget met or trends of the annual proportional funding gap

Table 19 shows that implementation of the 2017-2022 MSP faced a huge funding gap which reached an astounding high of **61%** in 2020 and 2021. This means that only 39% of the total MSP funding need was financed. Towards the end of the MSP under review (for the years 2021 and 2022), the funding gap had drastically reduced from 61% in 2020 to **28%** in 2022.

The level of NMCP financing throughout the period was on average at **50%** and low according to WHO rating. WHO rates level of financing as **high** if the funding gap is **less than 10%**, **moderate** if funding gap ranges between **10% to 20%**, and **low** if the funding gap is **higher than 20%**.

Table 19: Trends on the proportions of annual budget met or trends of the annual proportional funding gap

BUDGET (MWK)	2017/18 (2018)	2018/19 (2019)	2019/20 (2020)	2020/21 (2021)	2021/22 (2022)	2022/23 (2023)
MALAWI GOVERNMENT	211,115,651	204,740,651	305,160,356	238,988,456	161,151,965	66,627,450
PMI	16,654,000,000	15,140,000,000	17,411,000,000	17,441,000,000	19,200,000,000	24,000,000,000
GLOBAL FUND	11,000,000,000	11,000,000,000	11,000,000,000	11,000,000,000	11,000,000,000	11,000,000,000
TOTAL FUNDING MADE AVAILABLE	**29,217,655,510**	**40,363,127,920**	**27,101,141,588**	**25,459,270,092**	**60,802,236,603**	**40,509,713,608**
MSP BUDGET	**61,141,064,941**	**97,978,349,784**	**68,901,580,333**	**65,286,640,216**	**100,219,184,005**	**56,064,588,079**
BUDGET GAPS	**31,923,409,4431**	**57,615,221,864**	**41,800,438,745**	**39,827,370,124**	**39,416,947,402**	**15,554,874,471**
% GAP	**52%**	**59%**	**61%**	**61%**	**39%**	**28%**

2.2.7.4. Key Bottlenecks

Program capacity to Implement

The following bottlenecks were identified to have affected the rate of activity implementation during the MSP 2017-2022 period:

- Delays in procurement and liquidation processes affected timely financing and implementation of subsequent activities.
- The COVID-19 pandemic with travel restrictions affected cross-border collaboration activities.
- Delays to fill the approved established posts following the functional review affected program strengthening on Human Resource.
- Long and delayed approval processes for requests, affected timely implementation of activities
- Some strategic activities like the Zero Malaria Starts with Me Campaign could not get financial commitments and therefore were not implemented.
- Knowledge gap among newly recruited Community Health Workers (CHWs) in the districts affected effective provision of services.
- Limited and/or inexistent budgetary support within District Implementation plan

Malaria program Financing

The financial analysis of budget allocations for the National Malaria Strategic Plan shows that the Malaria program has consistently been underfunded at an average gap of 50%. This is quite substantial and impacts the ability to control malaria in Malawi. The funding from the government has declined, and that from partners and donors have flatlined, or dwindled despite the rise in cost of malaria commodities, shipment, and overall implementation costs during the period under review. There is need to expand the funding base through lobbying Treasury, Parliament, non-traditional donors, and advocating for increases from the current donors to improve and maintain high coverage of malaria control interventions for sustained impact. The malaria burden in Malawi has been stratified and will guide deployment of targeted interventions using the limited available resources.

At district level, malaria activities are not adequately funded under the public funding stream.

2.2.7.5. Recommendations

Recommendations on the assessment of the program management component have been classified into 3 categories: Policy, Planning, and monitoring; Program capacity to implement; and Malaria program financing

Policy, Planning, and monitoring

- The Malaria Research Agenda needs to be reviewed, finalized, and submitted for approval
- NMCP to take a proactive role in providing technical advice to the IDSR to ensure inclusion of adequate epidemic preparedness and response to possible Malaria epidemics.
- Re-align the NMCP Structure to the approved NMCP established staff positions in line with the functional review.
- Build capacity to DHMT members on integrated supportive supervision to lower-level health facilities and prioritize all malaria interventions.
- The DHMT to consider periodic review of the performance of the malaria program at district level for prioritization of support.
- Support districts to improve on data management and analysis for early epidemic detection and response.
- NMCP to maintain an updated country's malaria burden stratification report and MAP to guide deployment of appropriate targeted high impact interventions.
- NMCP and Partners should quantify and stock ITNs for Epidemic Preparedness and response.

Program capacity to implement

The following recommendations were made based on the findings on implementation capacity:

- Designate temporary finance officers in districts to increase capacity to handle huge expenditures and facilitate timely liquidation when implementing major interventions like Mass Net Distribution Campaign.
- Build the capacity of District Malaria Coordinators to promote successful program implementation.
- NMCP to take an active role in providing technical guidance in articulation of malaria case management algorithm in the iCHIS.
- Improve capacity building in service delivery and supervision at district level through transfer of skills to DHMT to improve leadership and governance.

Malaria program financing

Based on the review findings on Malaria financing landscape, both at national and district level, the following recommendations are made:

- NMCP to develop a business plan for resource mobilization.
- NMCP to stratify and annually update the country's malaria burden and employ appropriate targeted high impact interventions.

- MoH to lobby for increased domestic funding for malaria control and elimination activities to minimize dependence on donor funding.
- MoH and partners to advocate with the Government for increased allocation of funds for malaria to achieve the vision of malaria elimination.
- NMCP to engage the high-level politicians, private sector, Partners, and the community to make the malaria Elimination agenda high to attract funding.
- NMCP to carry out a cost benefit analysis to have economic benefit evidence for effective lobbying.
- NMCP to continue lobbying for resources to implement the Zero Malaria Starts with Me campaign with support from the Ministry to facilitate collective efforts.
- Advocate for the allocation of DIP funds for malaria specific activities

2.3. KEY LESSONS LEARNT TO DATE ON MALARIA CONTROL EFFORTS

Based on issues identified during the situation analysis, the following lesson s have been drawn:

- Continued political will and MoH Leadership support (Senior Management and

  Program) is key to successful implementation of broader strategic interventions for ownership at all decision-making points including financing.
- Partners/donor good relationship and cooperation is key in addressing financial gaps in the system during implementation
- Alignment to national or international policy and strategic agenda is crucial not just for relevance purposes but also facilitates evaluation of outcomes with reference to standardised benchmarks
- Central-level systems support through development of policies, tools and guidelines is important to standardise practices, but this must be accompanied by more proactive monitoring of compliance, functionality and utilisation of the systems developed.
- Quality reigns over quantity – To make significant progress towards desired outcomes and impacts, what matters more is the quality of the activities lined up to change the status quo towards a particular direction. This guarantees inclusion of high-impact activities during planning through review of the intervention logic (freshening problem analyses)
- Strengthened coordination and collaboration across health interventions areas is key for more efficient use of resources
- Cost-effectiveness analysis is important especially when determining intervention mixes in limited-resource settings
- Capacity enhancement must be an integral part of broader strategic intents especially in the present era of rapidly evolving knowledge and best-practices

- Balance investments into the health care supply system with adequate interventions on the demand side through a robust SBCC intervention set
- Risk-adjusted financial planning may reduce the financial impact of unforeseen health emergencies which have strained existing resource allocations of interventions

3

SETTING THE BROAD MALARIA AGENDA

His Excellency, the President of the Republic of Malawi, Dr. Lazarus Chakwera, launching the "Zero Malaria starts with me "campaign in 2021

3.1. INTRODUCTION

Programming and implementation of malaria interventions in Malawi is specifically informed by the vision and mission of the NMCP. The vision and mission of NMCP also inform the setting of goals and objectives

Sections below present the NMCP broad agenda set out in its vision, mission, goal, objectives, and guiding principles.

3.2. VISION

All people in Malawi are free from malaria

3.3. MISSION

To reduce malaria to a level where it is no longer of public health significance in Malawi

3.4. STRATEGIC GOAL

To eliminate malaria in Malawi by 2030

3.5. OBJECTIVES

Implementation of malaria interventions from 2023 up to 2030 will aim to achieve the following thematic objectives:

i. Increase the proportion of population protected by at least one malaria vector control interventions from 37% in 2022 to at least 90% by 2030
ii. To increase and sustain the proportion of suspected cases of malaria that are tested from 98% in 2022 to 100% and treat all the confirmed cases by 2030.
iii. To increase the uptake of at least 3 doses of IPTp from the 2022 baseline of 56% to 80% by 2030

iv. To sustain annual average stock out rate of less than 1% for all malaria first-line treatment throughout the MSP (2023-2030) period
v. To increase proportion of caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of the onset of fever from 46% to 90% by 2030
vi. To increase the proportion of the general population who use an ITN consistently from 55% (MBS 2021) to 80% by 2030
vii. To Increase the proportion of pregnant women who take IPTp 3+ during pregnancy from 56% (MBS 2021) to 80% by 2030
viii. To improve malaria data quality from 95.6% in 2022 to 100% by 2030 to ensure evidence-based program implementation, policy direction and accountability at all levels of health service delivery.
ix. To strengthen program management to support the effective implementation of planned MSP activities from 56% to over 90% by 2030

3.6. GUIDING PRINCIPLES

The implementation of the NMSP (2023-2030) will be guided by the following principles:

- **Human Rights Based Approach and Equity:** The Government of Malawi will provide malaria control and prevention services to all people without distinction of ethnicity, gender, disability, religion, political belief, economic, social condition, or geographical location. The rights of health care users and their families, providers, and support staff will be respected and protected.
- **Gender Sensitivity:** Gender issues will be mainstreamed in the planning and implementation of all malaria program.
- **Ethical Considerations:** The ethical requirement of confidentiality, safety, and efficacy in both the provision of malaria control and prevention services and research will be adhered to.
- **Efficiency:** All stakeholders will be encouraged to use the resources dedicated to malaria control efficiently to maximize health gains.
- **Accountability:** All stakeholders will take full responsibility for the decisions made and actions taken while providing care in malaria control and prevention.
- **Community Participation:** Community participation will be encouraged in the planning, management, and delivery of malaria services.
- **Evidence-based Decision Making:** Interventions will be evidence based.
- **Partnership and Multi-sectoral Collaboration:** Public-Private Partnership (PPP) and multi-sectoral collaboration will be
-

encouraged and strengthened in malaria control and prevention.

- **Decentralization:** Health services management and provision will be in line with the Local Government Act of 1998 which entails devolving health service delivery to Local Assemblies.
- **Appropriate and innovative Technology:** All health care providers will use health care technologies that are appropriate, relevant, and cost effective

4

STRATEGIC INTERVENTIONS

4.1. INTRODUCTION

This section provides detailed information on how NMCP and partners intend to implement the respective strategic interventions under this strategic plan. The narrative for the proposed interventions serves as a guide as well as a binding commitment to implementation of the strategies in a manner which leads to effective achievement of the desired outcomes and impacts. The strategies and key activities will be presented according to thematic areas of Vector control; malaria in pregnancy and other novel interventions; case management; Procurement and Supply chain management; SBCC; Surveillance monitoring Evaluation and Operational Research; and program management.

4.2. STRATEGIC INTERVENTIONS

4.2.1. Integrated Vector Management (IVM)

Objective 1: Increase the proportion of population protected by at least one malaria vector control interventions from 37% in 2022 to at least 90% by 2030

The interventions of vector control in Malawi that aim at preventing transmission are the use of Long Lasting Insecticide treated Nets (LLINs), Indoor Residual Spraying of eligible structures and where applicable, larval source management. These will be implemented within the framework of integrated vector management and monitored through vector surveillance.

1. Institute policies, guiding frameworks and oversight structures.
2. Universal Access to Quality Long Lasting Insecticidal Nets
3. Build capacity of districts to implement large-scale malaria elimination initiatives
4. Quality IRS in selected, suitable epidemiological areas.
5. Conduct Larval source management.
6. Vector surveillance.

Strategy 1: Institute policies, guiding frameworks and oversight structures

This strategy shall involve developing or updating all vector control intervention guidelines and other implementation tools. These guidelines shall include LLINs guidelines in line with the two-yearly mass ITNs campaign policy, Larval Source Management Implementation

guidelines and Indoor Residual spraying Implementation tools. This will also involve the constitution of vector control implementation oversight structures.

Strategy 2: Universal Access to Quality Long Lasting Insecticidal Nets.

The routine distribution will involve improving access of LLINs to under-five children and pregnant women who are generally at risk. This vulnerable population will receive a net at ANC first visit for the pregnant women and at birth for the under-five children.

The mass LLIN distribution campaign is aimed at increasing access to the general population according to the universal coverage definition which is one net for every two people. This will be conducted every two years.

The emergency net distribution is aimed at protecting the population faced with natural disasters. The disaster victims are registered, and distribution done based on universal coverage definition.

Strategy 3: Build capacity of districts to implement large-scale malaria elimination initiatives.

The strategy will build the capacity of district stakeholders with skills to implement 1-3-7 model approach to malaria surveillance and response. The model will involve reporting of confirmed malaria cases within one day, investigation of malaria cases confirmed through rapid diagnostic testing (RDT) within three days, and application of targeted control measures to prevent further transmission within seven days. This strategy will be implemented in collaboration with all relevant thematic areas in the program.

Strategy 4: Quality IRS in selected, suitable epidemiological areas

Indoor Residual Spraying (IRS) will be implemented in suitable epidemiological districts and in areas sub-nationally tailored according to epidemiological stratification and as characterised by entomological indicators appropriate for the intervention. The intervention will also be implemented as part of insecticide resistance management in some areas. Prior to its implementation, the following key activities will be required: supplemental environmental assessment to guide environmental protection compliance, community mobilisation. Spray operations will be conducted alongside entomological monitoring to assess the quality of spraying so that real time interventions are taken to address any mishaps. Post IRS activities shall include community feedback meetings to get feedback from the community on the management of the spray operations and their views and observations following spraying. In an event that

IRS implementation has been withdrawn in the target districts due to unforeseeable circumstances, the population in such districts must be protected from malaria with dual AI/PBO nets to be distributed through a mass campaign as part of exit strategy for IRS.

Strategy 5: Conduct Larval source management

Larval Source Management (LSM) is the management of water bodies (aquatic habitat) that are potential breeding sites for anopheline mosquitoes in order to prevent the completion of mosquito development. LSM is further classified into (1) habitat modification, (2) habitat manipulation (3) biology control and (4) larviciding. Malawi under this strategy shall deploy the habitat modification and manipulation approaches unlike in the last strategy that focused on bio-larviciding. Habitat modification is a permanent change of land water including landscaping, drainage of surface water, land reclamation and filling but also coverage of water storage containers, wells, and other potential breeding sites. Habitat manipulation is a recurrent activity involving flushing, drain clearance, shading or exposing the habitat to the sun based on the vector species. The implementation of these activities under this strategy will solely rely on the mapping of breeding sites in Malawi.

Strategy 6: Vector surveillance

Vector control interventions require support in terms of regular monitoring of vector ecology, biology, habits, densities, sensitivity to the insecticides being used. Insecticide resistance which is likely to evolve with extensive use of LLINs, IRS insecticides and in Agriculture may well prove to be an important risk factor. The program will continue to conduct entomological studies to establish a national entomological profile that explores vector ecology and behaviour, species composition and distribution, vector density, and insecticide resistance. The program will operate sentinel sites for the study and monitor vector bionomics. It will enhance and motivate data collection and sharing on application of new vector control tools for their specific deployment. It will also establish an entomological surveillance system at all levels through capacity building and infrastructural development.

4.2.2.Malaria case management

Objective 2: To increase and sustain the proportion of suspected cases of malaria that are tested from 98% in 2022 to 100% and treat all the confirmed cases by 2030.

Malaria case management is one of the key interventions for malaria control in Malawi. It comprises of malaria diagnostics and treatment at

facility level both public (Govt. and CHAM) and private as well as community level. As such, this thematic area in collaboration with SMEOR will ensure tracking of confirmed malaria cases that are treated according to guidelines for regular monitoring. The key focus areas for case management will include: Expansion of community malaria case management services (in numbers of village clinics and age band extension), School Malaria Case Management through provision of Teachers Learners Kits (LTK), Capacity building for health workers, Private sector engagement, supportive supervision and mentorship, expansion of malaria microscopy as well as quality of case management services supported by policies and guidelines.

1. Ensure policy adherence and support
2. Support the enforcement of medical equipment standardization policy in procurement of medical equipment
3. Strengthen diagnostic capacity for ISO accreditation.
4. Improve the capacity/responsiveness of health workers
5. Strengthen leadership commitment, coordination, supervision and monitoring for Malaria services at all levels
6. Private Sector Engagement
7. Strengthen drug resistance prevention
8. Strengthen malaria diagnostic services
9. Strengthen Community Case Management

Strategy 1: Ensure policy adherence and support

For effective case management implementation, policies and guidelines will be developed, printed and distributed to all health facilities. During the implementation of this strategic plan, the NMCP will periodically continue to review these guidelines in line with emerging issues and orient health workers.

NMCP will continue to support districts and facilities to devise reward or incentive mechanisms for good performance on Malaria Case Management

Strategy 2: Support the enforcement of medical equipment standardization policy in procurement of medical equipment

NMCP will continue working with Physical Assets Management and other departments in procurement of malaria case management related equipment and provide direction to implementing partners on equipment

procurement in line with medical equipment standardization policy. In order to ensure that the policy is adhered to, NMCP shall ensure availability of equipment, supplies and materials all the time.

Strategy 3: Strengthen diagnostic capacity for ISO accreditation.

The is a call from WHO for all member states to have laboratories accredited on ISO 15189. The National Parasitology Reference Laboratory is supposed to be accredited. Since the laboratory is also responsible for administering Proficiency Testing for the whole national laboratory network, there is also need for accreditation on ISO 17043. A series of activities have been identified to build capacity of laboratory personnel in quality management systems. Develop, print and distribute laboratory documents.

Strategy 4: Improve the capacity/responsiveness of health workers

Provision of quality of care for both uncomplicated and severe malaria cases at all levels of health care delivery is paramount for malaria case management. The NMCP will make sure that all health workers have adequate knowledge and skills on malaria case management.

NMCP together with regulatory bodies will follow on preservice training institutions to make sure that their curriculums have been updated to include changes in Malaria Case Management. This is so because the programme would like to make sure that the right material is provided to the scholars before they graduate.

The team will also mentor health workers and lectures from pre - service training institutions as part of capacity building. In addition, the program will continue providing refresher trainings every two years in line with WHO recommendations. The program will also follow up on all trained health workers in malaria case management within six weeks of training.

The program will continue to conduct quarterly integrated malaria mentorship and supportive supervision on case management at all levels and incorporate all health facilities from private sector during rounds of IMSSM.
During this strategic plan, the program will adopt LTK as part of strategy for increasing access to malaria diagnosis and treatment in schools. This intervention will be provided through primary schools in selected districts.

The case management thematic unit will strengthen its collaboration with other thematic units within the program to conduct integrated case management review meetings at district level.

Strategy 5: Strengthen leadership commitment, coordination, supervision and monitoring for Malaria services at all levels

The malaria program review for the 2017-2022 identified a number of gaps in leadership commitment,

coordination as well as supervision and monitoring. The program will participate in joint annual review meetings targeting DHMTs and District Council staff.

The NMCP shall establish a core group on case management supportive supervision that will target core DHMTs as well as extended DHMTs to build capacity on facility supportive supervision including wards and mentorship of health workers.

Strategy 6: Private Sector Engagement

The MMIS 2021 results show that 7% of the population seek medical services from private health facilities. With the findings from the malaria program reports 2018 that there was poor adherence to malaria case management policies and treatment guidelines in private clinics, during this strategic plan, the program will engage the private sector in case management. Mapping of all private clinics across the country will be conducted during the first year of implementation of this strategy. NMCP will mobilize resources both for training and mentorship of all health workers in the private clinics to improve malaria diagnosis and treatment. In addition, private sector clinic representatives will continue to be involved in case management TWG meetings as well as district malaria review meetings.

Strategy 7: Strengthen drug resistance prevention

As part of prevention of ACT drug resistance, the program will explore options for minimising cases of drug resistance. This will include enaging the population on enhanced adherence to treatment, introduction of multiple first line teartment as a policy for the country; and engagement of pharmacy technicians on pre-disbursement counseling. This will be guided by therapeutic efficacy studies that shall be conducted every two years throughout the life span of this strategic plan.

