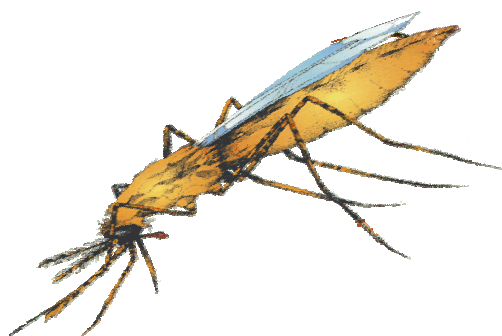




Government of Malawi

Ministry of Health



**MALARIA STRATEGIC PLAN
2011 – 2015
TOWARDS UNIVERSAL ACCESS**

National Malaria Control Programme
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Abbreviations

ADB	African Development Bank
ACT	Artemisinin-based Combination Therapy
AL	Artemether-Lumefantrine
BCC	Behaviour Change Communication
BLM	Banja La Mtsogolo
CCM	Community Case Management
CHAM	Christian Health Association of Malawi
CMED	Central Monitoring and Evaluation Department
CMS	Central Medical Stores
DEC	District Executive Committee
DFID	Department for International Development
DHMT	District Health Management Team
DHO	District Health Officer
DHS	Demographic and Health Survey
DIP	District Implementation Plan
DOT	Directly Observed Therapy/Treatment
DPHS	Director of Preventive Health Services
EHP	Essential Health Package
GDP	Gross Domestic Product
GOM	Government of Malawi
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HC	Health Centre
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HEU	Health Education Unit
HMIS	Health Management Information System
HSA	Health Surveillance Assistant
HTSS	Health Technical Support Services
ICT	Information and Communications Technologies
IDSR	Integrated Disease Surveillance and Response
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illnesses
IFMIS	Integrated Financial Management Information System
IPT	Intermittent Preventive Treatment
IPTp	Intermittent Preventive Treatment for Pregnancy
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Nets

IVM	Integrated Vector Management
LLIN	Long Lasting Insecticide-treated Nets
LMIS	Logistics Management Information System
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal(s)
MGDS	Malawi Growth and Development Strategy
MICS	Multiple Indicator Cluster Surveys
MIP	Malaria in Pregnancy
MIS	Malaria Indicator Survey
MoLG	Ministry of Local Government
MOH	Ministry of Health
MSP	Malaria Strategic Plan
NAC	National Aids Commission
NGO	Non-governmental Organisation
NMCP	National Malaria Control Programme
NORAD	Norwegian Agency for Development Corporation
NSO	National Statistics Office
PAMIS	Physical Assets Management Information System
PMI	U.S. President's Malaria Initiative
PMPB	Pharmacy Medicines and Poisons Board
PoW	Programme of Work
PPP	Public-private Partnerships
PRMIS	Patient Record Management Information System
PSI	Population Services International
PSM	Purchasing and Supply-chain Management
RBM	Roll Back Malaria Partnership
RDT	Rapid Diagnostic Tests/Testing
RHU	Reproductive Health Unit
SADC	Southern African Development Community
SMEOR	Surveillance, Monitoring, Evaluation& Operations Research
SP	Sulfadoxine-Pyrimethamine
SWAp	Sector Wide Approach Programme
SWOT	Strengths, Weaknesses, Opportunities and Threats
TWG	Technical Working Group
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

WVI	World Vision International
VDC	Village Development Committee
VHC	Village Health Committee

Foreword

The Ministry of Health (MoH) is pleased to present the new Malaria Strategic Plan for 2011-2015. Malaria continues to be the number one cause of morbidity and mortality in our country, with an estimated six million cases each year representing about 40% of the burden of illness in our health facilities. It is not selective, and all of us are at risk. However, malaria is a disease that can be prevented and treated effectively. This new Strategic Plan covering the next five years will provide the leadership and evidence-based direction needed to move confidently toward elimination of malaria as a public health threat in Malawi.

The primary goal of this new plan will be the achievement of Universal Coverage in the prevention and treatment of malaria, reducing by half the 2010 levels of malaria morbidity and mortality in Malawi by the year 2015. This means every citizen of Malawi will be reached with all malaria interventions including care and effective cure.