Strategy 8: Strengthen malaria diagnostic services

NMCP shall ensure diagnostic services are strengthened both at facility and community level. This will be done by training the providers and providing proficiency tests and quality controls and also supervising and mentoring them. Malaria microscopy is the gold standard for confirming malaria infection. NMCP shall ensure availability of microscopes, microscope spare parts, ancillary equipment and reagents at all times. Equipment shall be serviced and maintained regularly. Test kits, reagents and methods shall be evaluated and validated. There is need for a backup power to all testing facilities to ensure continued services in the event of power interruption. Refurbish National Parasitology Reference Laboratory infrastructure and other laboratories.

Strategy 9: Strengthen Community Case Management

Community case management evolved into a comprehensive strategy called integrated community case management (iCCM) that addresses three main childhood diseases namely malaria, pneumonia, and diarrhoea. It promotes early recognition, prompt diagnostic testing, and appropriate treatment of malaria among children under-five in the home or community.

It is an equity-focused strategy that aims to improve access for under-five children in hard-to-reach areas thereby improving timely and effective treatment of malaria.

NMCP in collaboration with IMCI and CHSS started a pilot of the age band expansion for malaria community case management towards the end of the MSP 2017-2022. The pilot, aimed at assessing the effectiveness of expanding malaria community case management (eCCM) to all ages will be concluded during the implementation of the MSP 2023-2030. It is anticipated that a policy will be enacted and eCCM rolled out not long after the start of MSP 2023-2030 implementation.

Community health workers mainly Health Surveillance Assistants (HSAs) are trained to diagnose, treat, or refer malaria cases in under-5 children at community level as appropriate.

Equipped with a three-lock drug box, HSAs are regularly supplied with mRDT for malaria parasitological testing, Lumefantrine-Artemether (LA) for treatment of confirmed uncomplicated malaria and rectal artesunate (RA) as pre-referral treatment of severe malaria at community level.

NMCP will collaborate with Integrated Management of Childhood Illnesses (IMCI) Unit, Community Health Services Section (CHSS), and other supporting partners implementing iCCM activities to ensure that implementation is in tandem with MSP 2023-2030, Malaria Treatment Guidelines, Diagnostics Guidelines, and global best practices in line with WHO guidelines. The programme will also ensure a harmonised M&E Framework for reporting malaria cases at health facility and community levels.

To improve malaria case management at community level, the following activities will be conducted: (1) NMCP will work closely with IMCI and CHSS to increase the number of village clinics to satisfy the 5km radius as per the Ministry of Health policy for increased access to care; (2) NMCP will collaborate with IMCI and CHSS to organise refresher trainings for HSAs; and (3) NMCP in collaboration with the IMCI and CHSS will continue engaging the MoH towards the institutionalisation of the eCCM.

4.2.3.Malaria in Pregnancy and other novel interventions

Objective 3: To increase the uptake of at least three doses of Intermittent Preventive Treatment (IPTp) from 56% baseline (MMIS,2021) in 2023 to 80% by 2030.

To address issues highlighted in chapter 2 on malaria during pregnancy, the country will support delivery of a comprehensive package of interventions to ensure improved pregnancy outcomes and maternal survival. Some of the key interventions provided by this guideline include administration of Sulphadoxine Pyrimethamine (SP), under direct supervision of skilled service providers, distribution of Long-Lasting Insecticidal Nets (LLINs) and appropriate case management through prompt diagnosis and effective treatment with recommended medicines. The programme will strive to increase the uptake of IPTp 3+ to reduce the vulnerability in pregnancy through collaboration and coordination with key stakeholders namely, RHD, PSM and Health Education Unit (HEU).

1. Expand existing network of health care services
2. Strengthen Health System Capacity to provide MIP services
3. Strengthen SBC for Malaria to address MIP issues
4. Strengthen commodity logistics planning
5. Strengthen Public Private Partnerships
6. Explore and Support other novel interventions

Strategy 1: Expand existing network of health care services

In Malawi, ANC is provided in all Public and CHAM facilities free of charge, while some private facilities are also offering ANC services but at a cost. During the MSP 2023-2030 implementation, NMCP in collaboration with Reproduction Health department will support expansion of ANC services to underseved populations in hard to reach and remote areas through capacity building to Community Midwives Assistants (CMAs) to enable them conduct outreach clinics. The program will also use the same CMAs to intensify awareness on MIP services that would help clear myths and misconceptions that contribute to low performance.

Strategy 2: Strengthen Health System Capacity to provide MIP services

The Health System needs resources in terms of human and material to provide quality services. Government of Malawi, through the Ministry of Health, has oversight of lobbying and advocating for these resource. As the

Ministry of Health continues to recruit CMAs, the NMCP, RHD and DHMT will support to build capacity to them for expanded ANC service delivery through orientations, supportive supervision, mentorship, coaching and review meetings with much focus on the new MIP guidleines. NMCP will also print and distribute IPTp guidelines posters, job aids and procurement of MIP equipment (Cups, basins and trays) to promote Directly Observes Therapy (DOT). The Donor and Partners PMI, will continue to procure IPTp drugs and routine ITNs for MIP. In its mandate to improve MIP data quality and management, NMCP will also conduct orientation of already existing data clerks to improve their knowledge and skills in proper recording of the registers and reporting forms that capture MIP data.

Strategy 3: Strengthen SBC for Malaria to address MIP issues

The SBCC strategy involves dissemination of messages using various forms of channels to communities with an emphasis on the recipient adopting positive health behaviours. In this regard the MIP program will collaborate and coordinate with RHD, Health Education Services (HES) and CSOs to engage the local leaders in mobilizing the communities on early ANC attendance. This will be based on existing evidence from the 3 IMPACT Malaria districts[18]. The 3 districts involved local leaders in sensitizing the community on early ANC attendance with significant increase in IPTp coverage.

The main objective would be to empower community, traditional and faith leaders with knowledge and skills to clear misconceptions that are hindering early ANC attendance. The MIP program will therefore support interface meetings, and awareness campaigns. Communities will also be encouraged on male involvement in women's sexual and reproductive health service uptake.

Strategy 4: Strengthen commodity logistics planning

NMCP will strengthen collaboration and coordination with other key stakeholders namely, Directorate of Reproductive Health (RHD) and PSM to ensure timely quantification and distribution of MIP commodities (PT kits, LLINs, IPTp-SP DOT equipment and antimalarials) to avoid stock outs.

Strategy 5: Strengthen Public Private Partnerships

The programme will support DHMT to map out all private partners providing ANC services and initiate a proper reporting system of data, this will ensure capturing of MIP data from

[18] Mchinji, Kasungu and Nkhatabay

private clinics into DHIS2. The program will also provide MIP guidelines and orientation of MIP service providers on new guidelines in private clinics to ensure standardization of services.

Strategy 6: Explore and Support other novel interventions

Malaria vaccine: The RTS,S/AS01 malaria vaccine is an injectable vaccine that provides partial (approx. 39% efficacy.) protection against malaria in young children. Malawi adopted the phased introduction of the Malaria Vaccine through the routine Expanded Immunization Programme (EPI) program after a successful pilot in selected areas from 2019 and WHO recommendation for broader use in countries with high to moderate malaria burden caused by Plasmodium falciparum. The Expanded Immunization Programme (EPI) is the lead implementer of the vaccine in close collaboration with the NMCP

Other Novel Interventions: In addition to the scale-up of the malaria vaccine, NMCP and partners will be open to explore other novel interventions that may make it into approved Malaria interventions. The following are some of the potential novel malaria interventions to be explored.

i. Seasonal malaria chemoprevention (SMC)
ii. Perennial malaria prevention (PMC/IPTi+)
iii. IPT in school children children (Including the Learners Treatment Kit)
iv. Post discharge malaria chemoprevention (PDMC)

4.2.4. Procurement and Supply Chain Management

Objective 4: To sustain annual average stock out rate of less than 1% for all malaria first-line treatment throughout the MSP (2023-2030) period

Efficient and effective malaria commodity procurement and supply chain management (PSM) are fundamental to the program performance in the fight against malaria. To ensure malaria commodity availability throughout the health system, the MOH's long-term objective is to establish a reliable, integrated national supply chain system capable of delivering health commodities to all public sector facilities as well as CHAM affiliates. The current national system is designed to deliver health commodities from the Central Medical Stores Trust (CMST) to regional medical stores (RMS), and to health facilities (central hospitals, district hospitals, community/rural hospitals, and health centres). Beyond health facilities, under-five and village clinics access health commodities from the health facilities in their catchment areas.

The country has a robust logistics management information system (OpenLMIS) which is linked to the district health information system 2 (DHIS2) through an interoperability layer. Health facility data which are reported through the two systems are used for decision making that include commodity demand forecasting, supply planning, procurement, distribution, stock status and pipeline monitoring and accountability performance tracking.

The last malaria performance review indicated encouraging achievement in ensuring continuous commodity availability with annual average stockout rate of first line malaria treatments at less than 1% throughout the plan implementation period. However, there are still some challenges that could hinder the sustainment of this achievement. These challenges include data quality problems, inadequate funding for commodities and implementation of PSM activities, and inadequate coordination of PSM activities.

1. Enhance local ownership and coordination of malaria commodity procurement and supply management
2. Improve quality of LMIS data for commodity Security and Accountability
3. Strengthen commodity demand planning, procurement, distribution and inventory control, and quality assurance activities
4. Improve the capacity of health workers and the Malaria Youth Army Champions on procurement and supply management activities at district level.

Strategy 1: Enhance local ownership and coordination of malaria commodity procurement and supply management

Enhancing local ownershi in procurement and supply chain management of malaria commodities is critical to ensure sustainability in the implementation of malaria elimination activities in the country. This requires engagement and commitment of leadership to allocate more domestic resources to support procurement and management of malaria commodities.

The program will work with all key stakeholders including the Malaria Youth Army Champions to strengthen the coordination of national and sub-national PSM activities. This will include revitalizing the national logistics technical working group (TWG) and supporting the functionality of drug and therapeutic committees (DTC) and health centre management committee (HCMC).

Strategy 2: Improve quality of LMIS data for commodity Security and Accountability

Quality LMIS data is key in ensuring commodity security and accountability in the procurement and supply chain management system. This requires quality record keeping, reporting and analysis for supporting evidence-based decision making and performance monitoring. As part of improving the quality of LMIS data, the program will conduct regular data review and analysis at district and central levels and provide feedback to the health facilities . In addition, the program will work with the health facility management to institutionalize data analysis and feedback mechanisms to improve the culture of evidence-based decision making and performance monitoring.

In collaboration with HTSS, NMCP will support the roll out of the stock management module in OpenLMIS to facilitate capturing batch numbers and expiry dates to enable effective tracking and monitoring of commodity stock. In addition, NMCP will advocate for ensuring aggregation and disaggregation of data in OpenLMIS to enhance data analysis and use at sub-national level. Furthermore, the program will coordinate with Central Monitoring and Evaluation Division (CMED) and Digital Health to optimize the inter operability layer between DHIS2 and OpenLMIS including monitoring of the process of data transmission into DHIS2.

As part of the implementation of the transparency and accountability guidelines, the program will conduct regular monitoring of transparency and accountability performance. This activity will include identification and engagement of health facilities with transparency and accountability gaps, putting in place action plans to address the factors driving the accountability gaps with a view to graduating health facilities from low level accountability to higher level accountability.

Strategy 3: Strengthen commodity demand planning, procurement, distribution and inventory control, and quality assurance activities

Uninterrupted supply of malaria commodities requires accurate demand planning, effective procurement, distribution, inventory management and quality assurance of the products throughout the supply chain. As part of this, the program in collaboration with HTSS and other key stakeholders will conduct annual forecasting and supply planning exercises. In addition, the program will conduct semi-annual revision of the forecast and quarterly pipeline updates to ensure timely and adequate procurement of all malaria commodities including products required for novel interventions (malaria vaccines, SMC, IPT in school children) for malaria prevention and control in the country.

In collaboration with relevant stakeholders, the program will continue conducting regular distribution of malaria commodities to all eligible health facilities. To reduce

risk of wastage through expiry and contribute to improved commodity availability, NMCP will collaborate with HTSS to print and distribute the revised Malawi Health Commodity Logistics Management System (MHCLMS) Standard Operating Procedure (SOP) manual which includes procedure for commodity redistribution. The program will also support the implementation of the Master Supply Chain Transformation Plan (MSCTP). NMCP in collaboration with HTSS will ensure proper use of malaria medicines through proper prescribing in accordance with the malaria standard treatment guidelines.

Strategy 4: Improve the capacity of health workers and the Malaria Youth Army Champions on procurement and supply management activities at district level.

Effective implementation of procurement and supply chain management activities require having staff with adequate knowledge and skills. In realizing this, the NMCP will conduct supportive supervision and mentorship of pharmacy and other staff responsible for commodity management. In addition, the program will collaborate with HTSS and other partners to provide in-service training on PSM activities including forecasting, supply planning, procurement, inventory management, transparency, and accountability, recording and reporting, data analysis and use.

4.2.5.Social Behaviour Change and Communication (SBCC)

Objective 5a: To increase proportion of caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of fever onset from 46 % to 90% by 2030

Care seeking for children with fever is not a behavioural norm in Malawi. The MIS report for 2021 indicates that of the 37% of under five children who had fever two weeks prior to the survey, only 46% sought care for malaria within the recommended 24 hours of the onset of fever. To achieve the objective NMCP will employ the following SBC strategies: Intensify mass communication through community radios and interpersonal communication; strengthen partnership and community engagement and capacity building on malaria SBC.

Objective 5b1: To increase the proportion of the general population who use an ITN consistently from 55% (MBS 2021) to 80% by 2030

Trends in consistent net use and care shows significant decline. ITN use in 2021 in the general population was 37%, a significant drop from 55% in 2017 while trends in ITN use by pregnant women (49%) and children aged five (53%) also decined (MIS 2021). ITN care is at 57%. The MBS 2021 indicates that the factors attributed to different behavior determinant include: supportive descriptive community norms,

perceived self-efficacy, perceived susceptibility and favorable attitudes.

Therefore, to achieve the objective, NMCP will employ the following strategies: consistent interpersonal communication, intensification of mass communication and capacity building.

5c. To Increase the proportion of pregnant women who take IPTp 3+ during pregnancy from 56% (MBS 2021) to 80% by 2030

The uptake of IPT3+ among pregnant women is low (56 %, MBS 2021).

According to the 2021 MBS survey, 66% of respondents had favourable attitude towards IPTp, only 36% thought that it was okay for pregnant women to take IPTp on an empty stomach, and only 28% thought their community would approve of someone taking IPTp. Increasing spousal discussion about ANC, improving attitudes about IPTp, dispelling myths and rumors about IPTp and establishing taking IPTp as a social norm are likely means of increasing IPTp uptake.In this regard, for the objective to be met, NMCP will employ the following strategies: consistent interpersonal communication, intensification of mass communication, strengthening partnership and community engagement; capacity building; and strengthening of community-led planning, monitoring and learning for Malaria intervention

1. Consistent interpersonal communication
2. Intensification of mass communication through national and community radios plus social media
3. Strengthening partnership and Community engagement
4. Capacity Building
5. Strengthen Community-led planning, monitoring and learning for Malaria interventions

Strategy 1: Consistent Interpersonal communication

Interpersonal communication will consistently be utilized because it has a huge impact in dealing with myths and misconceptions. These will also be key in dealing with negative perceptions, attitudes and practices which negatively affects prompt health seeking care amongst caregivers of the under five children.

The following activities will be undertaken to realize this strategy: development of IPC materials; community dialogues; health talks; theatre for development; community filming; and sensitization meetings.

Strategy 2: Intensification of mass communication through national and community radios plus social media

Mass communication is preferred because it has an advantage of disseminating messages to large numbers of people within a short period. Primarily NMCP will use community radio stations which are becoming increasingly popular within their locations and have leverage of using local languages. This in-turn fosters better understanding of information. The following activities will be undertaken a) development of mass media SBC materials; featuring and airing of SBC materials; periodically collect, document and share best practices and success stories in relation to prompt care seeking within 24 hours of onset of fever of the under five children and ITN use. National radios, TV's and social media influencers will also be utilized in addition to the community radios.

Strategy 3: Strengthen partnership and Community engagement

SBC strategies outlined in the MSP can only be effective if they are implemented by diverse partners capitalizing and leveraging on their strengths and competitive advantage. Therefore, the collaborative efforts of key malaria SBC stakeholders at all levels (national, sub-national and community) remains critical. Key activities in strengthening partnership and community systems strengthening to support zero malaria starts with me brand will include development of advocacy kit, advocacy meetings with national and decentralized levels stakeholders, coordination meetings and exchange learning visits.

Strategy 4: Capacity Building

Different key stakeholders require capacity to effectively undertake SBC activities at all levels. Key activities will include; building capactiy to the Malaria Youth Army Champions to effectively carry out its activities aimed at engaging the community for positive behaviour change in support of the malaria elimination agenda; training of relevant school, community structures, media and community theatre groups on Malaria SBC priorities; training of relevant personnel such as District Health Promotion officers, IEC focal persons; conducting monitoring of SBC activities; conducting supportive supervision and mentorship of malaria SBC activities at facility and community levels; training facility and community health workers on Malaria SBC; and procurement of ICT equipment to aid in SBC interventions.

Strategy 5: Strengthen Community-led planning, monitoring and learning for Malaria interventions

NMCP and partners will endeavor to strengthen the capacity of community-level actors in planning and monitoring of malaria interventions as part of ensuring effective participation of all stakeholders. With the malaria youth army champions as the main focus and collaborative partner at

community level, NMCP and partners will: (i) Map existing youth structures to drive the strategy of recruitment and trainings in Malaria programming; (ii) Conduct training for the youth led and Community based organisations in programming of malaria interventions; (iii) Support the Malaria youth army to conduct monitoring and supevision on early uptake of ANC, IPTp3 and Net usage in the communities; and (iv) Support the Malaria Youth Army Champions to conduct learning field visits on experiences and best practices on ITN use, ANC uptake and Indoor Residual Spraying in the districts where the intervention is being implemented

4.2.6. Surveillance, Monitoring, Evaluation and Operation Research (SMEOR)

Objective 6: To improve malaria data quality from 95.6% in 2022 to 100% by 2030 to ensure evidence-based program implementation, policy direction and accountability at all levels of health service delivery.

SMEOR is one of the crosscutting thematic areas of the malaria strategic plan and an essential component for the success of the malaria control program. A functional SMEOR system ensures that good quality; accurate, complete, and reliable malaria data is collected, collated, analyzed, and used to measure program performance and progress.

The objective of SMEOR is to improve malaria data quality from 94% in 2022 to 99% by 2030 to ensure evidence-based program implementation, policy direction and accountability at all levels of health service delivery. To do this, the ministry of Health will collaborate with other government departments and key malaria monitoring and evaluation stakeholders in the country in performing the following activities. The following strategies will be deployed to achieve the objective.

1. Improve data ownership and utilization at service delivery point
2. Capacity building
3. Engagement of private Clinics
4. Surveillance, Monitoring and Evaluation
5. Epidemics preparedness and response
6. Build Data Management resilience to unforeseen circumstances

Strategy 1: Improve data ownership and utilization at service delivery point

In collaboration with partners, NMCP will develop, disseminate, and support implementation of a malaria specific

job aid on data use and the WHO DHIS2 data quality tool for routine malaria data verification and DHIS2 based data cleaning. On data use, the

NMCP will coordinate with CMED, Digital Health and partners to develop and support implementation of malaria specific data visualization tools for use at the national, district, facility, and community levels. NMCP and its partners will support facility staff to perform basic data analysis using the analytical and visualization tools developed at the national level and ensure that data and relevant reports are discussed and used by the facility teams to enhance program implementation.

The program has been implementing quarterly district data reviews under the previous strategy and this has enhanced program monitoring at the district level. In the 2023- 2030 strategy, this activity will continue to be supported, and will include key staff from key private health providers at all levels and will also include awards for best performing facilities. In the previous strategy, NMCP has been conducting integrated supportive supervision and mentorship (ISS&M) activities covering 100% of all facilities twice every year. The ISS&M activity has contributed to effective program implementation monitoring across the program thematic areas. In the 2023-2030 malaria strategy, this activity will continue to be implemented, and will include key staff from key private and village clinic health providers. In collaboration with CMED and Digital Health Division in the Ministry, NMCP will support District HMIS Officers and Malaria Coordinators to ensure efficient data management processes.

Strategy 2: Capacity building

The program will map availability of personnel to manage HMIS data at facility level which is key for a robust HIS system. Consequently, more data clerks will be lobbied for if gaps are identified and the program will continue making use of temporally data focal persons where data clerks are not available. The program will conduct orientations targeting health care workers including village clinics to align with changes made to malaria reporting tools.

Management of data at all levels will be guided by an SOP for data management which will be developed by the program and will be disseminated and distributed after finalization in collaboration with CMED. Quarterly on the job data mentorship will strengthen health care workers' skills and knowledge. The program will also train health care workers in data extraction, analysis and visualization to strengthen data use at all levels. In addition, health care workers will be trained to write success stories and case studies which will be shared locally and globally through the program website. Data management

is dynamically changing to suit the changing epidemiological landscape, hence the need to continue to strengthen staff skills through specialized trainings. The specialized trainings will provide an opportunity for networking, exposure, sharing and learning from other country experiences in strengthening surveillance, program management and monitoring of malaria programs.

Capacity in terms of equipment and storage tools is vital for record keeping at district and facility level. In this regard, the program will support districts with computers and other tools to enable analysis of data and visualization. All necessary HMIS data collection tools will be provided in collaboration with CMED and corresponding storage shelves to strengthen record keeping at facility level. Digitalization of data collection and storage will be scaled up to all data capturing points at district and facility level. The P rogram's website will be maintained and used for information sharing locally and at the national level.

Strategy 3: Engagement of private Clinics

NMCP will engage the private health sector to establish contact with facilities that provide malaria services and are capable of generating data on malaria cases. NMCP will work with the Medical Council, Nurses Council, PMRA and CMED to enforce private facilities' compliance with the existing reporting systems during their registration. In addition NMCP will institutionalize the MOH data capturing tools to ensure complete and timely reporting of all malaria cases.

Strategy 4: Surveillance, Monitoring and Evaluation

NMCP with partners will review reporting forms to enable collection of more disaggregated malaria data. The program will collaborate with CMED/Digital health to modify data entry in DHIS-2 to accommodate the disaggregated data. The program will also strengthen disease surveillance through use of malaria case thresholds by district and health facility. Malaria case tracking will be done every 2 weeks, monthly and In addition, NMCP and partners will standardize and consistently develop data analysis protocols for the malaria burden Stratification update as a routine exercise. This will strengthen surveillance systems to monitor and track the effectiveness of malaria interventions, including case detection, treatment, and prevention activities, at sub-national level.

NMCP will conduct collaborative meetings between the health sector (CMED) and NSO to harmonize and standardize the approach of determining the population denominator at community level.

NMCP will continue to work with partners to conduct household and health facility surveys and operation

research. This will include therapeutic efficacy study, entomological monitoring study and other effectiveness studies for novel interventions. The Malaria research agenda will be revised and used to guide research implementation and optimize available resources in order to ensure that research findings are program-relevant and support actionable findings. NMCP will further strengthen coordination with research institutions for effective implementation of the research agenda. NMCP will conduct dissemination conferences to disseminate the household and health facility surveys and other research/study results.

Strategy 5: Epidemics preparedness and response

Epidemics and preparedness response will be critical to the country due to its vulnerability to drought and floods, which affect malaria transmission patterns and can leave displaced populations vulnerable. The program will develop a Malaria Epidemic Preparedness and Response plan and start reporting malaria cases every 2 weeks. NMCP will establish malaria epidemic threshold by district and health facility to detect malaria epidemics and establish a notification system which would trigger appropriate response. The program will use and supervise the existing district emergency management structures that are responsible for coordinating emergency issues including control of malaria epidemics to appropriately respond to malaria epidemics.

4.2.7.Programme management

Objective 7: To strengthen program management to support the effective implementation of planned MSP activities from 56% to over 90% by 2030

The programme management component of MSPs seeks to facilitate the effective translation of plans into implementation action. This is done by catalyzing interactions among human resource capacity, programme planning, coordination and financing modalities.

The strategic approach of NMCP under NMSP (2023-2030) will focus on: (i) Building capacity of human resources; (ii) Strengthening of programme planning and progress evaluation; (iii) Strengthening coordination, collaboration and partnership building; (iv) Intensifying resource mobilization efforts and efficiency improvements; (v) Engagement of neighbouring countries to tackle cross-border issues affecting implementation of malaria interventions; and (vi) Supporting program administration for effective implementation of the program activities.

1. Human Resource Capacity Building for Program Management at All Levels
2. Strengthen Program Planning and Reviews
3. Partnership and Stakeholders' Coordination
4. Resource Mobilization and Efficiencies
5. Engage in Cross Border Initiatives
6. Support Program Administration

Strategy 1: Human Resource Capacity Building for Program Management at All Levels

Technical skills

To improve the technical skills of the NMCP officers, the program will conduct a voluntary knowledge and skill gap self-assessment across all thematic areas. This will result in a training need report for all NMCP officers. Both short- and long-term training needs and costs will be determined based on this report. Resources will be mobilized from government, donors, and well-wishers to support the short- or long-term capacity building trainings within or outside the country. Where training resources cannot be mobilized, temporary alternative ways like getting a Technical Assistant to mentor an NMCP officer will be sought. The NMCP will also mobilize and allocate resources for benchmarking in neighboring and other countries, and for national and international conference attendance as part of capacity building.

Financial Management skills

NMCP takes part in the management of the Global Fund grant during implementation. While grant management involves financial management, the program only has non-financial program staff who have gaps in financial management skills which affects the effective management of the grant finances. During the implementation of this Malaria Strategic Plan implementation, the program plans to lobby for a finance officer to be stationed at the NMCP offices to work with districts that get resources from NMCP and PIU financial officers. As part of the short-term remedy to the challenge, the program plans to conduct finance management gap assessment on the relevant existing staff, mobilize resources and organize short courses depending on the identified knowledge gap. The program will also be open to Technical Assistant Support and benchmarking for capacity building.

Staffing positions

In the just ended Malaria Strategic Plan 2017-2022, the NMCP got an approval for 17 established positions

for the first time ever in the MOH functional review. However, authority has not been granted yet to fill the

approved positions leaving the NMCP to continue operating with borrowed staff mostly from the districts. While NMCP has at least 17 positions approved for the program, the senior positions at grades P7 or P5 do not allow direct filling by specialized officers like entomologists, who must join at grade 1 where it does not befit a specialized officer and there is only a single position specified for a pharmacist. This makes it impossible for the program to ever attract an entomologist creating the need to lobby for additional established senior posts that can allow direct entry by specialized staff. The NMCP plans to advocate for more senior posts and direct entry into such positions by specialized officers. While waiting for consideration to this request, the NMCP will explore the option of TA support for specialized positions by donors and partners. Meanwhile, the program will continue with collaboration with research institutions for entomologists support. As a long-term solution, NMCP will identify NMCP officers willing to train as entomologists and seek support for such under technical skills above. The program will also continue to have the placement of Global fund supported officers under NMCP who will help with the global fund grant management coordination.

Strategy 2: Strengthen Program Planning and Reviews

The NMCP under the Ministry of Health (MOH) as the policy holder in the control, prevention, and treatment of malaria in Malawi, will continue to facilitate and provide direction and guidance in planning and monitoring of all strategies outlined in the 2023-2030 strategic plan. The NMCP with support from partners will on an annual basis develop implementation plans at the beginning of each year that will guide implementation of the planned activities and reports that will be developed at the end of each implementation period (year). Periodic program review meetings will be conducted on quarterly and annual basis at district and national level. Such review meetings will provide direction and guidance to implementation of activities in the next quarter/annual implementation period. The review meetings will support the prioritization of activities at district and national level.

The NMCP will facilitate, necessitate, and lead the process to conduct Mid Term Review (MTR) and End Term Review (ETR) of the malaria program to assess progress towards attainment of the set indicators across all strategies outlined in the Strategic Plan. The MTR will provide a comprehensive assessment of the strategic plan mid-way through its implementation. The One Plan, One Monitoring and Evaluation and One

Budget will be developed and shared with implementing partners and donors to improve adherence to the guidelines and policies, and limit duplication of efforts.

Strategy 3: Partnership and Stakeholders' Coordination

Implementing partners

Coordinated efforts at all levels by the NMCP and partners is paramount in the pursuit of malaria elimination in Malawi. The NMCP will continue to maintain a good partnership with several partners and stakeholders in its quest to lead, support implementation and achieve the MSP impact indicators. The NMCP will conduct remapping exercise to identify all implementing partners and stakeholders that support and those with capacity to strengthen efforts in the control, prevention, and treatment of malaria at all levels (national and district levels). Following the remapping exercise, a map of its partners and stakeholders that includes details of name, area of interest and site of implementation will be maintained. Periodic partner and stakeholder meetings will be conducted on quarterly basis to review implementation progress and explore issues relating to the malaria program. The NMCP will also coordinate to conduct periodic or adhoc meetings when necessary, with the Malaria Advisory Committee.

Multi-sectoral stakeholders

The NMCP will improve its partnership and coordination with multi-sectoral stakeholders through coordination platforms with Ministry of Health agencies, other line ministries, private sectors, and non-state health stakeholders. Pursuant to this, the program will re-establish the existing links and add new relevant stakeholders. The NMCP will orient the stakeholders to the program to ensure adherence to the policy and guidelines in implementation of activities and reporting. Periodic program reviews with relevant partners will be conducted.

Strategy 4: Resource Mobilization and Efficiencies

Planning

The Malawi Government allocates funding to the health sector annually with focus on remuneration, recurrent cost of health care facilities and capital expenditure. Donors provide the largest proportion of the operational budget for implementation of planned MSP activities. Having only half of all planned activities financed as in the previous MSP is not good enough to successfully control and eliminate Malaria. The goal of elimination of Malaria in this new MSP cannot be achieved with such low financing to the program. This calls for more deliberate and proactive efforts in programme planning, resource

mobilization and utilization with efficiency.

The NMCP will organize and prioritize a training on business plan development with any available resources to build capacity in NMCP Staff. This will be followed by development of a business plan to guide the resource mobilization drive. The business plan will have an implementation plan and roadmap so that its implementation can be monitored.

To adequately convince the would-be investors in Malaria interventions, the program with support from partners will conduct cost effective and cost-benefit analysis of interventions to justify investments.

Efficiencies

To realize value for money, and leverage on existing resources elsewhere, the Program will look for opportunities to integrate activities and minimize duplication. The NMCP will prioritize activities/interventions that will yield the highest impact towards Malaria Elimination. Any savings realized in the course of implementation, will be allocated to high impact and targeted interventions that can help accelerate progress towards malaria elimination.

Transport

For any successful implementation of interventions, mobility infrastructure is key. The NMCP will assess and quantify the need for Motor bikes support for District Malaria coordinators to successfully support health facility supervision and follow up of issues. The Program will also assess the status of the current fleet of vehicles and quantify the need for Motor Vehicle for n ational and district support. When needs are identified, the Program will mobilize resources for procurement of motor bikes and vehicle according to need with associated vehicle maintainance costs.

Strategy 5: Engage in Cross Bo rder Initiatives

Cross-border Malaria control collaborative initiatives are widely being adopted to reduce cross border malaria burden and harmonize interventions for neighbouring districts across the borders. In its attempt to strengthen cross border collaborative activities, NMCP will organize annual exchange visits with neighboring countries to agree on cross border malaria control initiatives and discuss the cross-border pilferage of malaria commodities such as LLINs, LA and MRDTs. NMCP will also work hand in hand with District Health Officers in the respective border districts to develop terms of reference for cross border collaboration. NMCP will also advocate with neighboring countries for synchronization and harmonization of malaria control activities at border districts. Cross border collaborative meetings will also

be held across all borders with the partner countries to align malaria control activities across these borders. The program will organize annual exchange visits to benchmark on new initiatives, learn and share best practices on Malaria elimination evidence based interventions and best Malaria elimination techniques.

Strategy 6: Support Program Administration

Supporting the malaria program with vehicle maintenance and running costs, office operations costs, IT and office equipment is essential to ensuring that the program is able to carry out its functions effectively and efficiently. Procurent of a new vehicle freight will ensure the safety, efficiency and effectiveness of the program delivery. Although procuring new vehicles represents a significant investment, it is necessary for the program to prioritize the safety and well-being of the program staff while ensuring program implementation. New vehicles have fuel efficiency and reduced maintenance costs which will ultimately result in long-term cost savings for the program. Resources will be needed to support maintainance for both new and old vehicles for the program. To facilitate program administration, IT equipment and office consumables are critical for any activity planning, excecution and liquidation of program planned activities. It will be important to mobilize resources for fleet replacement, maintainance, IT equipment and office consumables.

NMCP will also support the Malaria Youth Army Champions on administration and operations especially on procument of operational and administrative aminities which may be be funded directly trough the grouping.

5

IMPLEMENTATION FRAMEWORK

5.1. IMPLEMENTATION ARRANGEMENTS

5.1.1. Planning and implementation mechanisms.

The National Malaria Control Program (NMCP) is an integral part of the Ministry of Health and is responsible for the control of malaria in the country. The NMCP provides policy direction and guidance in the implementation of the malaria elimination agenda. This is achieved through the development, revision and dissemination of relevant malaria policies and guidelines in line with national and global developments.

Implementation of the 2023-2030 MSP will be through joint efforts by NMCP, partners and stakeholders at all levels of healthcare service provision. The NMCP will lead in the coordination of the consultative planning, implementation, research, monitoring and evaluation of malaria prevention and elimination activities in the integrated healthcare service delivery arrangement. It will also be responsible for coordinating reporting of strategic plan implementation progress and performance to the health sector, WHO and RBM. The malaria advisory committee will continue providing technical guidance to the Secretary for Health when need arises.

At national level, implementation of MSP 2023-2030 will be in line with HSSP III. It is expected that all implementing partners will work and contribute towards the achievement of this strategic plan through the "three ones" principle, one plan, one budget, and one M&E (Report). The NMCP will enhance district supervision through the zonal malaria coordinators based at zonal health offices. At district level, the implementation will be through the District Implementation Plan (DIP) with the leadership of the District Health Management Team (DHMT). It will also be responsible for recommending potential candidates to the Secretary for Health for appointment as District Malaria Coordinators responsible for coordinating malaria interventions at district level.

At the health center, malaria focal persons will be involved in planning and supervising the implementation of interventions towards elimination of malaria in collaboration with the health center management team. In turn the focal person will work hand in hand with Health Surveillance Assistants (HSAs) who are the main link with the community.

The NMCP will provide technical support to all levels of health service delivery in line with the decentralized architecture. NMCP will provide this technical support through its staffing

establishment approved by the 2020 Ministry of Health Functional Review.

5.1.2.Partnership coordination system.

NMCP will re-map the partners in the malaria program to improve coordination. The partners will be identified by the thematic areas of their interest and location of implementation. NMCP will on quarterly and annual basis conduct coordination quarterly meetings with the partners and other stakeholders. The thematic sub technical working group meetings will be held every quarter prior to each stakeholder's meetings. There will also be annual research dissemination conferences to share information from research institutions.

Partners key roles and responsibilities

Other Government Ministries and Departments

The Ministry of Health through the NMCP will collaborate with several line ministries such as Ministries responsible for Education, Ministry of Defense, Ministry of Agriculture, Water Development and Irrigation, Finance, Homeland Security, Labour, Information and Transport and Public Works in the implementation of this strategic plan. The NMCP will also work with the Departments of Environmental Affairs, and Fisheries as well as Reproductive Health and iMCI Directorates, Epidemiology Unit, Health Education Services Unit, district, city and town councils.

The roles of these institutions will include but not limited to: promotion of LLIN use in schools and other institutions such as prisons, colleges, universities; integrate malaria prevention strategies in school curriculum; supplement the implementation of IVM including larviciding and environmental management; participate in the planning of IVM activities such as larviciding and IRS; participate in the planning and implementation of mass distribution of LLINs; vector control technical working group; enforce environmental management regulations for agricultural and water sectors, building and construction works including roads; participate in district and national malaria planning and review meetings; implement IRS activities in barracks, prisons and the dwellings of uniformed officers; support the implementation of LLIN and IPTp through ANC clinics; support implementation of Learners Teachers Kit (LTK) which is malaria diagnosis and treatment in schools; review BCC materials for the various interventions and participate in joint supervisions visits.

Political and other influential leaders

Political and other influential leaders will be critical in the implementation of the strategic plan. Their expected roles include advocacy for allocation of more resources towards malaria prevention and elimination from the

government; participate in resource mobilization for malaria preventions and elimination; advocate for community uptake of interventions including the use of LLINs, uptake of IPTp and acceptability of IRS; advocate for the recruitment of health workers to support program delivery and advocate for enactment of by-laws to support malaria elimination.

Private sector and civil society

The contribution of the private sector and civil society in the implementation of this strategic plan will be important. The private sector will contribute in the service delivery, particularly in activities related to case management and vector control. They will also be involved in financing the program through the health insurance schemes, out-of-pocket payments, public-private partnership arrangements and other in-kind support towards malaria elimination. The private sector will also play a critical role in IEC and BCC interventions including advocacy though community outreach programs.

The civil society will advocate for quality and equitable malaria services delivery and behaviour change on part of the community. They will also play a vital role in the advocacy for adequate financing towards the program while providing checks and balances to the program implementers.

Communities

The implementation of MSP 2023-2030 will be done through existing structures at the community level such as: health ce nter advisory committees, Area development committees (ADCs), village development committees (VDCs), village health committees (VHCs) and community-based organizations (CBOs). Their specific roles will include but not limited to facilitati n g community mobilization; mobilizing resources at the local level for malaria prevention and elimination; participati n g in identification and prioritization of health needs and supporting the production and dissemination of key messages to create demand for and utilization of malaria control interventions. These structures will also be responsible for providing oversight and checks and balances to the implementing partners.

Development Partners and Other International NGOs

Bi-lateral, multi lateral and funding organizations such as USAID/PMI, Centres for Disease Control and Prevention (CDC), Foreign, Commonwealth and Development Office (FCDO), African Development Bank, GIZ, WHO, UNICEF, World Bank, Global Fund, Against Malaria Foundation (AMF), Save the Children, World Vision International, Concern Universal, will play a significant role in the implementation of this 2023-2030 National Strategic Plan.

Their specific roles will include providing technical guidance, financial resources, and support in the implementation of malaria elimination interventions; providing evidence-based norms and standards to guide the implementation of interventions; providing technical assistance in sourcing, procurement and distribution of commodities and assisting in the conduct of monitoring and evaluation activities such as surveys.

Research Institutions

The successful implementation and evaluation of the MSP 2022-2030 will rely on evidence generated from research within and outside Malawi by established research institutions. These will play a very important role in generating research results to guide the implementation of the MSP strategies as well as the monitoring and evaluation of the plan. In addition, research institutions will carry out essential studies that will improve implementation of existing interventions by providing evidence to support or call for remedial measures to their delivery mechanisms.

Their specific roles will include participating in appropriate technical working groups; providing technical assistance in the monitoring of drug efficacy and insecticide resistance; providing technical assistance in the conduct of the Malaria Indicator Survey and other surveys; provide technical support in essential studies on case management, vector control, diagnostic services, M & E, SBC as well as malaria in pregnancy.

5.1.3.Procurement and Supply Chain Management

The focus in the 2023 – 2030 MSP period will be uninterrupted supply of health and non-health products for malaria prevention and treatment. This will be achieved through accurate and timely forecasting, quantification, procurement, and distribution of malaria commodities. The focus will also be on strengthening the malaria commodities supply chain system and improvement of data quality and availability. The flow of commodities will be from international and national suppliers to central and regional level warehouses from where they will be distributed further to district and health center facilities. Thereafter, the relevant commodities will be allocated to village clinics for provision of community services. During the implementation of this plan, we will gradually transition to a pull system. The NMCP in collaboration with HTSS-Pharmaceuticals, CMST and relevant partners will continuously build the capacity of health workers in PSM. CMST will lead the acquisition and distribution of malaria medical products during the period.

5.1.4. Resource mobilization and financial resources management

The successful implementation of MSP will depend on the availability of adequate resources on a timely basis. In the next eight years, the NMCP will advocate for more funding from traditional and non-traditional donors. The NMCP together with the Health Financing Division in the Ministry's Planning Directorate, will conduct roundtable discussions to advocate for more funding with various institutions and agencies. Funding proposals will be developed and submitted to institutions and organizations. NMCP will ensure that program resources are utilized in a prudent manner using the country's adopted Public Finance Management Frameworks to realize efficiency gains a n d value for money.