Over the period of the previous Malaria Strategic Plan (MSP) 2005-2010, the National Malaria Control Programme (NMCP) and its partners achieved significant improvements in addressing this dread disease, which has challenged not only the lives of our citizens but also the economic development of Malawi as a nation. As just one example, in the last two years, the government and its partners distributed 3.7 million long lasting insecticide treated nets (LLINs) for prevention. And in the next five years ahead, we will distribute millions more of these bed nets with the goal of having one net for every two people, in line with international best practices. In addition we will introduce the nationwide use of Rapid Diagnostic Tests so that every suspected case of malaria will be properly and promptly diagnosed and treated. In addition, malaria program management, drug procurement, distribution, monitoring and evaluation, and service delivery will be strengthened so that all malaria interventions will be provided in an integrated manner at all levels of the delivery system, including in communities and homes.

We have a particular problem with malaria in Malawi, which is our belief about the nature of this disease. We are very worried about a death from AIDS or TB, but when it comes to malaria, we have become too accepting of its presence in our lives. Our perception of this disease must change to the point that everyone understands that malaria is not inevitable: it can be prevented and controlled if we all know how and when to take action. Accordingly, we will deliver widespread behavior change messages and education campaigns to empower communities to take charge of their own health by increasing use of Insecticide Treated Mosquito Nets (ITNs), speeding up the seeking of treatment at a facility for malarial symptoms, and encouraging a health-supportive and timely response to malaria at the community and household level.

We have been paying a heavy price for malaria in illness, death, malnutrition, and losses of economic and social well-being. I therefore challenge all Malawians - parents, children, leaders, civil servants, health workers, all - to learn about this disease and take up the fight to prevent it and treat it when it occurs. We can defeat this disease only when we all play our parts.

I wish to take this opportunity to thank all the development partners for their financial and technical contribution, staff of the Ministry including district health offices, who have dedicated their undivided time, the technical stewardship of the National Malaria Control Programme to ensure the high quality of this document.

Willie Samute
Principal Secretary
Ministry of Health

Executive Summary

Malaria is a longstanding and debilitating companion in Malawi, a high-burden, hyper-endemic country of 13.1 million people. Recent data indicates that suspected malaria case rates have almost doubled from approximately 3.7 million cases in 2005 to 6.1 million cases in 2009. Malaria is responsible for approximately 34% of all outpatient visits and approximately 40% of all hospitalization of children under five years old.

The Malaria Strategic Plan for 2011-2015 has been developed to build exponentially on the successes achieved and lessons learned during implementation of the two previous NMCP Strategic Plans, 2001-2005 and 2005-2010, including a decrease in case fatality rate from 5.6% in 2004 to 3.4% in 2009 IDSR report . The Plan is a well-considered and scaled-up response to the call for malaria elimination through Universal Access to education, prevention and treatment, formalized among African heads of state under the Abuja Declaration of 2000 that set targets of 80% access to appropriate treatment by all at risk of malaria; 80% access to malaria prevention by pregnant women; and 80 % of children under 5 years and pregnant women sleeping under insecticide-treated nets (ITNs) for all African countries. The Strategic Plan for 2011-2015, will guide clinicians, politicians, funders and citizens alike toward the 80% targets and the achievable goal of Universal Access to malaria interventions, providing malaria service coverage for all Malawians and reducing the disease burden nationwide.

The new Plan was developed through a consultative and participatory process including mainstream technical staff from the National Malaria Control Programme, distinguished members of the National Malaria Advisory Committee, the Ministry of Health and other key stakeholders in the public and private health sectors. In addition, the Malaria Programme Review conducted in 2010 by a team from the World Health Organization identified specific areas of strength for the achievement of the set targets of the National Malaria Control Programme, including policies in all key intervention areas, availability of supply chain systems, strong partnership and resources to scale up distribution of long-life insecticide-treated bed nets even more broadly. Weaknesses identified include limited facilities for confirmed diagnosis, inadequate capacity of data management and analysis at all levels and reliance on donor funding.

The Malawi government working with its bilateral and multilateral partners, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), the President's Malaria Initiative (PMI), the United States Agency for International Development (USAID), the Department for International Development (DFID), as well as the World Health Organization (WHO) and other agencies under the United Nations system, will continue to broaden malarial control interventions while addressing remaining challenges, such as a continued rise in the number of reported suspected malaria cases due to lack of diagnostic equipment and training in health facilities, low coverage of insecticide-treated bed nets per household and low utilization of proven long-lasting insecticide-treated nets, inadequate surveillance mechanisms to assess disease burden, and challenges in supply chain management of anti-malarials as well as basic diagnostics, treatment equipment and supplies.