5.2. KEY ASSUMPTIONS

There are a number of moving factors which might affect the likelihood of meeting targets set NMCP and partners in this strategic plan. The certainty of meeting the set targets by 2030 is subject to the following assumptions by NMCP and partners being true:

i. Political commitment will continue at all levels to support the Malaria Strategic Plan;
ii. Financial and technical support from government and partners will continue;
iii. Increased healthcare financing through the traditional and non-traditional sources for better performance of health system;
iv. Commodities and supplies at both local and international markets will be available to meet the country's needs;
v. Improvement in health system performance, such as supply chain management, human resources and infrastructure will occur;
vi. Strong coordination among malaria stakeholders in Malawi will prevail during the period of the revised MSP; and
vii. Strong coordination of healthcare service delivery in platforms of care at all levels of service delivery.

5.3. RISK MANAGEMENT

Implementation of this strategic plan will be subjected to several risks which will require timely and appropriate mitigation to avoid derailing the implementation of the plan. Table below presents a detailed analysis of the possible risks and proposed mitigation.

Table 20: Risk Analysis summary

RISKS	MITIGATION STRATEGY
Financial gap: financial gap to fully implement the MSP	• Explore support from non- traditional donors • Strengthen Public private partnership (PPP)
Natural disasters: Malawi has been experiencing natural disasters due to climate change such as	• Develop emergency preparedness and response plan, guided by the shock triggers defined by DODMA
Floods in some parts of country that might have a bearing on malaria interventions.	• Preposition of supplies to disaster prone areas.
Vector resistance to insecticides: Emergence and spread of malaria vector resistance to commonly used insecticides has potential to diminish the effectiveness of IRS and LLINs. This will necessitate rotation to more expensive insecticides with significant rise in program costs.	• Develop insecticide resistance management plan
Failure of some service providers to adhere to case management guideline: Provider behaviour to malaria case management.	• Strengthening supportive supervision and mentorship at all service delivery points.
Reduced efficacy of artemether-lumefantrine	• Introduction and use of new and/or multiple first line treatments

6

NMSP COSTING AND FINANCING

6.1. INTRODUCTION

This chapter presents estimates on financial resources required to fully implement this strategic plan. The chapter also outlines NMCP resource mobilization plans based on the analysis or outlook of financing commitments and the resulting financing gaps.

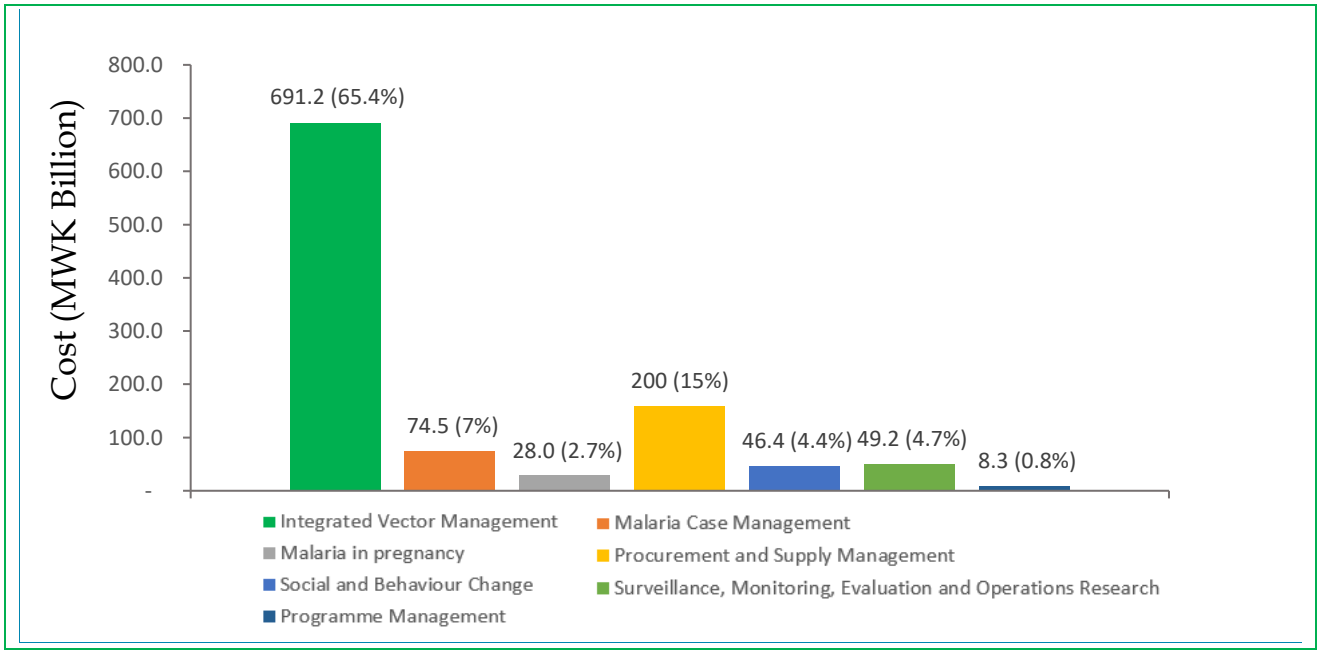
6.2. NMSP FINANCIAL RESOURCE REQUIREMENTS

The total cost of implementing the whole set of interventions components presented in Annex 8.1 from 2023 to 2030 has been estimated at MWK 1.1 trillion (US$ 1.03 Billion)[19]. This was estimated based on detailed activity costing using the WHO tool for costing national multi-year and annual plans on malaria interventions.

6.2.1. Cost estimates by thematic area

In terms of the relative cost contributions among the 7 thematic intervention components, the Integrated Vector Management constitutes 65.4% of the total MSP costs. This reflects the importance NMCP and partners have always placed on the need to effectively manage malaria transmission vectors if the country is to be free from malaria. Figure 22 below summarises the MSP financial resource requirements by each of the thematic components. Annex 8.2 presents a detailed summary of the MSP costs by thematic objectives and strategies.

Figure 22: NMSP Cost Summary by thematic intervention component



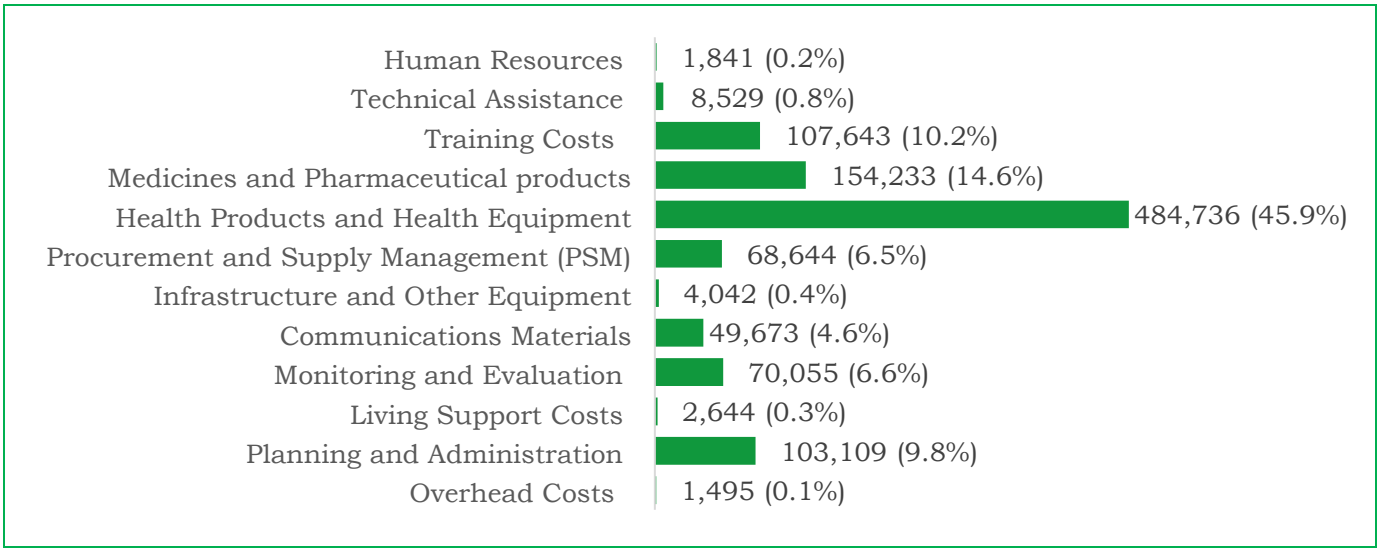
[19] At the exchange rate of MWK 1025 to US$1

6.2.2. Cost estimates by cost category

Figure 23 summarises MSP costs by cost category and shows that about 60.5% of total MSP 2023-2030 estimated costs are on medicines and pharmaceutical products, and health products and medical equipment. These two cost categories represent 14.6% and 45.9% of total MSP 2023-2030 cost respectively.

The purchase on ITNs for mass campaigns is the main activity contributing the higher share of the health products and medical equipment category Annex 8.2 presents the detailed summary of MSP costs by cost category for all the years up to 2030.

Figure 23: MSP cost summary by cost category



6.3. RESOURCE MOBILIZATION FOR FULL MSP IMPLEMENTATION

NMSP 2023-2030 will face an annual average gap of 51% for the first 4 years (2023-2027). This funding outlook is based on commitments by major sources of financing for malaria intervention in Malawi (GF, PMI and Government of Malawi). The funding gaps are likely to be experienced during the other 4 years of MSP 2023-2030 from 2027 given the fiscal space for health limitations government of Malawi is facing as reported by the 2018 Fiscal space for health study by the World Bank. This is notwithstanding the fact that donor support has been fluctuating as a result of shocks caused by global health and economic crises

In response to the above outlook on MSP (2023-2030) financing gaps, NMCP will develop the resource mobilization plan which seeks to address the financing gaps with a particular focus on increasing domestic sources in line with resource generation options outlined in the Malawi Health Financing Strategy. NMCP will also explore opportunities for efficiency improvements in resource allocation and management which could free up recources for narrowing the funding gaps.

7

MONITORING AND EVALUATION FRAMEWORK

7.1. INTRODUCTION

This section provides details of how NMCP intends to track progress towards targets on each of the broad thematic intervention components outlined in Annex 8.1. The section also presents key global and national aspirations which have guided the framing and monitoring of intervetions on malaria by countries.

7.2. KEY GLOBAL AND NATIONAL DEVELOPMENT FRAMEWORKS ON MALARIA

Texbox below summarises key global and national development frameworks which inform efforts by countries on malaria

Global Technical Strategy (GTS) for Malaria

- To reduce, malaria mortality rate and case incidence by 40% by 2020 and further reduce by 75% by 2025 and finally reduce by 90% by 2030, when compared with 2015.

Sustainable Development Goals

- **Target 3.3:** By 2030, end epidemics of HIV, Tuberculosis, Malaria and Neglected Tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases
  - 3.3.3 Malaria incidence per 1,000 population

7.3. PERFORMANCE FRAMEWORK

The Malaria Monitoring and Evaluation Plan in Annex 8.4 has been developed based on the performance framework presented in Table 21 below. The performance framework outlines phased targets on each of the output and outcome indicators to be tracked under the thematic areas given the set of strategies and activities in the intervention framework in Annex 8.1.

The Mid-term review (MTR) will be conducted by 2027 in order to provide comprehensive assessment mid-way implementation of the plan. During the strategic plan period, NMCP and partners envisage to conduct at least 2 malaria indicator surveys as per requirement by WHO for countries to conduct the survey after every 2 years. The actual interval between the MIS exercises has however depended on the availability of funding. The results of these surveys will serve as key reference data for the final evaluations of the strategic plan using the performance framework. The monitoring of the strategic plan will also take advantage of other surveys such as MICS and DHS and operational research findings to assess progress towards the achievement of the set targets. The final evaluation of the strategic plan (malaria Programme review - MPR) will be done in 2030 at the end of the strategic plan

Table 21: Performance Framework (MSP 2023-2030)

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
IVCM	Outcome	Proportion of household population who slept under an insecticide-treated net the previous night	MMIS 2021	37%	-	-	80%	-	85%%		90%%	
	Outcome	% of children under 5 years of age slept under an ITN	MMIS 2021	53%	-	-	73%	-	83%		90%%	
	Outcome	% of pregnant women slept under an ITN	MMIS 2021	49%	-	-	70%	-	80%		90%%	
	Outcome	Proportion of population protected by IRS within the past 12 months in IRS targeted areas	Admin reports 2022	39%	40%	42%	55%	63%	69%	78%	82%	91%
	Outcome	Proportion of children under 5 years of protected by IRS within the past 12 months in IRS targeted areas	Administrative reports 2022	39%	40%	42%	55%	63%	69%	78%	82%	91%
	Outcome	Proportion of pregnant women protected by IRS within the past 12 months in IRS targeted areas	Administrative reports 2022	18%	40%	42%	55%	63%	69%	78%	82%	91%
	Outcome	Number of infective bites per person per year (Innoculation rate)	Study reports 2021	32.5	27	22	17	12	7	2	0	0

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
	Outcome	Proportion of mosquitoes infected with sporozoites	Study reports 2021	1.0%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%	0.3%	0.2%
	Output	Number of targeted districts with permanent breeding sites environmentally modified	Administrative reports	0	0	0	2	3	4	5	6	8
	Output	Number of targeted districts with permanent breeding sites environmentally manipulated	Administrative reports	0	0	0	2	3	4	5	6	8
	Output	Number of high burden districts implementing IRS	Administrative reports 2022	4	4	1	6	7	8	9	10	11
	Outcome	% of households with at least one ITN for every two people.	MIS 2021	21%	-	-	80%	-	85%	-	90%	-
	Outcome	% of households owning at least one ITN	MIS 2021	55%	-	-	80%	-	90%	-	100%	-
Case Management	Coverage	% of outpatient suspected malaria cases in public health facilities who are tested by parasitological diagnosis	HMIS - 2022	99.02%	99.25%	99.50 %	99.50 %	99.50 %	100.0%	100.0 %	100.0%	100.0 %

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
	Coverage	Percentage of suspected malaria cases that received parasitological test at community level	MPR 2022	99.89%	100.00 %	100.00 %	100.00 %	100.00 %	100.00%	100.0 0%	100.00 %	100.00 %
	Coverage	Proportion of confirmed malaria cases that received first line treatment	HMIS - 2022	99.00%	99.00%	99.50 %	99.50 %	100.00 %	100.00%	100.0 0%	100.00 %	100.00 %
	Coverage	% of outpatient suspected malaria cases in private facilities that received parasitological tests	HMIS - 2015	0.00%	0.00%	0.00%	50.00 %	60.00 %	70.00%	80.00 %	90.00%	92.00%
	Coverage	Proportion of confirmed malaria cases that received first line treatment in private facilities	HMIS - 2022	0.00%	75.00%	80.00 %	85.00 %	90.00 %	95.00%	100.0 0%	100.00 %	100.00 %
	Impact	Outpatient malaria test positivity rate	HMIS 2022	38.85%	31.00%	28.83%	20.18%	14.13%	12.01%	11.41 %	7.98%	5.00%
	Impact	Number of deaths per 100,000 population	HMIS 2022	9	9	8	7	6	5	4	3	2
	Impact	Malaria parasite prevalence among under-five years children	MMIS 2021	10.50%	-	-	5.16%	-	3.00%	-	2.00%	-
	Impact	Reported malaria cases (confirmed and presumed)	HMIS 2022	4,257,729	-	3,438, 116	2,406, 681	2,045, 679	1,943,39 5	1,360, 377	1,156,3 20	1,098,5 04
	Impact	Reported confirmed (microscopy and mRDTs)	HMIS 2022	218	-	168	115	96	86	61	51	48

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
		malaria cases per 1,000 population										
	Impact	Percentage of severe malaria cases out of all inpatient cases	HMIS 2022	9%	8%	7%	6%	5%	4%	3%	2%	1%
	Impact	Percentage of under five children severe malaria cases out of all severe malaria inpatient cases	HMIS 2022	47%	46%	45%	44%	43%	42%	41%	40%	39%
MIP	Outcome	% of pregnant women who have access to and receive 3 or more doses of IPTp for malaria prevention	MMIS 2021	56%	56%	60%	64%	68%	72%	76%	80%	85%
		% of pregnant women who have access to and receive 4 or more doses of IPTp for malaria prevention	MMIS 2021	-	-	-	25%	27%	29%	31%	35%	40%
PSM	Outcome	Percentage of health facilities with no stock outs of first line treatment for uncomplicated malaria in the last 3 months	LMIS, Health Facility Survey	99.0%	99.2%	99.4%	99.6%	99.7%	99.8%	99.8%	99.8%	99.8%
		Percentage of health facilities with no stock outs of Artesunate injectable in the last 3 months	LMIS, Health Facility Survey	98.5%	98.7%	98.9%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
		Percentage of health facilities with no stock outs of mRDT in the last 3 months	LMIS, Health Facility Survey	98.9%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%
		Percentage of health facilities with no stock outs of LLINs in the last 3 months	LMIS, Health Facility Survey	96.3%	97.0%	97.5%	97.5%	97.9%	98.3%	98.6%	98.8%	99.0%
		Percentage of health facilities with no stock outs of sulfadoxine-pyrimethamine (SP) in the last 3 months	LMIS, Health Facility Survey	95.6%	96.0%	96.5%	97.0%	97.5%	98.0%	98.5%	99.0%	99.0%
SBC	Outcome	Proportion of caregivers taking their under-five children to the health facility within 24 hours of onset of fever	MMIS 2021	46%	50%	60%	70%	80%	90%	90%	90%	90%
	Outcome	Proportion of caregivers who believe that most people in their community take under five children to a health provider on the same or next day after they develop a fever	MBS 2021	68%	68%	70%	74%	78%	80%	80%	80%	80%

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
	Outcome	Proportion of caregivers who believe that most people in their community take under five children to a health provider on the same or next day after they develop a fever	MBS 2021	68%	68%	70%	74%	78%	80%	80%	80%	80%
	Outcome	Proportion of caregivers with correct knowledge of seeking care within 24 hours of onset of fever from 60%	MBS 2021	60%	62%	64%	70%	74%	78%	80%	80%	80%
	Outcome	Proportion of caregivers with a positive perceived response efficacy of malaria treatment	MBS 2021	74%	76%	78%	80%	84%	86%	90%	90%	90%
	Outcome	Proportion of caregivers with positive attitudes towards malaria care-seeking and treatment	MBS 2021	78%	80%	82%	84%	86%	88%	90%	90%	90&
	Outcome	Proportion of children under five years who sleep under an ITN every night	MMIS 2021	53%	56%	60%	65%	70%	75%	80%	80%	80%
	Outcome	Proportion of males 19 years and above who use an ITN consistently	MBS 2021	55%	56%	60%	65%	70%	75%	80%	80%	80%

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
	Outcome	Proportion of caregivers with a favourable attitude toward consistent ITN use	MBS 2021	82%	83%	85%	90%	92%	95%	95%	95%	95%
	Outcome	Proportion of caregivers of under 5 children who have a positive perceived response efficacy of ITNs	MBS 2021	61%	65%	68%	70%	75%	80%	80%	80%	80%
	Outcome	Proportion of males aged 19 and above who believe ITN use is a community norm	MBS 2021	38%	40%	42%	50%	54%	60%	70%	80%	80%
	Outcome	Proportion of males aged 19 and above who believe that ITNs do not pose a risk to one's health	MBS 2021	80%	82%	84%	86%	90%	92%	95%	95%	95%
	Outcome	Increase the proportion of pregnant women who start ANC early (first trimester)	MBS 2021	40%	44%	48%	56%	64%	72%	80%	80%	80%
	Outcome	Proportion of pregnant women who believe most women in their community go to antenatal care at least 4 times when they are pregnant	MBS 2021	75%	78%	80%	84%	86%	88%	90%	90%	90%

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
SMEOR	Coverage	Proportion of malaria data quality	Program Review Report	95.6%	96%	97%	97%	98%	99%	99%	99%	100%
	Coverage	Proportion monthly malaria reports submitted of all expected reports	HMIS 2022	98%	99%	99%	100%	100%	100%	100%	100%	100%
	Coverage	% monthly malaria reports submitted by 15th of next month of all expected reports.	HMIS 2022	92%	92%	93%	94%	95%	96%	97%	98%	99%
	Coverage	Accuracy rate	Program Review Report	97%	98%	98%	99%	99%	100%	100%	100%	100%
Programme Management	Coverage	Proportion of Program Management activities Fully implemented annually	Annual Malaria Program Review Report	53%	90%	90%	90%	90%	90%	90%	90%	90%
	Coverage	Proportion of Integrated Vector Management activities Fully implemented annually	Annual Malaria Program Review Report	48%	90%	90%	90%	90%	90%	90%	90%	90%
	Coverage	Proportion of Activities Malaria Case Management Fully implemented annually	Annual Malaria Program	50%	90%	90%	90%	90%	90%	90%	90%	90%

Thematic Area	Type of indicator	Indicator	Source	Baseline Value	Targets							
					2023	2024	2025	2026	2027	2028	2029	2030
			Review Report									
	Coverage	Proportion of Procurement and Supply Chain Management (PSM) activities Fully implemented annually	Annual Malaria Program Review Report	53%	90%	90%	90%	90%	90%	90%	90%	90%
	Coverage	Proportion of Malaria In Pregnanancy activities (MIP) Fully implemented annually	Annual Malaria Program Review Report	50%	90%	90%	90%	90%	90%	90%	90%	90%
	Coverage	Proportion of Social Behaviour Change (SBC) activities Fully implemented annually	Annual Malaria Program Review Report	95%	90%	90%	90%	90%	90%	90%	90%	90%
	Coverage	Proportion of Surveillance Monitoring and Evaluation Plus Operational Research activities Fully implemented annually	Annual Malaria Program Review Report	45%	90%	90%	90%	90%	90%	90%	90%	90%

7.4. DATA SOURCES

Given that the set of proposed indicators are standardized indicators thsat are routinely tracked in the mainstream national health information system (the HMIS), the HMIS will be the main sources of data for monitoring the implementation of the strategic plan. Complementing the HMIS which now operates through the DHIS platform will be programme specific data sources and population-based surveys such as end user verification supervision, malaria indicator survey among others.

Data from DHIS will be reviewed on a monthly, quarterly and annual basis to check on validity, quality and completeness.

The key indicators that will be used in monitoring the coverage and impact of the interventions laid out in the M&E matrix in Annex 8.4, building on the performance framework above.

ANNEXES

8.1. NMSP Intervention framework

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
1. Integrated Vector Management	**Objective 1: To increase the proportion of population protected by atleast one malaria vector control interventions from 37% in 2022 to at least 90% by 2030**	1	Institute policies, guiding frameworks and oversight structures.	1	Update the LLINs guidelines in line with the two-yearly mass ITNs campaign policy		**X**						
				2	Develop Larval Source Management Implementation guidelines.		**X**						
				3	Conduct quartery vector control technical working group meeting at national level	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				4	Update the Indoor Residual Spraying Implementation tools		**X**						
		2	Universal Access to Quality Long Lasting Insecticidal Nets	1	Conduct mass net distribution campaigns every two years		**X**		**X**		**X**		**X**
				2	Procure nets for mass distribution		**X**		**X**		**X**		**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				3	Conduct routine net distribution	X	X	X	X	X	X	X	X
				4	Procure nets for routine distribution	X	X	X	X	X	X	X	X
				5	Procure nets for emergency net distribution	X	X	X	X	X	X	X	X
				6	Conduct emergency net distribution	X	X	X	X	X	X	X	X
		3	Build capacity of districts to implement large-scale malaria elimination initiatives	1	Train and equip district stakeholders with skills to implement 137 model.						X		
				2	Procure nets for implementation of 1-3-7 model						X	X	X
		4	Quality IRS in selected, suitable epidemiological areas	1	Conduct supplemental environmental assessment						X		
				2	Identification of suitable epidemiological and	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					entomological areas.								
				3	Conduct environmental compliance assessment	X	X	X	X	X	X	X	X
				4	Conduct Community mobilisation.	X	X	X	X	X	X	X	X
				5	Conduct spraying in selected districts and targeted areas	X	X	X	X	X	X	X	X
		5	Larval source Management in targeted communities	1	Conduct mapping of breeding sites.			X		X		X	
				2	Conduct Community mobilisation.			X	X	X	X	X	X
				3	Conduct larval habitat manipulation or modification.			X	X	X	X	X	X
		6	Vector surveillance and insecticide resistance management	1	Monitor ecology, biology, behaviour and distribution of vectors.	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				2	Conduct insecticide resistance monitoring	X	X	X	X	X	X	X	X
				3	Quality and performance assessment of IRS and ITNs	X	X	X	X	X	X	X	X
				4	Maintainance of a well characterised mosquito colony	X	X	X	X	X	X	X	X
2. Case Management	**Objective 2: To increase and sustain the proportion of suspected cases of malaria that are tested from 98% in 2022 to 100% and treat all the confirmed cases by 2030.**	1	Strengthen policy adherence and support	1	Revise Malaria Case Management and Malaria Diagnostic Guidelines and job aids		X			X			
				2	Print the guidelines and job aids		X			X			
				3	Distribute the guidelines	X				X			
				4	Orient 10,000 health workers to the Case Management Policies and Guidelines		X			X			

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				5	Collaborate with Finance & Planning on Performance Based management	X							
				6	Pilot and roll out Performance Based management		X						
		2	Strategy 2.2: Support enforcement of medical equipment standardisation policy in procurement of medical equipment	1	Orient DHMT's and stake holders on standard equipment guidelines in liason with PAM		X			X			
		3	Strengthen diagnostic capacity for ISO accreditation.	1	Develop laboratory various documents on quality management systems in line with ISO 15189 & ISO 17043		X						
				2	Print laboratory documents on quality management		X						

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					systems in line with ISO 15189 & ISO 17044								
				3	Distribute laboratory documents on quality management systems in line with ISO 15189 & ISO 17045		X						
				4	Conduct annual SLIPTA assessments	X	X	X	X	X	X	X	X
				5	Disseminate the assessment results	X	X	X	X	X	X	X	X
				6	Carry out Quartery mentorship activities to enhance QMS		X	X	X	X	X	X	X
				7	Conduct biannual review meeting Quality improvement projects (QIP)		X		X		X		X
				8	Conduct SLMTA training to 100		X						

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					parasitological technicians								
				9	Conduct document review meetings (QMS documents)		X		X		X		X
				10	Train 80 parasitology Laboratory technicians on biosafety and biosecurity		X						
				11	Refurbish existing National Parasitology Refrence Laboratory		X				X		
		4	Capacity building/ responsiveness of health workers	1	Provide in-service refresher training to 10,000 clinicians & Nurses malaria case management guidelines	X		X		X		X	
				2	Provide in-service training to 3,000 Laboratory Technicians on	X		X		X		X	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					Malaria Microscopy								
				3	Train 1000 private practioneers in Malaria case Management		X		X		X		
				4	NMCP & regulatory authorities joint monitoring visits to Pre-training institutions on updating curriculum contents for malaria case management		X		X		X		X
				5	Conduct quarterly integrated malaria mentorship and supportive supervision on case management at all levels	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				6	Conduct quarterly integrated malaria mentorship and supportive supervision on case management in the private facilities	X	X	X	X	X	X	X	X
				7	Support annual monitoring visits by Regulatory body (Medical and Nurses Councils) to facilities that are not following the policy	X	X	X	X	X	X	X	X
				8	Conduct joint Programme & DHMT integrated supportive supervision with private facilities	X	X	X	X	X	X	X	X
				9	Conduct Quarterly zonal case management review meetings.	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				10	Train 20 district supervisors as case management core mentorship team	**X**				**X**			
				11	Conduct bianual special mentorship of health workers targetting poorly performing facilities	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				12	Participate in WHO accredited external competency assessment of malaria microscopists (ECAMM) training		**X**			**X**		**X**	
				13	support PAM in capacity building for malaria microscopy maintenances - attend international short cources		**X**			**X**			

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
		5	Strengthen leadership commitment, coordination, supervision and monitoring for Malaria services at all levels	1	Conduct a joint quarterly DHMT/NMCP supervision on malaria case management targetting poorly prerforming facilities	X	X	X	X	X	X	X	X
				2	Conduct case management meeting with core DHMTs as well as extended DHMTs to enhance facility supportive supervision including wards and mentorship of health workers.		X			X			
		6	Private Sector Engagement	1	Conduct mapping of private facilities		X			X			X
				2	Conduct annual case management supervision to private facilities	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
		7	Strengthen drug resistance prevention	1	Support the SMEOR team to conduct Therapeutic Efficacy Studies every two years								
				2	Conduct stakeholders meeting to discuss / disseminate TES results								
				3	Train at least 10,000 health workers on new multiple antimalarial treatments		**X**			**X**			
		8	Strengthen malaria Diagnostic services	1	Evaluate mRDT performance for use every four years.		**X**				**X**		
				2	10 laboratory Technicians to participate in Twinning NPRL with other WHO accredited labs in the region		**X**			**X**			**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				3	Conduct in country post marketing surveilance for mRDTs and microscopy reagents / lot testing.		X	X	X	X	X	X	X
				4	Produce PT and QC materials	X	X	X	X	X	X	X	X
				5	Distribute QC materials	X	X	X	X	X	X	X	X
				6	Provide EQA (PT) to malaria microscopy sites	X	X	X	X	X	X	X	X
				7	Retrieve EQA samples	X	X	X	X	X	X	X	X
				8	Produce non Plasmodium species		X				X		
				9	Procure microscopes and other laboratory-based equipment		X						
				10	Procure ancillary equipment		X				X		
				11	Conduct equipment mapping exercise		X						

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
		9	Strengthen community case management	1	Provide refresher training to 5,000 HSAs on malaria community case management in line with universal access to malaria treatment		X						
				2	Train additional 2,000 HSAs to open new village clinics as part of expansion		X						
				3	Support IMCI unit to provide quarterly supportive supervision of HSAs running village clinics at community level	X	X	X	X	X	X	X	X
				4	Engage M&E to revise the form 1a reporting tool to include adults and incorporate data into DHIS 11 platform	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
3. Malaria In Pregnancy and other novel interventions	**Objective 3: To increase the uptake of atleast 3 doses of IPTp from the 2022 baseline of 56% to 80% by 2030**	1	Expand existing network of health care services	1	Orient 30 CMAs per district in 29 districts to improve in the provision of MIP services in the communities they serve	**X**	**X**	**X**	**X**			**X**	
				2	Support DHMT to conduct targetted mobile clinics to selected hard to reach and remote areas to increase access of ANC and MIP services	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
		2	Strengthen Health System Capacity to provide MIP services	1	Train 90 for 5 days ANC health workers per district in 29 districts including Community Health Workers on revised MIP guidelines	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				2	Orient 60 support staff for 3 days per district in 29 districts on MIP	**X**	**X**	**X**	**X**				

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					data quality and management.								
				3	Procure and distribute SP DOT equipment (cups, buckets, trays) 150 cups in 650 ANC facilities, 2 Tap buckes in 650 ANC facilities, 2 buckets without taps in ANC facilities and 2 basins in 750 ANC facilities.		**X**		**X**				
				4	Print and distribute revised tools and guidelines 5 per facility in the 750 facilities		**X**					**X**	
				5	Support DHMT to conduct quarterly MIP review meetings in 29 districts targetting nurses, CMAs and HSAs	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					from public, CHAM and private clinics.								
				6	Support capacity building of DHMT and extended DHMT members through mentorship and coaching to enable them conduct follow up visits to low perfoming facilities in MIP (including private practice).	X	X	X	X	X	X	X	X
		3	Strengthen SBC for Malaria	1	Support DHMT to conduct awareness on MIP interventions to dispel myths and misconceptions hindering the utilization of MIP services		X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				2	Support DHMTs in collaboration with CSOs to conduct interface meetings with community and faith based leaders in 29 districts.(30 people per session)		X			X			X
				3	Support DHMT to orient 60 community voluteers and HSAs in selected community structures in all the 650 facilities on community awareness and develop strategies and action plan to improve IPTp uptake.		X			X			
		4	Strengthen Public Private Partnerships	1	Support DHMT to MAP out private clinics providing ANC in 29	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					districts and initiate a reporting system to incoporate their data into the DHIS 2								
		5	Support roll out of the malaria vaccine	1	Lobby for funds to expand malaria vaccine coverage to the remaining 18 districts by 2030	X	X	X	X	X	X	X	X
				2	Quarterly collaboration and coordination meetings with EPI technical working group (TWG)	X	X	X	X	X	X	X	X
				3	Conduct district quarterly review meetings on malaria vaccone implementation	X	X	X	X	X	X	X	X
				4	Conduct quarterly NMCP-EPI joint supportive supervision on implementation	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					of the malaria vaccine								
				5	Support DHMTs to conduct facility review meetings on Malaria vaccine implementation	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
		6	Explore other novel malaria interventions i.e. Seasonal malaria chemoprevention (SMC), Perennial malaria prevention (PMC/IPTi+), IPT in school children, Post discharge malaria chemoprevention (PDMC), Mass drug administration (MDA)	1	Support stakeholders meeting towards the endorsement of novel interventions approved by WHO (SMC, PMC/IPTi+, IPT in schools, MDA)	**X**	**X**						
				2	Support Health Sector TWG to review the stakeholders' recommendations on the novel interventions	**X**							
				3	Support Malaria advisory committee	**X**							

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					meeting on endorsement of proposed novel interventions by the MoH								
				4	Orient clinicians and nurses on Post Discharge Malaria Chemoprolaxis - to be integrated in case management trainings of health workers		**X**		**X**		**X**		**X**
				5	Revise reporting tools to include PDMC - to be integrated in M&E tools revision		**X**						
		1	Enhance local ownership and coordination of malaria commodity procurement and supply management	1	Advocate for more domestic resources to support procurement of malaria commodities	**X**							

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				2	Revitalize the national logistics TWG (Malaria commodity management task force)	X	X	X	X	X	X	X	X
				3	Conduct quarterly TWG meetings		X						
				4	Support the functionality of drug and therapeutic committees (DTC) and health center management committee (HCMC	X	X	X	X	X	X	X	X
				5	Conduct capacity building in social accountability mechanisms and tools with Health Centre Management and Drug Therapeutic Committee	X	X	X	X	X	X	X	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
4. Procurement and Supply Chain Management	**Objective 4: To sustain annual average stock out rate of less than 1% for all malaria first-line treatment throughout the MSP (2023-2030) period**	2	Improve quality of LMIS data for commodity Security and Accountability	1	Conduct monthly data review and analysis at district and central level and provide feedback to the health facility to improve data quality	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				2	Procurement of malaria commodities	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				3	Coordinate with CMED and Digital Health to optimize the inter-operability layer between DHIS2 and OpenLMIS	**X**							
				4	Support the implementation of transparency and accountability guidelines		**X**		**X**		**X**		
				5	Conduct quarterly follow up of distribution	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				6	Conduct TWG meetings	X	X	X	X	X	X	X	X
				7	Conduct quarterly pipeline review and updates	X	X	X	X	X	X	X	X
		3	Strengthen commodity demand planning, procurement, distribution and inventory control, and quality assurance activities	1	Conduct quantification exercise every year (forecasting and supply planning)	X	X	X	X	X	X	X	X
				2	Conduct semi-annual quantification review exercise	X	X	X	X	X	X	X	X
				3	Conduct quarterly pipeline review	X							
				4	Implement proper malaria commodity procurement	X							
				5	Conduct monthly distribution of malaria commodities to all eligible	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					facilities in the country								
				6	Ensure good storage conditions of malaria commodities	X	X	X	X	X	X	X	X
		4	Improve the capacity of health workers and the Malaria Youth Army Champions on procurement and supply management activities at district level.	1	Conduct quarterly supportive supervision and mentorship of pharmacy and other staff responsible for the management of commodity logistics and validation of reports	X	X	X	X	X	X	X	X
				2	Provide in-service training on PSM activities including forecasting, supply planning, procurement, inventory	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					management, transparency, and accountability; recording and reporting; data analysis and use								
				3	Conduct regular monitoring of adherence to guidelines by health workers	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				4	Print and distribute re-distribution guidelines		**X**	**X**					
				5	Conduct capacity building in social accountability mechanisms and tools with Health Centre Management and Drug Therapeutic Committee	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
5. Social and Behaviour Change (SBC)	**Objective 5a: To increase proportion of**	1	Intensify mass communication through	1	Development of mass media SBC materials	**X**		**X**		**X**		**X**	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
	caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of the onset of fever from 46% to 90% by 2030		national and community radios plus social media	2	Featuring and airing of SBC materials	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				3	Support featuring and airing of best practices and success stories	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
		2	Intensify Interpersonal communication	1	Development of Interpersonal Communication materials	**X**		**X**		**X**		**X**	
				2	Conduct community dialogue sessions	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				3	Conduct health talks in health facilities and communities	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				4	Undertake community filming	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				5	Conduct road-shows in districts low care seeking within 24 hours of onset of fever for U/5 children	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				6	Conduct community	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					sensitization meetings								
				7	Conduct theatre for development in communities	X	X	X	X	X	X	X	X
				8	Undertake highlevel advocacy meetings at national level	X	X	X					
				9	Conduct advocacy meetings with various stakeholders at the district level	X	X	X					
				10	Conduct advocacy meetings with various stakeholders at the community levels	X	X	X					
				11	Conduct malaria information dissemination through open days to promote zero malaria	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					starts with me brand.								
		3	Strengthen partnership and Community engagement	1	Conduct quarterly Technical Working Group Meetings	X	X	X	X	X	X	X	X
				2	Engage stakeholders in joint SBC planning and review meetings,	X	X	X	X	X	X	X	X
				3	Engage community (faith leaders, traditional leaders); CSOs, Community structures (CHAGs, ADCs, VDCs, HCMCs, CBOs), HAC, Radio Listening clubs; Private Sector; and Politicians on zero malaria	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					starts with me campaign)) and the on importance of seeking care within 24 hours of on-set of fever for under five children								
		4	Capacity building	1	Conduct orientation of relevant personnel such District Health Promotion officers, health workers, malaria youth army champions, and IEC focal persons on Malaria SBC priorities	**X**		**X**		**X**		**X**	
				2	Conduct orientation of media personnel on Malaria SBC priorities	**X**		**X**		**X**		**X**	
				3	Conduct orientation of	**X**		**X**		**X**		**X**	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					community theatre groups on Malaria SBC priorities								
				4	Conduct biannual monitoring, supportive supervision and mentorship of Malaria SBC activities at facility and community levels	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				5	Procurement of ICT equipment to aid in SBC interventions	**X**					**X**		
				6	Conduct orientation of Malaria Youth Army Champions	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
	Objective 5b: To increase the proportion of the general population who use an ITN consistently from 55% (MBS	1	Consistent interpersonal communication	1	Development of Interpersonal Communication materials	**X**		**X**		**X**		**X**	
				2	Conduct community and school dialogue sessions	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
	2021) to 80% by 2030			3	Conduct health talks in health facilities, schools and communities	X		X		X		X	
				4	Undertake school and community filming	X	X	X	X	X	X	X	X
				5	Conduct road-shows	X	X	X	X	X	X	X	X
				6	Conduct community and school sensitization meetings	X	X	X	X	X	X	X	X
				7	Conduct theatre for development in communities and schools	X	X	X	X	X	X	X	X
				8	Undertake highlevel advocacy meetings at national level	X	X	X					
				9	Conduct advocacy meetings with various stakeholders at the district level	X	X	X					

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				10	Conduct advocacy meetings with various stakeholders at school and community levels	X	X	X					
				11	Conduct malaria information dissemination sessions through open days	X	X	X	X	X	X	X	X
		2	Intensify mass communication on ITN use	1	Development of mass media SBC materials	X		X		X		X	
				2	Featuring and airing of SBC materials	X	X	X	X	X	X	X	X
				3	Conduct monitoring and tracking of aired and featured products	X	X	X	X	X	X	X	X
				4	Support featuring and airing of best practices and success stories	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				5	Develop Malaria communication tools/ messages including digital, print or traditional to be shared through social media plafforms and community engagement events	X	X	X	X	X	X	X	X
		3	Capacity Building	1	Conduct orientation of relevant personnel such District Health Promotion officers, health workers and IEC focal persons on ITN use	X		X		X		X	
				2	Conduct orientation of SHN Teachers and School Club Patrons/matrons on ITN use	X		X		X		X	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				3	Conduct orientation of Media Team on ITN use	X		X		X		X	
				4	Conduct orientation of school and community theatre groups on ITN use	X		X		X		X	
				5	Conduct biannual supportive supervision and mentorship of SBC activities on ITN use at health facility, school and community levels	X	X	X	X	X	X	X	X
				6	Recruiting 1000 more Malaria Youth Army Champions with a selection from already existing youth structures	X		X		X		X	
				7	Train the CSOs and Malaria youth champions	X		X			X		