Significant progress was made under the previous two Strategic Plans. According to the Malawi Malaria Indicator Survey in 2010, the number of households owning at least one ITN increased from 38% in 2006 (MICS) to 58.1% in 2010. The percentage of children under five years old who slept under an ITN grew from 25% in 2006 to 55.4% in 2010, and the percentage of pregnant

women who slept under an ITN improved from 26% in 2006 to 49.4%. Still, the percentage of under-5 children with access to anti-malarials within 24 hours of onset of symptoms has improved but remains unacceptably low at 21.9%.

In preparation for the 2011-2015 Strategic Plan, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis was conducted by the NMCP staff and key stakeholders to assess the current status of NMCP activities in 6 primary intervention areas: Vector Control; Case Management; Malaria in Pregnancy; Social Mobilization and Advocacy; Surveillance, Monitoring, Evaluation & Operations Research; and Programme Management. These led to four strategic objectives for the new Strategic Plan:

Strategic Objective 1: To achieve universal coverage of all interventions by 2015 in order to have 80% utilization rate of the interventions through:

- Strengthening of Integrated Vector Management
- Ensuring Effective and Prompt Diagnosis and Treatment
- Continuing Provision of Malaria in Pregnancy Services

Strategic Objective 2: To strengthen advocacy, communication and social mobilization capacities for malaria control by 2015 in order to increase the use of all malaria interventions through social mobilization and advocacy.

Strategic Objective 3: To strengthen surveillance, monitoring and evaluation systems including operational research for tracking progress in the implementation of malaria control activities by 2015 through:

- Strengthening routine data systems
- Strengthening surveillance and operational research
- Promoting use of information for planning and decision making

Strategic Objective 4: To strengthen capacity in programme management in order to achieve malaria programme objectives at all levels of health service delivery through:

- Strengthening human resource capacity
- Resource mobilization
- Provision of policy direction
- Strengthening coordination
- Strengthening procurement and supply chain management

Active partners to the NMCP in the implementation of this Strategic Plan are Ministry of Health (policy formulation and enforcement, quality control/assurance, and resource mobilization), as well as other line ministries such as Ministry of Education, Ministry of Defence, Ministry of Agriculture, Ministry of Finance, Ministry of Home Affairs and Ministry of Information in the implementation of this strategic plan. The NMCP will also work with the Department of Environmental Affairs, Department of Fisheries, Reproductive Health Unit, Epidemiology Unit, Health Education Unit, city and town assemblies. The NMCP itself will coordinate the consultative planning, implementation,

research, monitoring and evaluation of malaria prevention and control activities, and report implementation progress to the MOH and other partners.

Additional partners include political leaders and other decision makers to advocate for resource mobilization and allocation as well as health worker recruitment; private sector and civil society to provide Long Lasting Mosquito Nets (LLINs), storage, distribution of malaria intervention supplies and input to Technical Working Groups; Village Development Committees and Health Committees to mobilise communities and disseminate key messages; international development partners to provide technical guidance and financial resources, and research institutions to monitor and evaluate Plan implementation and carry out research priorities.

The Malaria Monitoring and Evaluation Plan will be developed in early 2011 to support the implementation of this plan. The main sources of data for monitoring the implementation of the strategic plan will be national routine sources (IDSR and HMIS), programme specific data sources and population based surveys. The midterm review of the strategic plan will be done during the third year (in 2013) of implementation of this plan. During the strategic plan period two malaria indicator surveys will be conducted one in 2012 and another one in 2014. The results of these surveys will input in the midterm and final evaluations of the strategic plan. The monitoring of the strategic plan will take advantage of other surveys such as MICS and DHS and operational research findings. The final evaluation of the strategic plan will be conducted in 2015.

1 Introduction

The purpose of the Malaria Strategic Plan 2011-2015 (MSP 2011-2015) is to establish a vision, goals, objectives and targets for the National Malaria Control Programme and to select the most effective strategies, interventions, and actions that are likely to achieve success within the next five years. This strategic plan will build on the successes achieved and lessons learned during implementation of the two previous NMCP Strategic Plans, 2001-2005 and 2005-2010, and ensure that the Ministry of Health through the NMCP is in a position to:

- Deliver ongoing guidance to national, regional and community malaria control efforts by providing an achievable set of national targets, goals and objectives;
- Provide an organizational framework through which interventions and services can be provided with greater efficiency and impact;
- Develop a set of policies, guidelines and procedures to support implementation of interventions;
- Identify the evidence-based interventions and strategies to be utilised to greatest effect;
- Assure adequate leadership, technical expertise and human resources to support the programme;
- Support coordination among multiple levels of the system, donors and partners;
- Mobilize sufficient resources and provide adequate infrastructure, drugs, supplies and equipment;
- Provide guidance for monitoring, evaluation and operational research to measure results and guide ongoing programme decision making.

Global and regional political commitment to preventing and controlling malaria has steadily increased in the past decade. The African Union Heads of State jointly manifested this commitment in 2000 under the Abuja Declaration, calling for “Universal Access” to HIV/AIDS, Tuberculosis and Malaria Services by 2010 for all Africans. These leaders were joined by the United Nations Secretary General’s call for 100% coverage of malaria control interventions and the elimination of malaria as a threat to public health.

Because of these regional initiatives, the Malawi government will move from targeting of malaria control interventions to Universal Access under which all people at risk of malaria should have equitable access to malaria prevention, care and treatment.

The Malawi government and its bilateral and multilateral partners, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), the President’s Malaria Initiative (PMI), the United States Agency for International Development (USAID), the Department for International Development (DFID), as well as the World Health Organization (WHO) and other agencies under the United Nations system have increased provision of financial and technical resources for malarial control interventions in the country in response to the continuing high burden. This has resulted in broadened malaria intervention coverage within a short period of time as evidenced by the results of the Malaria Indicator Survey conducted by the NMCP in

2010. However there are some challenges, such as a continued rise in the number of reported suspected malaria cases due to lack of diagnostic equipment and training in health facilities, low coverage of insecticide-treated bed nets per household and low utilization of proven long-lasting insecticide-treated nets, inadequate surveillance mechanisms to assess disease burden, and challenges in supply chain management of anti-malarials as well as basic diagnostics, treatment equipment and supplies.

The process of developing the MSP 2011-2015 was consultative and participatory, involving mainstream technical staff, the National Malaria Advisory Committee, the MOH and other key stakeholders in the public and private health sectors. The first phase of the process started with internal consultations at the NMCP and resulted in the development of the road map for more in-depth consultations with stakeholders to seek their input and feedback. The second phase involved establishment of the National Malaria Advisory Committee to oversee the process of development of the MSP. This was followed by a series of stakeholders' workshops for consensus building and retreats by the writing team comprised of technical experts from the Ministry, external consultants and other partners. The final document was reviewed and endorsed by the National Malaria Advisory Committee before submission for approval by the Ministry of Health.

2 Country Profile

2.1 Geography and Demography

Malawi is a landlocked country with a land area of approximately 119,310 square kilometers of which 24,410 square kilometers is covered by Lake Malawi, Lake Malombe and Lake Chilwa. From North to South, the country is 901 kilometers long and varies in width from 80 to 160 kilometers. The country is bounded to the East and South-West by Mozambique, to the North-West by Zambia and to the North by Tanzania.

Physically, Malawi is part of the Great Rift Valley of East and Central Africa; the whole country from North to South is traversed by a deep trough between two parallel faults or cracks in the Earth's crust, most of which is filled by Lake Malawi. West and southwest of the Lake, Malawi stretches on a plateau that stands between 914 and 1,220 meters above sea level. Both cities of Lilongwe and Blantyre stand at about 1,067 meters above sea level. The Nyika Plateau in the North rises to over 1066 meters. The Shire Highlands in the South have an elevation of about 232 meters, rising to the dramatic mountain masses of Mulanje (3,048 metres) and Zomba (2,133 metres).

Malawi experiences a primarily tropical climate with three distinct seasons per year: cool-cold and dry (May to mid- August); hot (mid-August to November); and rainy (November to April). The variable altitude of the country provides a wide difference in climate. The Lakeshore areas have longer hot seasons with higher humidity levels. Temperatures are at their hottest in the lower altitudes of the Shire Valley, and the rains are more prolonged in the North. As a rule, temperature levels are lower and rainfall levels higher with rising altitude.