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					in the monitoring of ITN and IRS implementation								
				8	Conduct community sensitization and awareness campaigns on Malaria prevention through Malungo Zii (Zero Malaria) campaign to stimulate the behaviour change (Breaking the myth and misconceptions on ANC, Net Usage and other Malaria interventions such as the Malaria Vaciine in the communities through engagement meetings with	**X**			**X**			**X**	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					existing structures)								
		4	Strengthening partnership and Community engagement	1	Conduct quarterly Technical Working Group Meetings	X	X	X	X	X	X	X	X
				2	Engage stakeholders in joint SBC planning and review meetings	X	X	X	X	X	X	X	X
				3	Engage of faith leaders, traditional leaders, CSO's,CBO,s private sector and politicians on zero malaria	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					starts with me campaign								
		5	Strengthen Community-led planning, monitoring and learning for Malaria interventions	1	Conduct training for the youth led and Community based organisations in programming of malaria interventions		X			X			
	Objective 5c: To Increase the proportion of pregnant women who take IPTp 3+ during pregnancy from 56% (MBS 2021) to 80% by 2030	1	Consistent Interpersonal communication	1	Development of advocacy pack	X		X		X		X	
				2	Conduct advocacy meetings with gatekeepers	X	X	X					
				3	Conduct early ANC attendance motivation community meetings with males and female reproductive age groups	X	X	X	X	X	X	X	X
		2	Capacity Building	1	Train health workers on how to use early ANC	X		X		X		X	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					attendance Advocacy Pack								
		3	Strengthen Community-led planning, monitoring and learning for Malaria interventions	1	Conduct monitoring and supevision on early uptake of ANC, IPTp3 and Net usage in the communities	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				2	Conduct a learning field visits for the ITN use, ANC uptake and Indoor Residual Spraying in the districts where the intervention is being implemented	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
6. Surveillance, Monitoring & Evaluation and Operational Research	**Objective 6: To improve malaria data quality from 94% in 2022 to 99% by 2030 to ensure evidence based program**	1	Improve data ownership and utilization at service delivery point	1	Develop and disseminate appropriate data visualization tools for SDP		**X**				**X**		
				2	Support facility based monthly data review								

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
	implementation, policy direction and accountability at all levels of health service delivery.				meetings with minutes								
				3	Support to district HMIS II Coordinator to follow up on routine data collection and reporting	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				4	Conduct quarterly district data review meetings for facility data focal points and in-charges including private facilities	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				5	Support to districts with internnet connectivity for the implementation of DHIS 2 - Monthly subscriptions	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				6	Introduce yearly best performing awards on	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					malaria data quality to health facilities								
				7	Conduct quarterly Integrated Malaria Supportive Supervision and Mentorship	X	X	X	X	X	X	X	X
				8	Support district coordinators with motor bikes for routine facility supportive supervision to health facilities		X						
				9	Develop malaria data dashboards and charts up to health center and village clinic levels								
				10	Support district to conduct data verification and cleaning in DHIS-2 in line with	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					existing data quality job aid.								
		2	Surveillance, Monitoring and Evaluation and operational Research	1	Conduct Therapeutic Efficacy Study	X		X		X		X	
				2	Conduct malaria parasite species distribution study		X				X		
				3	Conduct entomogical profile and insecticide resistance studies		X		X		X		X
				4	Conduct Malaria Indicator Survey			X		X		X	
				5	Review, print and distribute malaria research agenda				X				
				6	Collaborate with research affiliates on priority studies as guided by the malaria research agenda			X		X		X	
				7	Conduct Malaria Behaviour Study			X		X		X	

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				8	Disseminate household and health facility surveys and other research results			X		X		X	
				9	Conduct collaborative meeting between health sector (CMED) and NSO to harmonize and the approach of determining the denominator at community level		X						
				10	Review reporting forms to enable collection of more disaggregated malaria data				X				
				11	In collaboration with CMED/Digital health to modify data entry in DHIS-2 to accommodate disaggregated data		X						

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				12	Conduct quartery M&E Sub Technical Working	X	X	X	X	X	X	X	X
				13	Participate in DHS								
		3	Epidemics and preparedness response	1	Report malaria cases every 2 weeks	X	X	X	X	X	X	X	X
				2	Detect malaria epidemics via a notification system	X	X	X	X	X	X	X	X
				3	Support district emergency teams to appropriately respond to malaria epidemics	X	X	X	X	X	X	X	X
				4	Establish malaria epidemic thresholds at district and health facility level	X							
		4	Capacity building	1	Map out facilities with and without data clerks after every 2 years	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				2	Lobby for more data clerks for vacant facilities after every 2 years	X	X	X	X	X	X	X	X
				3	Identify Temporarily focal point persons where no data clerks are available	X	X	X	X	X	X	X	X
				4	Support yearly short courses for SMEOR officers at different levels		X		X		X		X
				5	Develop, disseminate and distribute SOP for data management at SDP after evey 5 years	X					X		
				6	Train health workers on epidemics and preparedness response in preparation of weekly malaria	X					X		

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					reporting at all levels								
				7	Launch NMCP website and orient personnel on the use of NMCP website	**X**							
				8	Training program and district personnel in the development of program reports, success stories and case studies	**X**					**X**		
				9	Train data clerks from public and private health facilities in data management and reporting system		**X**						
				10	Orient health care workers on revised reporting tools with disaggregated malaria data				**X**			**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				11	Support with data analysis and visualization materials and equipment (Computers).	X	X	X	X	X	X	X	X
				12	Provision of adequate data registers & storage tools/equipment and space	X	X	X	X	X	X	X	X
				13	Digitalize the mass LLIN distribution data collection and storage		X						
				14	Loby for scalling up digitalization of the data collection and storage tools for routine malaria data at village clinics								
				15	Maintain and pay annual NMCP website subscription fees	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
		5	Engagement of private Clinics	1	Through DHMT MAP out private health facilities per district	**X**							
				2	Work with the private hospitals/clinics to institutionalize the MOH data tools		**X**						
7. Program Management	**Objective 7: To strengthen program management to support the effective implementation of planned MSP activities from 56% to over 90% by 2030**	1	Human resource capacity building	1	Conduct technical knowledge gap assessment across the thematic areas within NMCP	**X**							
				2	Mobilize resources for technical knowledge gap filling	**X**				**X**			
				3	Prioritize and organize training within the thematic areas	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				4	Lobby for Technical Assistance (TA) support across the thematic areas, where appropriate	X	X	X	X	X	X	X	X
				5	Organize benchmarking activities		X		X		X		X
				6	Attend relevant conferences	X	X	X	X	X	X	X	X
				7	Lobby for finance officer to be stationed within NMCP	X	X						
				8	Conduct finance management gap assessment on the relevant existing staff	X	X						
				9	Organize short course depending on the knowledge gap		X						
				10	Mentorship and supportive supervision to the existing staff		X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					through technical assistance support								
				11	Organize benchmarking exercise		X		X		X		X
				12	Advocate for additional established specialized cadres positions	X	X						
				13	Explore alternatives to support NMCP at national level		X	X	X	X	X	X	X
				14	Staff Costs (Placement of 2 Global Fund Supported Officers, Program Officer & M&E officer, and Driver for the vehicle for Malaria Youth Army Champions)		X	X	X	X	X	X	X
		2	Strengthen Program Planning and Reviews	1	Develop an Annual	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					Implementation Plan at the beginning of each year								
				2	Conduct quarterly reviews at the end of each quarter	X	X	X	X	X	X	X	X
				3	Conduct annual reviews at the end of each year	X	X	X	X	X	X	X	X
				4	Conduct Mid Term Review for the Malaria Program			X			X		
				5	Conduct End Term Review for the Malaria Program							X	
				6	Develop One Plan, One Monitoring and Evaluation and One Budget with partners	X				X			
		3	Partnership and Stakeholders coordination	1	Conduct partner remapping exercise	X					X		

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				2	Plan and conduct regular stakeholders' meetings	X	X	X	X	X	X	X	X
				3	Re-establish the existing links and add new relevant stakeholders								
				4	Re-orientating stakeholders	X		X		X		X	
		4	Strengthen resource mobilization	1	Training on business plan development		X						
				2	Develop a business plan		X						
				3	Implement the business plan		X	X	X	X	X	X	X
				4	Conduct cost effective and Cost benefit analysis of interventions to justify investments	X			X				
				5	Review plans for opportunities to integrate activities and minimize duplication	X	X	X	X	X	X	X	X

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
				6	Prioritize activities and interventions that will yield highest impact	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
				7	Quantify the need for Motor bikes support for District Malaria coordinators	**X**							
				8	Quantify the need for Motor Vehicle need for National and districts support	**X**				**X**			
				9	Lobby for financial resources from Global Fund, PMI and Government for procurement of motor bikes and vehicle needs.	**X**							**X**
		5	Engage in cross-border Initiatives	1	Organize annual exchange visits with neighboring countries to agree on cross border	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

Thematic Area	Objectives	Strategies		Activities		Time frame							
						2023	2024	2025	2026	2027	2028	2029	2030
					control of malaria and discuss cross boarder pilferage of malarial commodities like LLINs, LA and MRTDS								
				2	Organize cross boarder visits to benchmark on new initiatives and Malaria Elimination technics	X	X	X	X	X	X	X	X
		6	Support Programme Administration	1	Vehicle maintenace and running costs	X	X	X	X	X	X	X	X
				2	Office Operations	X	X	X	X	X	X	X	X
				3	IT and office equipment	X	X	X	X	X	X	X	X
				4	Procurement of vehicles		X	X			X		

8.2. NMSP Cost Summary by Objective and Strategy

Objectives/Strategies	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Objective 1: Increase the proportion of population protected by atleast one malaria vector control interventions from 37% in 2022 to at least 90% by 2030	**18,604,466,568**	**83,803,427,151**	**31,043,522,340**	**114,207,676,926**	**47,683,592,625**	**153,397,922,219**	**63,988,638,125**	**178,480,010,528**	**691,209,256,481**
Strategy 1.1: Institute policies, guiding frameworks and oversight structures.	10,350,000	151,885,800	8,712,000	9,583,200	10,541,520	11,595,672	12,755,239	14,030,763	229,454,194
Strategy 1.2: Universal Access to Quality Long Lasting Insecticidal Nets	6,214,938,042	66,462,622,381	7,958,058,527	84,780,500,398	10,190,436,833	106,771,177,831	11,863,049,949	116,633,447,391	410,874,231,353
Strategy 1.3: Build capacity of districts to implement large-scale malaria elimination intiatives	-	-	-	-	-	729,590,145	178,480,661	199,273,658	1,107,344,464
Strategy 1.4: Quality IRS in selected, suitable epidemiological and entomological areas	11,924,757,635	16,677,557,141	22,028,095,679	28,281,966,353	35,609,949,798	44,083,277,097	48,974,512,655	59,253,263,877	266,833,380,236
Strategy 1.5: Larval source Management in targeted communities	-	-	473,509,386	489,051,944	1,146,126,971	986,254,755	2,126,977,435	1,445,327,422	6,667,247,913
Strategy 1.6: Vector surveillance and insecticide resistance management	454,420,890	511,361,829	575,146,747	646,575,030	726,537,502	816,026,719	832,862,185	934,667,417	5,497,598,319
Objective 2: To increase and sustain the proportion of suspected cases of malaria that are tested from 98% in 2022 to 100% and treat all the confirmed cases by 2030.	**5,506,604,800**	**19,182,147,262**	**6,624,533,168**	**3,064,074,869**	**21,196,441,429**	**3,883,361,710**	**9,748,711,310**	**5,276,950,094**	**74,482,824,641**
Strategy 2.1: Strengthen policy adherance and support	20,210,000	4,413,665,795	-	-	5,843,613,649	-	-	-	10,277,489,444
Strategy 2.2: Support enforcement of medical equipment standardisation policy in procurement of medical equipment	-	56,796,795	-	-	75,596,534	-	-	-	132,393,329

Objectives/Strategies	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Strategy 2.3: Strengthen diagnostic capacity for ISO accreditation	16,400,000	219,938,950	23,069,860	51,043,185	27,914,531	110,433,476	33,776,582	74,732,326	557,308,910
Strategy 2.4: Capacity building/ Responsiveness of health workers	4,633,609,000	2,215,328,744	5,577,204,600	1,882,407,346	7,662,021,415	2,277,712,888	8,186,157,659	2,751,063,366	35,185,505,018
Strategy 2.5:Strengthen leadership commitment, coordination, supervision and monitoring for malaria services at all levels	40,386,000	74,366,600	48,867,060	53,753,766	98,981,945	65,042,057	71,546,263	131,744,968	584,688,658
Strategy 2.6:Private sector engangement	395,380,850	804,005,235	478,410,829	526,251,911	1,070,130,968	636,764,813	700,441,294	1,424,344,318	6,035,730,217
Strategy 2.7: Strengthen drug resistance prevention	-	4,330,738,500	-	-	5,764,212,944	-	-	-	10,094,951,444
Strategy 2.8:Strenghthen malaria diagnostic services	109,816,600	713,326,758	145,109,976	163,560,734	228,205,724	325,068,383	241,615,410	328,373,603	2,255,077,187
Strategy 2.9:Strengthen community case management	290,802,350	6,353,979,885	351,870,844	387,057,928	425,763,721	468,340,093	515,174,102	566,691,512	9,359,680,434
Objective 3: To inrease the uptake of atleast 3 doses of IPTp from the 2022 baseline of 56% to 80% by 2030	**2,505,983,500**	**4,067,566,250**	**3,210,235,875**	**3,674,228,828**	**3,948,455,889**	**3,000,492,060**	**4,000,923,479**	**3,630,595,393**	**28,038,481,274**
Strategy 3.1: Expand existing network of health care services	507,848,000	558,632,800	614,496,080	675,945,688	407,605,440	448,365,984	1,056,147,092	542,522,841	4,811,563,925
Strategy 3.2: Strengthen Health System Capacity to provide MIP services	1,998,135,500	2,401,443,550	2,417,743,955	2,802,487,716	2,104,739,649	2,315,213,613	2,684,172,677	2,801,408,472	19,525,345,132
Strategy 3.3: Strengthen SBC for Malaria	-	1,078,971,300	177,995,840	195,795,424	1,436,110,800	236,912,463	260,603,709	286,664,080	3,673,053,617

Objectives/Strategies	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Strategy 3.4: Strengthen Public Private Partnerships	-	28,518,600	-	-	-	-	-	-	28,518,600
Objective 4: To sustain annual average stock out rate of less than 1% for all malaria first-line treatment throughout the MSP (2023-2030) period	**3,804,478,137**	**11,261,071,204**	**19,890,843,661**	**23,818,394,629**	**22,122,506,005**	**23,042,323,959**	**26,118,699,800**	**28,944,467,093**	**159,002,784,488**
Strategy 4.1: Enhance local ownership and coordination of malaria commodity procurement and supply management	39,865,200	47,921,170	24,036,892	26,440,581	29,084,639	31,993,103	35,192,414	38,711,655	273,245,654
Strategy 4.2: Improve quality of LMIS data for commodity Security and Accountability	3,332,426,262	10,851,559,574	19,348,988,358	23,201,151,631	21,330,385,007	22,480,926,263	25,371,209,477	28,716,450,044	154,633,096,617
Strategy 4.3: Strengthen commodity demand planning, procurement, distribution and inventory control, and quality assurance activities	92,931,325	47,194,125	51,913,538	57,104,891	62,815,380	69,096,918	76,006,610	83,607,271	540,670,059
Strategy 4.4: Improve the capacity of health workers and the Malaria Youth Army Champions on procurement and supply management activities at district level.	339,255,350	314,396,335	465,904,874	533,697,525	700,220,978	460,307,674	636,291,299	105,698,123	3,555,772,158
5a.To increase proportion of caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of the onset of fever from 46% to 90% by 2030	**2,529,042,282**	**1,769,671,672**	**2,414,952,221**	**1,826,910,142**	**2,570,631,632**	**2,482,721,357**	**3,110,464,275**	**2,674,779,139**	**19,379,172,719**
Strategy 5a.1: Intensification of mass communication through national and community radios plus social media	948,364,584	1,004,845,142	1,147,521,147	1,215,862,622	1,385,686,230	1,471,193,773	1,676,680,338	1,780,144,465	10,630,298,302
Strategy 5a.2: Intensify Interpersonal communication	528,891,720	515,252,505	640,365,541	309,062,949	426,196,107	373,966,168	515,697,290	452,499,064	3,761,931,344

Objectives/Strategies	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Strategy 5a.3: Strengthen partnership and Community engagement	162,599,000	178,858,900	196,744,790	216,419,269	238,061,196	261,867,315	288,054,047	316,859,452	1,859,463,969
Strategy 5a.4: Capacity Building	889,186,978	70,715,125	430,320,743	85,565,302	520,688,099	375,694,100	630,032,599	125,276,158	3,127,479,103
5b. To increase the proportion of the general population who use an ITN consistently from 55% (MBS 2021) to 80% by 2030	**2,907,606,074.00**	**2,000,634,396.20**	**3,531,176,969.54**	**2,093,741,185.60**	**3,687,834,045.16**	**3,178,487,625.90**	**4,445,463,537.64**	**3,054,712,936.05**	**24,899,656,770.09**
Strategy 5b.1: Consistent interpersonal communication	541,403,624.00	515,252,504.80	655,098,385.04	309,062,949.01	446,837,205.92	373,966,168.30	540,673,019.16	452,499,063.64	3,834,792,919.87
Strategy 5b.2: Intensification of mass communication on ITN use	1,186,966,450.00	1,249,677,191.40	1,456,194,404.50	1,512,109,401.59	1,734,301,777.95	1,860,115,172.58	2,098,505,151.31	2,213,879,374.87	13,311,748,924.21
Strategy 5b.3: Capacity Building	1,016,637,000.00	40,345,800.00	1,223,139,390.00	56,149,566.00	1,246,672,365.40	682,538,969.53	1,518,231,320.12	71,475,045.79	5,855,189,456.85
Strategy 5b.4: Strengthen partnership and Community engagement	162,599,000.00	178,858,900.00	196,744,790.00	216,419,269.00	238,061,195.90	261,867,315.49	288,054,047.04	316,859,451.74	1,859,463,969.17
Strategy 5b.5: Strengthen Community-led planning, monitoring and learning for Malaria interventions	-	16,500,000.00	-	-	21,961,500.00	-	-	-	38,461,500.00
5c. Increase the proportion of pregnant women who take IPTp 3+ during pregnancy from 56% (MBS 2021) to 80% by 2030	**438,139,216**	**306,428,100**	**530,148,451**	**56,385,419**	**295,647,786**	**68,226,357**	**357,733,821**	**82,553,892**	**2,135,263,043**
Strategy 5c.1: Consistent interpersonal communication	273,644,216	283,460,100	331,109,501	28,594,139	54,810,657	34,598,908	66,320,895	41,864,679	1,114,403,095

Objectives/Strategies	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Strategy 5c.2: Capacity Building	143,615,000	-	173,774,150	-	210,266,722	-	254,422,733	-	782,078,605
Strategy 5c.3: Strengthen Community-led planning, monitoring and learning for Malaria interventions	20,880,000	22,968,000	25,264,800	27,791,280	30,570,408	33,627,449	36,990,194	40,689,213	238,781,344
Objective 6: To improve malaria data quality from 95.6% in 2022 to 100% by 2030 to ensure evidence based program implementation, policy direction and accountability at all levels of health service delivery.	**3,489,107,616**	**4,606,695,793**	**5,049,699,575**	**4,629,902,217**	**6,082,962,790**	**11,805,614,984**	**8,179,930,031**	**5,365,311,500**	**49,209,224,506**
Strategy 6.1: Improve data ownership and utilization at service delivery point	2,440,535,282	3,125,674,143	2,953,047,691	3,248,352,460	3,546,014,010	4,381,226,489	4,320,194,379	4,755,912,837	28,770,957,290
Strategy 6.2: Surveillance, Monitoring and Evaluation and operational Research	467,572,334	367,552,145	1,911,720,670	258,057,151	2,313,182,011	481,765,246	2,798,950,233	311,565,093	8,910,364,885
Strategy 6.3: Epidemics and preparedness response	104,080,000	12,942,286	14,236,514	15,660,166	17,226,182	18,948,801	20,843,681	22,928,049	226,865,678
Strategy 6.4: Capacity building	476,920,000	1,090,646,076	170,694,700	1,107,832,440	206,540,587	6,923,674,448	1,039,941,738	274,905,521	11,291,155,511
Strategy 6.5: Engagement of private Clinics	-	9,881,143	-	-	-	-	-	-	9,881,143
Objective 7: To strengthen program management to support the effective implementation of planned MSP activities from 56% to over 90% by 2030	**557,222,545**	**749,067,782**	**1,212,029,078**	**786,078,089**	**967,075,263**	**1,669,534,966**	**1,254,877,375**	**1,092,087,181**	**8,287,972,278**
Strategy 7.1: Human resource capacity building	192,140,516	267,106,576	227,999,022	305,149,692	408,989,811	369,231,127	333,813,368	446,769,664	2,551,199,777

Objectives/Strategies	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Strategy 7.2: Planning and monitoring of implementation	114,917,000	110,997,700	301,813,757	134,347,147	168,324,649	401,786,584	436,253,375	196,785,350	1,865,225,562
Strategy 7.3: Partnership and coordination	17,051,714	3,229,285	20,511,574	3,907,435	24,819,004	4,889,048	30,030,995	5,720,876	110,159,932
Strategy 7.4: Resource mobilization	3,711,700	33,747,076	3,280,504	8,548,827	3,969,409	4,366,350	-	5,283,284	62,907,150
Strategy 7.5: Cross border Initiatives	75,215,360	82,736,896	91,010,586	100,111,644	110,122,809	121,135,089	133,248,598	146,573,458	860,154,440
Strategy 7.6: Support Programme Management	154,186,255	251,250,248	567,413,635	234,013,344	250,849,580	768,126,767	321,531,038	290,954,549	2,838,325,417
ANNUAL COSTS	**40,342,650,738**	**127,746,709,610**	**73,507,141,338**	**154,157,392,303**	**108,555,147,464**	**202,528,685,238**	**121,205,441,754**	**228,601,467,756**	
TOTAL MSP COST (2023-2030)	**1,056,644,636,201**								

8.3. NMSP Cost Summary by cost category

Cost Category	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Human Resource	103,708,316	201,867,217	172,644,150	244,259,333	212,536,832	295,553,793	252,768,301	357,620,089	1,840,958,031
Technical Assistance	14,335,714	1,448,296,609	17,346,214	1,829,941,181	4,298,179	2,317,251,759	5,200,796	2,892,696,788	8,529,367,241
Training Costs	5,998,058,890	24,190,334,426	7,562,855,225	10,070,106,838	22,127,018,658	12,799,741,167	10,659,173,137	14,236,173,062	107,643,461,403
Medicines and Pharmaceutical products	3,303,137,362	10,785,163,464	19,324,965,048	23,120,812,338	21,301,316,802	22,383,715,719	25,336,036,950	28,677,760,263	154,232,907,946
Health Products and Health Equipment	13,433,779,459	59,273,868,502	22,181,226,443	80,224,308,109	33,782,083,871	107,725,160,880	44,960,247,490	123,154,980,230	484,735,654,985
Procurement and Supply Management (PSM)	1,603,428,281	10,565,481,126	1,949,703,512	13,443,186,749	2,496,911,733	17,001,390,100	2,942,109,521	18,642,267,707	68,644,478,730
Infrastructure and Other Equipment	90,682,460	295,042,507	623,258,489	281,508,542	519,062,483	833,428,277	1,032,352,468	366,914,099	4,042,249,323
Communications Materials	5,813,368,258	4,637,104,529	6,440,648,183	4,685,660,075	6,837,693,107	6,018,704,574	8,239,909,592	7,000,249,451	49,673,337,770
Monitoring and Evaluation	4,730,562,034	6,744,989,262	6,838,473,604	7,375,069,498	8,155,802,490	15,561,440,256	10,967,545,944	9,680,822,748	70,054,705,835
Living Support Costs	216,699,000	296,225,600	265,146,090	295,853,349	342,398,818	383,927,868	388,200,390	455,732,827	2,644,183,943
Planning and Administration	4,919,910,007	9,173,299,404	7,970,565,293	12,405,406,023	12,581,541,355	16,994,999,451	16,188,309,959	22,874,563,413	103,108,594,904

Cost Category	COST (MWK)								
	2023	2024	2025	2026	2027	2028	2029	2030	2023-2030
Overhead Costs	114,980,955	135,036,964	160,309,087	181,280,268	194,483,136	213,371,395	233,587,207	261,687,078	1,494,736,090
Grand Total (MWK)	**40,342,650,738**	**127,746,709,610**	**73,507,141,338**	**154,157,392,303**	**108,555,147,464**	**202,528,685,238**	**121,205,441,754**	**228,601,467,756**	**1,056,644,636,201**
Grand Total (US$)	**39,358,684**	**124,630,936**	**71,714,284**	**150,397,456**	**105,907,461**	**197,588,961**	**118,249,211**	**223,025,822**	**1,030,872,816**

8.4. NMSP M & E Matrix

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
8.4.1. Impact Indicators						
Inpatient malaria deaths per year: rate per 100,000 persons per year	Numerator: Number of inpatient malaria deaths per year x 1000 Denominator: Total Number of people in the population.	9	2	HMIS	Annual	National
Malaria parasite prevalence among under-five years children	Numerator: Number of children under five years with malaria parasites, tested either through microscopy Denominator: Total number of children under five years surveyed	10.5%	2%	MMIS	Every 2 years	National, District
Malaria test positivity rate	Numerator: Number of confirmed malaria cases (by microscopy or mRDT). Denominator: Number of suspected malaria cases with a parasitological test (Microscope or RDT).	39%	5%	HMIS	Annual	National
Reported malaria cases (presumed and confirmed)	Number of malaria cases (presumed and confirmed)	4,257,729	1,098,504	HMIS	Bi-annual	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Confirmed malaria cases (microscopy or RDT): rate per 1000 persons per year	Numerator: Number of confirmed malaria cases (Microscopic or mRDT) per year x1000 Denominator: Total population at risk	218	48	HMIS	Annual	National
8.4.2.Outcome Indictors						
Malaria Prevention						
Proportion of children under five years old who slept under an insecticide-treated net the previous night	Numerator: Number of children under 5 years old who slept under an ITN the night preceding the survey x 100 Denominator: Total number of children under five years surveyed.	53.00%	90%	DHS, MIS	Every 2 years	National, District
Proportion of population that slept under an insecticide-treated net the previous night	Numerator: Number of people who slept under an LLIN the night preceding the survey Denominator: Total number of people surveyed.	37%	90%	MIS	Every 2 years	National, District

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of pregnant women who slept under an insecticide-treated net the previous night	Numerator: Number of pregnant women slept under an ITN the night preceding survey Denominator: Total number of pregnant women among in the surveyed populations	49%	90%	MMIS	Every 2 years	National, District
Proportion of population with access to an ITN within their household.	Numerator: Number of people who have access to an ITN within their household Denominator: Total number of individuals who spent the previous night in surveyed households	37%	90%	MMIS	Every 2 years	National
% of pregnant women who have access to and receive 3 or more doses of IPTp for malaria prevention	Numerator: Number of pregnant women who have access to and receive 3 or more doses of IPTp for malaria prevention Denominator: Total number of pregnant women who spent the previous night in surveyed households	56%	85%	MMIS	Every 2 years	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
% of pregnant women who have access to and receive 4 or more doses of IPTp for malaria prevention	Numerator: Number of pregnant women who have access to and receive 4 or more doses of IPTp for malaria prevention Denominator: Total number of pregnant women who spent the previous night in surveyed households	-	40%	MMIS	Every 2 years	National
Malaria Treatment						
Proportion of suspected malaria cases that receive a parasitological test at public sector health facilities	Numerator: Number of all suspected malaria cases that received a parasitological test at public sector health facilities. Denominator: Total Number of all suspected malaria cases that present at health facilities	99%	100%	HMIS	Biannual	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of suspected malaria cases that receive a parasitological test at private sector health facilities	Numerator: Number of all suspected malaria cases that received a parasitological test at private sector health facilities. Denominator: Total Number of all suspected malaria cases that present at health facilities	-	100%	HMIS	Biannual	National
Proportion of suspected malaria cases that receive a parasitological test in the community	Numerator: Number of all suspected malaria cases that received a parasitological test in the community. Denominator: Total Number of all suspected malaria cases presented in the community	99%	100%	HMIS	Bi-annual	National
Proportion of facilities treating severe malaria cases according to the National Guidelines	Numerator: Number of health facilities treating severe malaria cases according to the national guidelines visited. Denominator: Total number of facilities visited during OTSS	82%	90%	Program Report	Bi-annual	National, District

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of confirmed malaria cases that received first-line antimalarial treatment at public sector health facilities	Numerator: Number of confirmed malaria cases treated that received first-line antimalarial treatment according to national policy at public sector health facilities. Denominator: Total Number of confirmed malaria cases at public health facilities	99%	100%	HMIS	Bi-annual	National, District
Proportion of confirmed malaria cases that received first-line antimalarial treatment at private sector health facilities	Numerator: Number of confirmed malaria cases treated that received first-line antimalarial treatment according to national policy at private sector health facilities. Denominator: Total Number of confirmed malaria cases at public health facilities	-	100%	HMIS	Bi-annual	National, District

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of confirmed malaria cases that received first-line antimalarial treatment in the community	Numerator: Number of confirmed malaria cases treated that received first-line antimalarial treatment according to national policy in the community. Denominator: Total Number of confirmed malaria cases in the community	100%	100%	HMIS	Bi-annual	National, District
Percentage of health facilities with no stock outs of first line treatment for uncomplicated malaria in the last 3 months	Numerator: Number of health facilities with no stock outs of first line treatment for uncomplicated malaria in the last 3 months Denominator: Total Number of Health Facilities	99%	99.8%	LMIS, Health Facility Survey	Bi-annual	National, District
Percentage of health facilities with no stock outs of Artesunate injectable in the last 3 months	Numerator: Number of health facilities with no stock outs of Artesunate injectable in the last 3 months Denominator: Total Number of Health Facilities	98.5%	99%	LMIS, Health Facility Survey	Bi-annual	National, District

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Percentage of health facilities with no stock outs of mRDT in the last 3 months	Numerator: Number of health facilities with no stock outs of mRDT in the last 3 months Denominator: Total Number of Health Facilities	98.9%	99%	LMIS, Health Facility Survey	Bi-annual	National, District
Percentage of health facilities with no stock outs of LLINs in the last 3 months	Numerator: Number of health facilities with no stock outs of LLINs in the last 3 months Denominator: Total Number of Health Facilities	96.3%	99%	LMIS, Health Facility Survey	Bi-annual	National, District
Percentage of health facilities with no stock outs of sulfadoxine-pyrimethamine (SP) in the last 3 months	Numerator: Number of health facilities with no stock outs of sulfadoxine-pyrimethamine (SP) in the last 3 months Denominator: Total Number of Health Facilities	95.6%	99%	LMIS, Health Facility Survey	Bi-annual	National, District
Proportion of caregivers taking their under-five children to the health facility within 24 hours of onset of fever	**Numerator:** Number of caregivers taking their under-five children to the health facility within 24 hours of onset of fever. **Denominator:** Total number of caregivers who	46%	90%	MMIS	Every 2 years	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
	spent the previous night in surveyed households					
Proportion of caregivers who believe that most people in their community take under five children to a health provider on the same or next day after they develop a fever	**Numerator:** Number of caregivers who believe that most people in their community take under five children to a health provider on the same or next day after they develop a fever. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	68%	80%	MMIS	Every 2 years	National
Proportion of caregivers who believe that most people in their community take under five children to a health provider on the same or next day after they develop a fever	**Numerator:** Number of caregivers who believe that most people in their community take under five children to a health provider on the same or next day after they develop a fever. **Denominator:** Total number of caregivers who	68%	80%	MMIS	Every 2 years	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
	spent the previous night in surveyed households					
Proportion of caregivers with correct knowledge of seeking care within 24 hours of onset of fever from 60%	**Numerator:** Number of caregivers with correct knowledge of seeking care within 24 hours of onset of fever. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	60%	80%	MMIS	Every 2 years	National
Proportion of caregivers with a positive perceived response efficacy of malaria treatment	**Numerator:** Number of caregivers with a positive perceived response efficacy of malaria treatment. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	74%	90%	MBS	Every 2 years	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of caregivers with positive attitudes towards malaria care-seeking and treatment	**Numerator:** Number of caregivers with positive attitudes towards malaria care-seeking and treatment. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	78%	90&	MBS	Every 2 years	National
Proportion of children under five years who sleep under an ITN every night	**Numerator:** Number of caregivers taking their under-five children to the health facility within 24 hours of onset of fever. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	53%	80%	MMIS	Every 2 years	National
Proportion of caregivers with a favourable attitude toward consistent ITN use	**Numerator:** Number of caregivers with a favourable attitude toward consistent ITN use. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	82%	95%	MBS	Every 2 years	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of caregivers of under 5 children who have a positive perceived response efficacy of ITNs	**Numerator:** Number of caregivers of under 5 children who have a positive perceived response efficacy of ITNs. **Denominator:** Total number of caregivers who spent the previous night in surveyed households	61%	80%	MBS	Every 2 years	National
Increase the proportion of pregnant women who start ANC early (first trimester)	**Numerator:** Number of pregnant women who start ANC early (first trimester) . **Denominator:** Total number of pregnant women who spent the previous night in surveyed households	40%	80%	MBS 2021	Every 2 years	National
Proportion of pregnant women who believe most women in their community go to antenatal care at least 4 times when they are pregnant	**Numerator:** Number of pregnant women who believe most women in their community go to antenatal care at least 4 times when they are pregnant. **Denominator:** Total number of pregnant women who spent the previous night in surveyed households	75%	90%	MBS 2021	Every 2 years	National

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of malaria data quality	Average of report timeliness, completeness and malaria cases acuracy	95.6%	100%	Program Review Report	Bi-annual	National, District
Proportion monthly malaria reports submitted of all expected reports	**Numerator:** Number of malaria monthly reports submitted. **Denominator:** Total number of expected malaria monthly reports	98%	100%	HMIS	Bi-annual	National, District
% monthly malaria reports submitted by 15th of next month of all expected reports.	**Numerator:** Number of malaria monthly reports submitted timely. **Denominator:** Total number of expected malaria monthly reports	92%	99%	HMIS	Bi-annual	National, District
Malaria cases acuracy rate	Malaria cases in DHIS2 against malaria cases in register (OPR)	97%	100%	Program Review Report	Bi-annual	National, District
Proportion of Program Management activities Fully implemented annually	**Numerator:** Number of programe management activities implemented. **Denominator:** Total number of program management activities planned	53%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of Integrated Vector Management activities Fully implemented annually	Numerator: Number of planned Integrated Vector Management activities fully implemented for the last 12 months. Denominator: Total number of Vector Control activies planned for the last 12 months	48%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
Proportion of Activities Malaria Case Management Fully implemented annually	Numerator: Number of planned Malaria Case Management activities fully implemented for the last 12 months. Denominator: Total number of Malaria Case Management activies planned for the last 12 months	50%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
Proportion of Procurement and Supply Chain Management (PSM) activities Fully implemented annually	Numerator: Number of planned Procurement and Supply Chain Management (PSM) activities fully implemented for the last 12 months. Denominator: Total number of Procurement and Supply Chain Management (PSM)	53%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
	activies planned for the last 12 months					
Proportion of Malaria In Pregnanancy activities (MIP) Fully implemented annually	Numerator: Number of planned Malaria In Pregnanancy (MIP) activities fully implemented for the last 12 months. Denominator: Total number of Malaria In Pregnancy activies planned for the last 12 months	50%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
Proportion of Social Behaviour Change (SBC) activities Fully implemented annually	Numerator: Number of planned Social Behaviour Change (SBC) activities fully implemented for the last 12 months. Denominator: Total number of Social Behaviour Change activies planned for the last 12 months	95%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of Surveillance Monitoring and Evaluation Plus Operational Research activities Fully implemented annually	Numerator: Number of planned Surveillance Monitoring and Evaluation Plus Operational Research activities fully implemented for the last 12 months. Denominator: Total number of Surveillance Monitoring and Evaluation Plus Operational Research activies planned for the last 12 months	45%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
8.4.3.Coverage Indicators						
Malaria Prevention						
Number of long-lasting insecticidal nets distributed to at-risk populations through mass campaigns	Number of LLINs distributed to venerable households during mass distribution of LLINs.	9,069,950	10,958,223	Malaria Programme Reports	Every 3 years	National, District, Facility
Number of long-lasting insecticidal nets distributed to targeted risk groups through continuous distribution	Number of LLIN distributed to high risk groups during access to health services.	1,058,003	3,600,000	HMIS	Monthly	National, District

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of over five patients suspected with severe malaria	Numerator: Number of all over five suspected severe malaria cases that were tested for malaria Denominator: Total Number of all over five suspected severe malaria cases admitted in the health facilities	91%	98%	HMIS	Monthly	National, District
Proportion of over five patients confirmed with severe malaria	Numerator: Number of all over five confirmed severe malaria cases Denominator: Total Number of all over five severe malaria cases admitted in the health facilities	32%	80%	HMIS	Monthly	National, District
Program Management						
Proportion of Program Management activities Fully implemented annually	Numerator: Number of planned Program Management activities fully implemented within the last 12 months. Denominator: Total number of Program Management activies planned for the last 12 months	53%	90%	Annual Review Reports of the annual workplans	Annually	National, Districts and Implementing Partnership

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of Integrated Vector Management activities Fully implemented annually	Numerator: Number of planned Integrated Vector Management activities fully implemented for the last 12 months. Denominator: Total number of Vector Control activies planned for the last 12 months	48%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
Proportion of Activities Malaria Case Management Fully implemented annually	Numerator: Number of planned Malaria Case Management activities fully implemented for the last 12 months. Denominator: Total number of Malaria Case Management activies planned for the last 12 months	50%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of Procurement and Supply Chain Management (PSM) activities Fully implemented annually	Numerator: Number of planned Procurement and Supply Chain Management (PSM) activities fully implemented for the last 12 months. Denominator: Total number of Procurement and Supply Chain Management (PSM) activies planned for the last 12 months	53%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
Proportion of Malaria In Pregnanancy activities (MIP) Fully implemented annually	Numerator: Number of planned Malaria In Pregnanancy (MIP) activities fully implemented for the last 12 months. Denominator: Total number of Malaria In Pregnancy activies planned for the last 12 months	50%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership

Indicator	Operational Definition	Baseline	Target	Source	Frequency	Level of measurement
Proportion of Social Behaviour Change (SBC) activities Fully implemented annually	Numerator: Number of planned Social Behaviour Change (SBC) activities fully implemented for the last 12 months. Denominator: Total number of Social Behaviour Change activies planned for the last 12 months	95%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership
Proportion of Surveillance Monitoring and Evaluation Plus Operational Research activities Fully implemented annually	Numerator: Number of planned Surveillance Monitoring and Evaluation Plus Operational Research activities fully implemented for the last 12 months. Denominator: Total number of Surveillance Monitoring and Evaluation Plus Operational Research activies planned for the last 12 months	45%	90%	Annual Malaria Program Review Report	Annually	National, Districts and Implementing Partnership

8.5. Summary on activity implementation rate during MSP (2017-2022) period

MSP OBJECTIVES	DESCRIPTIONS	PERCENTAGE OF ACTIVITIES FULLY IMPLEMENTED	PERCENTAGE OF ACTIVITIES PARTIALLY IMPLEMENTED	PERCENTAGE OF ACTIVITIES NOT IMPLEMENTED	TOTAL NUMBER OF ACTIVITIES
Objective 1: By 2022, at least 90% of the population use one or more malaria preventative interventions	Number of planned activities	12	2	11	25
	Percentage of total	48	8	44	
Objective 2: At least 95% of suspected malaria cases will be tested and 100% of confirmed cases treated by 2022	Number of planned activities	15	5	10	30
	Percentage of total	50	17	33	
Objective 3: To increase uptake of at least three doses of Intermittent Preventive Treatment (IPTp) from 12% in 2014 to 60% by 2022	Number of planned activities	3	2	1	6
	Percentage of total	50	33	17	
Objective 4: To reduce annual average stock out rate of all La from 7% in 2016 to 3% in 2022	Number of planned activities	8	6	1	15
	Percentage of total	53	40	7	
Objective 5: To increase proportion of caregivers of under-five children who take action to seek appropriate malaria treatment within 24 hours of the onset of fever from 31.2% to 50% by 2022	Number of planned activities	20	1	0	21
	Percentage of total	95.2	4.8	0	

Objective 6: To provide evidence-based malaria surveillance system that guide programme implementation, policy direction and accountability by 2022	Number of planned activities	13	15	1	29
	Percentage of total	44.8	51.7	3.4	
Objective 7: To improve programme performance in implementing planned MSP activities from 43% to at least 90% by 2022	Number of planned activities	16	12	2	30
	Percentage of total	53	40	7	
TOTAL FOR MSP	**Number of planned activities**	**87**	**43**	**26**	**156**
	Percentage of total	**56%**	**28%**	**17%**	