According to the 2008 Malawi Population and Housing Census, Malawi's population is estimated at 13.1 million with a 2.8% growth rate per annum¹. The majority of the population (85%) lives in the rural areas with an average family size of about 4.6 people per household. The 2008 census also shows that Malawi has a young population as almost half of the population is under 15 years old (46%), and 50% is in the 15–64 age group. There are slightly fewer males than females: 98 for every 100, respectively. The total adult literacy rate in the country is 64%.

2.2 Economic Context

The GDP per capita for Malawi is \$761, and 65% of the population lives on less than a dollar a day². Malawi's economy is based on agriculture, representing 38.6% of the GDP, about 80% of all exports, and accounting for over 80% of the labour force. Nearly 90% of the population engages in subsistence farming.

The 2004 Integrated Household Survey estimated a national poverty rate of 54%; rural poverty is estimated at 55%, and urban poverty is at 25.5% (National Statistics Office 2004). The poor are characterised by the lack of productive means available to them to fulfill basic needs such as food, water, shelter, education and health. The urban literacy level is much higher at about 86% compared to 61% for rural citizens.

2.3 Health Indicators

Life expectancy at birth in Malawi is estimated at 43.4 years for females and 42.6 years for males. The under-5 mortality rate has decreased from 258 per 1000 live births in the 1980s to 118 in 2006⁴. The infant mortality rate declined from 138 per 1,000 live births in late 1980s to 69 in 2006, and child mortality is estimated at 103/1,000 live births⁴. The maternal mortality ratio dropped from 1,120 per 100,000 live births in 2000 to 807 per 100,000 live births in 2006. According to the National Aids Commission (NAC), HIV/AIDS adult prevalence rate was 12% in 2009 and has reportedly stabilized.

There has been almost no improvement in the proportion of births with medical assistance, from 55% in 1992 to 56% in 2000 and 57% in 2004. Malnutrition remains alarmingly high among children. It is reported that the country's 48% stunting rate in 2004 was one of the worst in Africa and has not improved within a decade. Due to the prevailing malnutrition, the rate of maternal anaemia was as high as 68% in 2004 while the 2010 MIS indicates that the rate of anaemia in under-5 children is as high as 69.7%⁵.

Table 2.1 Health indicators

Indicator	Value
Crude child mortality rate	103/1000 live births
Infant mortality rate	69/1000 live births
Under five mortality rate	118/1000 live births
Maternal mortality rate	807/100 000 live births
Life expectancy at birth	Male – 40 years; Female - 44 years
Under 5 anaemia	69.7%
Under 5 severe anaemia	12.3%

Sources: DHS 2004, MICS 2006, HDR 2009 and MIS 2010

3 National Health System and Policy Environment

3.1 Current National Policies for Malaria

The following policy guidelines were developed within epidemiological and policy context of Malawi and are aligned to WHO, Roll Back Malaria Partnership (RBM) and regional policies and guidelines that include:

- Government of Malawi Malaria Policy (revised 2009)
- Guidelines for Health Surveillance Assistants for Delivery of Sulfadoxine Pyrimethamine for Intermittent Preventive Treatment (2006)
- Guidelines for the Management of Insecticide Treated Nets (ITNs) Program (2007)
- National Malaria Monitoring and Evaluation Plan 2007-2011 (2007)
- Trainers Manual on Case Management (2007)
- National Malaria Treatment Guidelines (2007)
- Malawi Health Policy (under review)
- National Malaria Communication Strategy (2009)
- Guidelines for Indoor Residual Spraying (2008)

Guidelines under development include those on pharmacovigilance, malaria Rapid Diagnostic Testing, and the Indoor Residual Spraying training manual. The NMCP is planning to revise malaria case management guidelines to include:

- Protocols for second-line ant-malarial medicine (Artesunate-Amodiaquine);
- Strengthening malaria diagnosis through the deployment of Rapid Diagnostic Tests (RDTs);
- Operationalization of Artemisinin-based Combination Therapy (ACT) at community level;
- Innovative methods to deliver subsidized ACT through the private sector.

3.2 Country Health System Structure

The Malawi's health system comprises the public sector, the non-profit private sector, such as the Christian Health Association of Malawi (CHAM), and private for-profit sectors. The major providers of health services include the Ministry of Health, who is responsible for 63% of all health facilities, CHAM with 26% of total health facilities, and the Ministry of Local Government (MoLG) responsible for 5% of health facilities. Others that account for 6% of the total facilities are nongovernmental organizations (NGO) including *Banja La Mtsogolo* (BLM): a not-for-profit NGO that specializes in the delivery of sexual and reproductive health services. Table 3.1 provides a breakdown of facilities by ownership.

Table 3.1 Health Facilities by Sector

Type of facility	BLM	CHAM	MoLG	MOH	NGO	TOTAL
Central hospital	0	0	0	4	0	4
District hospital	0	0	0	22	0	22
Mental hospital	0	1	0	1	0	2
Rural hospital	0	27	0	19	0	46
Health centre	1	115	12	288	0	416
Clinic	27	8	4	2	1	42
Maternity centre	3	1	12	2	0	18
Dispensary	0	8	4	42	0	54
Total	31	160	32	380	1	604

The health system still faces the challenges of human resources in terms of numbers as well distribution, especially at community level as shown by Table 3.2 below.

Table 3.2 Health worker population ratios at national level and distribution

Occupational categories /Cadres	2008		Distribution %	
	National	HW/1000 population	Urban	Rural
Generalist medical practitioners	190	0.01	77%	23%
Nursing professionals	2,928	0.2	71%	29%
Nursing associate professionals	968	0.07	60%	40%
Pharmaceutical technicians and assistants	293	0.02	58%	42%
Medical and pathology laboratory technicians	473	0.03	63%	37%
Health Surveillance Assistants (HSAs)	10,055	0.77	21%	79%

Source: Health Worker Census 2008

3.3 National Policy Environment for Development of the New Strategic Plan

In 2005, the NMCP developed and launched the 2005-2010 Malaria Strategic Plan (MSP), in the backdrop of the Malawi Growth and Development Strategy, the overarching strategy for Malawi for the period 2006 to 2011. The MGDS has articulated the United Nations Millennium Development Goals and it is the national framework to promote economic growth, and is also a means to reduce poverty and Government's dependency on aid. Locally, the UN support to the MGDS is organized through multi-agency clusters based on the United Nations Development Assistance Framework (UNDAF) which focuses on integrated delivery of the Essential Health Package (UNDAF 2008-2011).

The MSP 2005-2010 set out specific outcomes for the NMCP to achieve by 2010 in terms of "scaling up" malaria control activities in the context of the Essential Health Package and the health-SWAp Programme of Work (2004-2010). It has also provided the overall contribution committed to by the Ministry of Health towards achieving the MDG priorities for the health sector, i.e. to increase life expectancy, decrease maternal mortality rates and decrease child morbidity and mortality rates including deaths due to diarrhea, especially in children under the age of 5.

The development of the third Strategic Plan has come at an opportune time as the MoH is also developing Sector-wide Approach (SWAp) II programme of work and the Malawi Government is reviewing the Malawi Growth and Development Strategy (MGDS). The activities of NMCP are implemented within the framework of the current national SWAp policy and strategy of public service delivery, including provision of the Essential Health Package (EHP) and supporting the six pillars of the Joint Programme of Work: (1) building and strengthening partnership among all stakeholders, (2) promoting ownership of malaria activities at all levels of health care delivery, (3) contributing to health sector reforms, (4) strengthening the Health Information System and research, (5) integrating malaria control activities into primary health care and other social economic development programs, and (6) increasing coverage of cost-effective interventions and strengthening community participation in the management of uncomplicated malaria.

The MGDS has articulated the United Nations Millennium Development Goals (MDGs) and provides the national framework to promote economic growth and reduce poverty and the Government's dependency on aid. Therefore the third generation of MSP will take advantage of these national developmental plans to promote the agenda of reducing malaria transmission and burden forward and achieve the stated goals by 2015.