8.6. HSSP III prioritization of interventions in the Heath Benefit Package

Care Program	Intervention Package	Intervention	Minimum Level of Care
Child Health	IMCI	Childhood pneumonia treatment (Antibiotics, oxygen, IV fluids - community to secondary level of care)	Primary
		Acute diarrhoea treatment (ORS, Zinc, IV fluids - community to secondary)	Primary
		Otitis Media Treatment	Primary
HIV/AIDS & Hepatitis	HIV/AIDS	Voluntary counselling and testing for HIV	Primary
		Antiretroviral treatment	Primary
		Prevention of Mother to Child Transmission (PMTCT) of HIV	Primary
		HIV/AIDS monitoring with viral load and CD4+ count	Primary
	Hepatitis	Testing for hepatitis B	Primary
		Treatment for hepatitis B	Primary
Malaria	Diagnosis and Testing	Rapid diagnosis tests	Primary
	Prevention	Mass ITN distribution	Primary

Care Program	Intervention Package	Intervention	Minimum Level of Care
		Indoor residual spraying	Primary
	Treatment	Uncomplicated first line malaria treatment including rectal treatment for <5 years old and home treatment	Primary
		Complicated malaria treatment	Secondary
Reproductive Health	Cervical cancer	Cervical cancer screening	Primary
		Treatment of precancerous lesions	Primary
	Sexually transmitted disease	Treatment of gonorrhoea	Primary
		Treatment of chlamydia	Primary
		Treatment of trichomoniasis	Primary
		Treatment of Pelvic Inflammatory Disease (PID)	Secondary
	SGBV	SGBV treatment and referral	Primary
	Family Planning	Oral contraception	Primary
		Male condom	Primary
		Injectable contraception	Primary
		Implant contraception	Primary
		Intrauterine device (IUD)	Primary

Care Program	Intervention Package	Intervention	Minimum Level of Care
		Tubal ligation	Secondary
Maternal and Newborn Health	ANC Package	Tetanus toxoid	Primary
		Testing for hepatitis B	Primary
		Urinalysis	Primary
		IPT distribution	Primary
		Deworming prophylaxis	Primary
		Daily iron and folic acid supplementation	Primary
		Syphilis detection and treatment	Primary
		Haemoglobin for pregnant women (hemocue)	Primary
	Antenatal complications	Ectopic case management	Secondary
		Post-abortion case management	Secondary
	Delivery Package	Antenatal corticosteroids for preterm labour	Primary
		Antibiotics for preterm rupture of the membranes	Primary
		Induction of labour for postdates	Secondary

Care Program	Intervention Package	Intervention	Minimum Level of Care
		Vaginal delivery (skilled attendance uncomplicated and complicated BeMONC delivery)	Primary
		Caesarean section (uncomplicated and complicated)	Secondary
		Active management of the 3rd stage of labour	Primary
		Management of pre-eclampsia and eclampsia	Secondary
		Management of obstructed labour	Secondary
		Treatment of antepartum and postpartum haemorrhage	Secondary
		Maternal sepsis case management	Secondary
	Newborn Care	Clean practices and immediate essential newborn care (vitamin K, erythromycin, chlorhexidine)	Primary
		Neonatal resuscitation	Primary
		Essential care of preterm of sick newborn including sepsis management	Secondary
		Kangaroo mother care	Primary

Care Program	Intervention Package	Intervention	Minimum Level of Care
		Support of breastfeeding mothers	Primary
Neglected Tropical Disease	Schistosomiasis	Schistosomiasis diagnosis (stool and urine)	Secondary
		Schistosomiasis treatment	Secondary
Mental, Neurological and Substance use disorders	Mental Health	Diagnosis and treatment of depression	Primary
		Diagnosis and treatment of acute psychotic disorders	Primary
		Diagnosis and treatment of bipolar disorder	Primary
	Neurological	Diagnosis and treatment of epilepsy	Primary
	Counselling	Mental Health Gap Action Program (mhGAP) counselling for people with mental, neurological and substance abuse conditions	Primary
		Psychotherapy (PST) through problem management plus (PM+) and Friendship Bench	Primary
Non-communicable Disease	Screening & diagnosis	Screening and diagnosis for NCD	Primary
	Prevention	Prevention of cardiovascular disease	Primary

Care Program	Intervention Package	Intervention	Minimum Level of Care
(NCDs) & Injury	NCD Treatment	Hypertension management and monitoring	Primary
		Diabetes type I	Secondary
		Diabetes type II	Primary
		Rheumatic heart disease	Secondary
	Respiratory disease	Asthma first line treatment with inhaled short acting beta agonist	Primary
		COPD first line treatment with inhaled short acting beta agonist	Primary
Injury & Surgery	Injury	Treatment of injuries – blunt and soft tissue	Primary
		Treatment of injuries – fracture reduction & fixation	Secondary
	Surgery	Elective and emergency inguinal hernia repair	Secondary
		Fistula repair	Secondary
Oral health	Oral health	Tooth extraction for severe pain	Primary
Nutrition		Growth monitoring promotion	Primary

Care Program	Intervention Package	Intervention	Minimum Level of Care
	Screening and prevention	Vitamin A supplementation and deworming in infants and children 6-59 months	Primary
	Malnutrition	Community-based management of moderate acute malnutrition	Primary
		Community-based management of severe acute malnutrition	Primary
		NRU management of severe acute malnutrition with complications	Secondary
Tuberculosis	Diagnosis and testing	GeneXpert diagnosis for all patients with presumptive TB	Secondary
	Preventative therapy	3HP preventative therapy for PLHIV	Primary
		Isoniazid preventative therapy for HIV+ pregnant women	Primary
		Isoniazid preventative therapy for children in contact with TB cases	Primary
	Treatment	First line treatment for TB with DOTS for high-risk patients	Primary
		MDR-TB treatment and case management	Primary
		BCG vaccine	Primary

Care Program	Intervention Package	Intervention	Minimum Level of Care
Vaccine Preventable Disease	Essential Vaccine Package	Polio vaccine (OPV and IPV)	Primary
		Pneumococcal vaccine	Primary
		Pentavalent vaccine (DPT-Hep-Hib)	Primary
		Rotavirus vaccine	Primary
		Measles vaccine	Primary
	Youth Vaccine	HPV vaccine	Primary
Health Promotion and Prevention	SGBV	SGBV screening	Primary
	Surveillance	Disease surveillance	Primary
	Home Care	Home-based care of chronically ill patients	Primary
	Promotion and Prevention	General health promotion & engagement	Primary
		Disaster preparedness and climate change engagement and promotion	Primary
		Promotion of hygiene and sanitation including water quality and food safety	Primary
		Prevention of accident, injury, and violence	Primary
		Occupational health promotion	Primary

8.7. Participants during key MSP development processes

8.7.1.Participants - Thematic Analysis workshop (Crossroads Hotel, Lilongwe)

Name of Participant	Gender	Institution	Area supported
Dr. Michael Kayange	M	NMCP	Programme Management, All
Dr. Sosten Lankhulani	M	NMCP/MoH	Case Management
Dr. Nyanyiwe Mbeye	F	KUHES	Case Management
Austin A. Gumbo	M	NMCP	Monitoring and Evaluation
Jacob Kawonga	M	CHISU Project	Monitoring and Evaluation
Collins Kwizombe	M	USAID – LL	Monitoring and Evaluation
John Sande	M	NMCP/MoH	Case Management
Osman Kitta	M	PSI-Impact Malaria	Strategic Planning (Consultant)
Amos Maenje	M	MoH-PHIM	Case Management
Petros Chirambo	M	CHAM	Case Management
Doris Kayambo	M	MoH – MZCH	Case Management
Dubulao Moyo	M	NMCP-MoH	Case Management
Mathews Mhango	M	Ntchisi DHO	Monitoring and Evaluation
Humphrey Tung'ande	M	NMCP	Monitoring and Evaluation
Gracious Hamuza	M	NMCP	Monitoring and Evaluation
Godfrey Silungwe	M	NMCP	Monitoring and Evaluation
Dr. Don Mategula	M	MLW	Monitoring and Evaluation

Name of Participant	Gender	Institution	Area supported
Bernad Banda	M	CHISU –LL	Monitoring and Evaluation
Wellngton Dausi	M	World Vision Int.	Monitoring and Evaluation
Elias Mwalabu	M	GHSC-PSM	Procurement and Supply Management
Fikadu Batu	M	GHSC-PSM	Procurement and Supply Management
George Chimadzuma	M	Mchinji DHO	Procurement and Supply Management
Norman Lakalaka	M	NMCP	Procurement and Supply Management
Elizabeth Mkandawire	M	NMCP	Procurement and Supply Management
Evans Chirambo	M	CHAM	Procurement and Supply Management
George Mphasa	M	Dowa DHO	Procurement and Supply Management
Chisomo Chirombo	M	GHSC-PSM	Procurement and Supply Management
Rabecca Minneman	F	PMI/USAID	Programme Management
Mike Nkhata	M	NMCP	Programme Management
Ben Chavula	M	World Vision Int.	Programme Management
Phindile Lupofya	F	Save the Children	Programme Management
Tamadani Kambewa	F	NMCP	Programme Management
Tyson Volkman	M	PMI	Programme Management

Name of Participant	Gender	Institution	Area supported
Esnart Katuya	F	NMCP	Programme Management
Happy Kondowe	M	HHSC-PSM	Integrated Vector Management
Pascal Madhlopa	M	World Vision Int.	Integrated Vector Management
Atupele Mwalwanda	F	NMCP	Integrated Vector Management
Sangwani Zimwanda	M	NMCP	Integrated Vector Management
Shadreck Mulenga	M	NMCP	Integrated Vector Management
Pius Masache	M	USAID-PMI	Integrated Vector Management
Akuzike Banda	F	NMCP	Integrated Vector Management
Al-jannat Sadala	M	Kasungu DHO	Malaria In Pregrancy
Christabel Komakoma	F	Impact Malaria	Malaria In Pregrancy
Kedson Masiyano	M	Lilongwe DHO	Malaria In Pregrancy
Evans Kaunda	M	NMCP	Malaria In Pregrancy
Joyce Malota	M	MCHS – LL	Malaria In Pregrancy
Violet Kalanje	F	Lilongwe DHO	Malaria In Pregrancy
Richwell Thom Tambuli	M	DAPP-TOME	Social and Behaviour Change for Malaria
Richy Nyalye	M	RIC Comm.	Social and Behaviour Change for Malaria

Name of Participant	Gender	Institution	Area supported
Angela Chitsime	F	JHU-CCP	Social and Behaviour Change for Malaria
Alick Kafunda	M	Ministry of Education	Social and Behaviour Change for Malaria
Salome Shaba	F	MoH	Social and Behaviour Change for Malaria

8.7.2. Participants - Problem (Bottleneck) Analysis Workshop (Linde Motel, Dowa)

Name of Participant	Gender	Institution	Area of Support
Dr. Michael Kayange	M	NMCP	Programme Management, All
Dr. Sosten Lankhulani	M	NMCP/MoH	Case Management
Dr. Nyanyiwe Mbeye	F	KUHES	Case Management
Austin A. Gumbo	M	NMCP	Monitoring and Evaluation
Dr. Lumbani Munthali	M	Ntchisi DHO	Programme Management
Jacob Kawonga	M	CHISU Project	Monitoring and Evaluation
Collins Kwizombe	M	USAID – LL	Monitoring and Evaluation
John Sande	M	NMCP/MoH	Case Management
Osman Kitta	M	PSI-Impact Malaria	Strategic Planning (Consultant)
Amos Maenje	M	MoH-PHIM	Case Management
Petros Chirambo	M	CHAM	Case Management
Dubulao Moyo	M	NMCP-MoH	Case Management
Dr. Collins Mitambo	M	MoH- Research Unit	Programme Management
Isaac Dambula	M	MOH/CMED	Monitoring and Evaluation
Mathews Mhango	M	Ntchisi DHO	Monitoring and Evaluation
Jacob Kawonga	M	CHISU Project	Monitoring and Evaluation
Collins Kwizombe	M	USAID – LL	Monitoring and Evaluation
Gracious Hamuza	M	NMCP	Monitoring and Evaluation
Godfrey Silungwe	M	NMCP	Monitoring and Evaluation

Name of Participant	Gender	Institution	Area of Support
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Elias Mwalabu	M	GHSC-PSM	Procurement and Supply Management
Fikadu Batu	M	GHSC-PSM	Procurement and Supply Management
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Norman Lakalaka	M	NMCP	Procurement and Supply Management
Elizabeth Mkandawire	M	NMCP	Procurement and Supply Management
Alinafe Kalanga	F	Mulanje DHO	Programme Management
Joshua Mwenda	M	Ntchisi DHO	Case Management
Anold Sichinga	M	NMCP	Vector Control
Flora Mphaya	F	NMCP	Programme Management
Grace Chamanga	F	NMCP	Programme Management
George Mphasa	M	Dowa DHO	Procurement and Supply Management
Chisomo Chirombo	M	GHSC-PSM	Procurement and Supply Management
Rabecca Minneman	F	PMI/USAID	Programme Management
Mike Nkhata	M	NMCP	Programme Management
Ben Chavula	M	World Vision Int.	Programme Management

Name of Participant	Gender	Institution	Area of Support
Tamadani Kambewa	F	NMCP	Programme Management
Esnart Katuya	F	NMCP	Programme Management
Happy Kondowe	M	HHSC-PSM	Integrated Vector Management
Pascal Madhlopa	M	World Vision Int.	Integrated Vector Management
Atupele Mwalwanda	F	NMCP	Integrated Vector Management
Sangwani Zimwanda	M	NMCP	Integrated Vector Management
Shadreck Mulenga	M	NMCP	Integrated Vector Management
Pius Masache	M	USAID-PMI	Integrated Vector Management
Al-jannat Sadala	M	Kasungu DHO	Malaria In Pregrancy
Christabel Komakoma	F	Impact Malaria	Malaria In Pregrancy
Evans Kaunda	M	NMCP	Malaria In Pregrancy
Agness Banda Mapala	F	MZIMBA SOUTH	Malaria In Pregnancy
Shenton Kacheche	M	PHIM-NPLR	Social and Behaviour change for Malaria
Salome Shaba	F	MoH	Social and Behaviour Change for Malaria
Austine Makwakwa	M	MOH-HES	Social and Behaviour change for Malaria
Alick Kafunda	M	Ministry of Education	Social and Behaviour Change for Malaria

Name of Participant	Gender	Institution	Area of Support
Sunday Mchemera	M	ALMA	
Thokozani Chaponda	F	ALMA	Vector Control
Hope Sinyeka	M	Mulanje DHO	
Bosco Chamanga	M	TDH	
Isaac Kampondeni	M	Mulanje DHO	
Emmanuel Francisco	M	Thyolo DHO	
James Katema	M	Zomba DHO	
Nyson Chamdondo	M	Phalombe DHO	
Lovemore Chafuwa	M	Lilongwe DHO	
Kalonga Pelani	M	Phalombe DHO	
Said Ndau	M	Zomba DHO	
Precious Chinyama	M	Chiradzulu DHO	
Eslyon Muza	M	Lilongwe DHO	
Jamico Kamwela	M	Likoma DHO	
Godfrey Siwale	M	Nkhatabay DHO	
Petros Kamanga	M	Mzimba South DHO	

Name of Participant	Gender	Institution	Area of Support
Virginia Kananji	F	Blantyre DHO	
Onyx Mumba	M	Chiradzulu DHO	
Isaac Nyirenda	M	Nkhatabay DHO	
Khumbo Munthali	F	Mzimba South DHO	
Maclear Masambuka	M	Kasungu DHO	
Danvan Kapalamula	M	Dowa DHO	
Samuel Banda	M	Rumphi DHO	
Geofrey Shumba	M	Rumphi DHO	
Bernad Banda	M	CHISU LL	
Moses Chilongo	M	Karonga DHO	
Macmillan Mwamatope	M	Mzimba North DHO	
Gray Mvula	M	Neno DHO	
Edward Mandowa	M	Likoma DHO	
Tinkhani Soko	M	Karonga DHO	
Matola Dauda	M	Chikwawa DHO	
Edward Mabweza	M	Chikwawa DHO	

Name of Participant	Gender	Institution	Area of Support
Chifundo Ngundo	F	Mzimba North DHO	
Jekiyala Kalonga	M	Nsanje DHO	
Dexter Kamnyanya	M	Chitipa DHO	
Peter Chidule	M	Chitipa DHO	
Mabvuto Musaya	M	Machinga DHO	
Moses Ntukaila	M	Balaka DHO	
Blessings Phiri	M	Balaka DHO	
Limbani Makawa	M	Mchinji DHO	
Lameck Mzava	M	Mchinji DHO	
Fortune Chilongo	M	Machinga DHO	
Patricia Sambo	F	Lilongwe DHO	Social and Behaviour change for Malaria
Lamusi Abudu	M	Mangochi DHO	
Ornelius Kunkeyani	M	Mangochi DHO	
Dina Kamowa	F	KuHES	
Precious Msutu	M	Nkhotakota DHO	
Geoffrey Mande	M	Nkhotakota DHO	

Name of Participant	Gender	Institution	Area of Support
Frank Linzie	M	Salima DHO	
Eliza Chaps	F	Salima DHO	
Lawrence Lubeni	M	Dedza DHO	
Mirriam Chigwiya	F	BT DHO	
Rajab Afaki	M	Dedza DHO	
Nicholas Mwamlima	M	Ntcheu DHO	
Phanga Manjawira	M	Ntcheu DHO	
Noel Dickson	M	NMCP	
Harry Mphwatika	M	Mwanza DHO	
Brazilia Mose	M	Neno DHO	
Kelvin Bowa	M	Mwanza DHO	
Grace Phungulume	F	Neno DHO	
Uchindami Balambo	F	NMCP	
Amon Chirwa	M	MOH-RESEARCH LL	
Alinafe Kaning'a	F	LLDHO	
Stella Dawa	F	NMCP	

8.7.3. Participants – MSP Writing and Costing Workshop (Blue Waters Hotel, Salima)

Name of Participant	Gender	Institution	Area of Support
Dr. Michael Kayange	M	NMCP	Programme Management, All
Dr. Sosten Lankhulani	M	NMCP/MoH	Case Management
Amos Maenje	M	MoH-PHIM	Case Management
John Sande	M	NMCP/MoH	Case Management

Name of Participant	Gender	Institution	Area of Support
Dubulao Moyo	M	NMCP-MoH	Case Management
Osman Kitta	M	PSI-Impact Malaria	Strategic Planning (Consultant)
Jacob Kawonga	M	CHISU Project	Monitoring and Evaluation
Collins Kwizombe	M	USAID – LL	Monitoring and Evaluation
Gracious Hamuza	M	NMCP	Monitoring and Evaluation
Godfrey Silungwe	M	NMCP	Monitoring and Evaluation
Austin A. Gumbo	M	NMCP	Monitoring and Evaluation
Elias Mwalabu	M	GHSC-PSM	Procurement and Supply Management
Fikadu Batu	M	GHSC-PSM	Procurement and Supply Management
Norman Lakalaka	M	NMCP	Procurement and Supply Management
Elizabeth Mkandawire	M	NMCP	Procurement and Supply Management
Rabecca Minneman	F	PMI/USAID	Programme Management
Mike Nkhata	M	NMCP	Programme Management
Ben Chavula	M	World Vision Int.	Programme Management
Esnart Katuya	F	NMCP	Programme Management
Akuzike Banda	F	NMCP	Integrated Vector Management
Pascal Madhlopa	M	World Vision Int.	Integrated Vector Management

Name of Participant	Gender	Institution	Area of Support
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Shadreck Mulenga	M	NMCP	Integrated Vector Management
Pius Masache	M	USAID-PMI	Integrated Vector Management
Al-jannat Sadala	M	Kasungu DHO	Malaria In Pregrancy
Christabel Komakoma	F	Impact Malaria	Malaria In Pregrancy
Evans Kaunda	M	NMCP	Malaria In Pregrancy
Agness Banda Mapala	F	MZIMBA SOUTH	Malaria In Pregnancy
Alick Kafunda	M	Ministry of Education	Social and Behaviour Change for Malaria
Danvan Kapalamula	M	Dowa DHO	Social and Behaviour Change for Malaria
Shenton Kacheche	M	PHIM-NPLR	Social and Behaviour change for Malaria
Austine Makwakwa	M	MOH-HES	Social and Behaviour change for Malaria

8.8. NMCP Institutional Framework (NMCP within MoH)