4 Overview of Malaria Control Programme Implementation

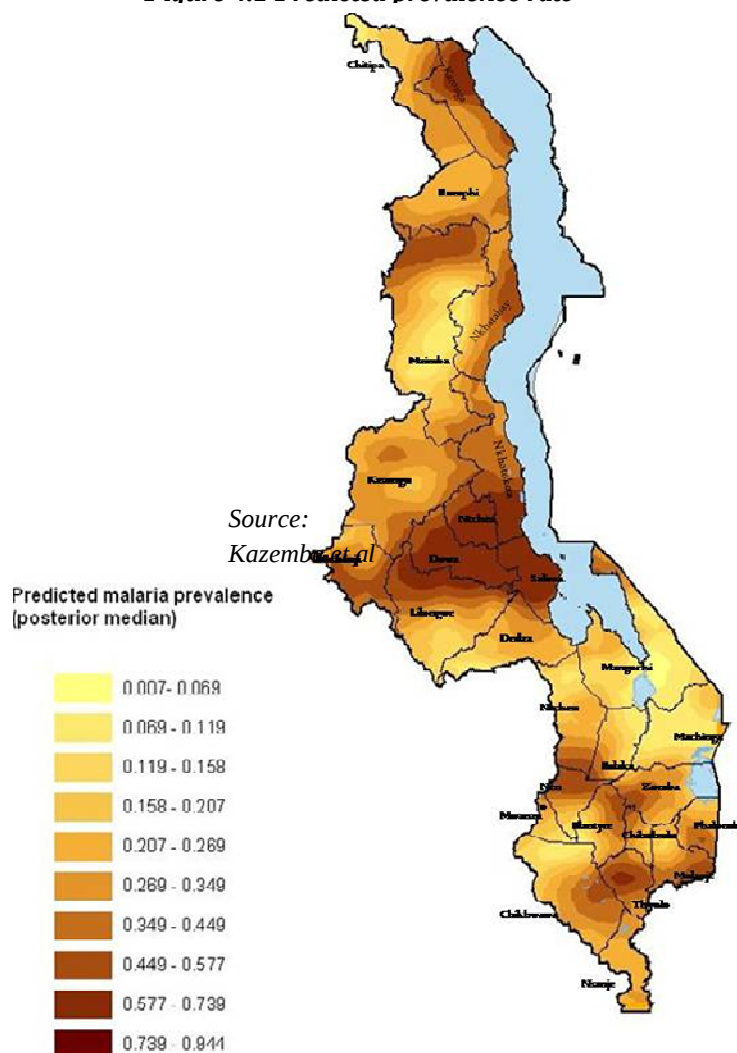
4.1 Malaria Epidemiology

Malaria is hyper-endemic in Malawi, and transmission occurs throughout the year in most places, except in the mountainous areas in the North and South. Transmission is greatest during the rainy season and in the low-lying areas. Due to great variations in rainfall and population movement, a substantial portion of the population is at risk of malaria epidemic and pregnant

women and children aged 3 months to 5 years are at the greatest risk due to compromised immunity. (See Figure 4.1 for national predicted prevalence rates by geographic area).

Ninety-eight percent of malaria infections are caused by *Plasmodium falciparum*, with *Anopheles funestus*, *A. gambiae*, and *A. arabiensis*, the primary mosquito vectors in Malawi. Malaria transmission occurs throughout the year in most places in the country; however, there is variation in intensity of transmission from low, medium and high based on season and topography. Transmission is highest during the rainy season and along the low-lying areas. Transmission is higher in areas with high temperatures and during Malawi's rainy season (October through April), particularly along the lakeshore and lowland areas of the lower Shire Valley.

Figure 4.1 Predicted prevalence rate



According to the 2010 Health Management Information System (HMIS) report, malaria accounts for about 34% of all outpatient visits and is estimated to be responsible for about 40% of all hospitalization of children under five years old and 40% of all hospital deaths. The number of suspected malaria cases has almost doubled from a value of about 3.7 million cases in 2005 to about 6.1 million cases in 2009 as shown in Table 4.1 below. In all the years children less than five years constitute about 50% of the total suspected malaria cases. Some of the possible reasons for an increased number of reported cases despite scaled up of interventions are increased reporting rate, increased uptake of health services and the fact that ACTs can only be accessed at health facilities. The 2009 HMIS report indicates that between 380,000 – 700,000 malaria outpatient cases were being reported monthly by the health facilities throughout the country. This resulted in about 6.1 million episodes of malaria reported in the outpatient departments in 2009.

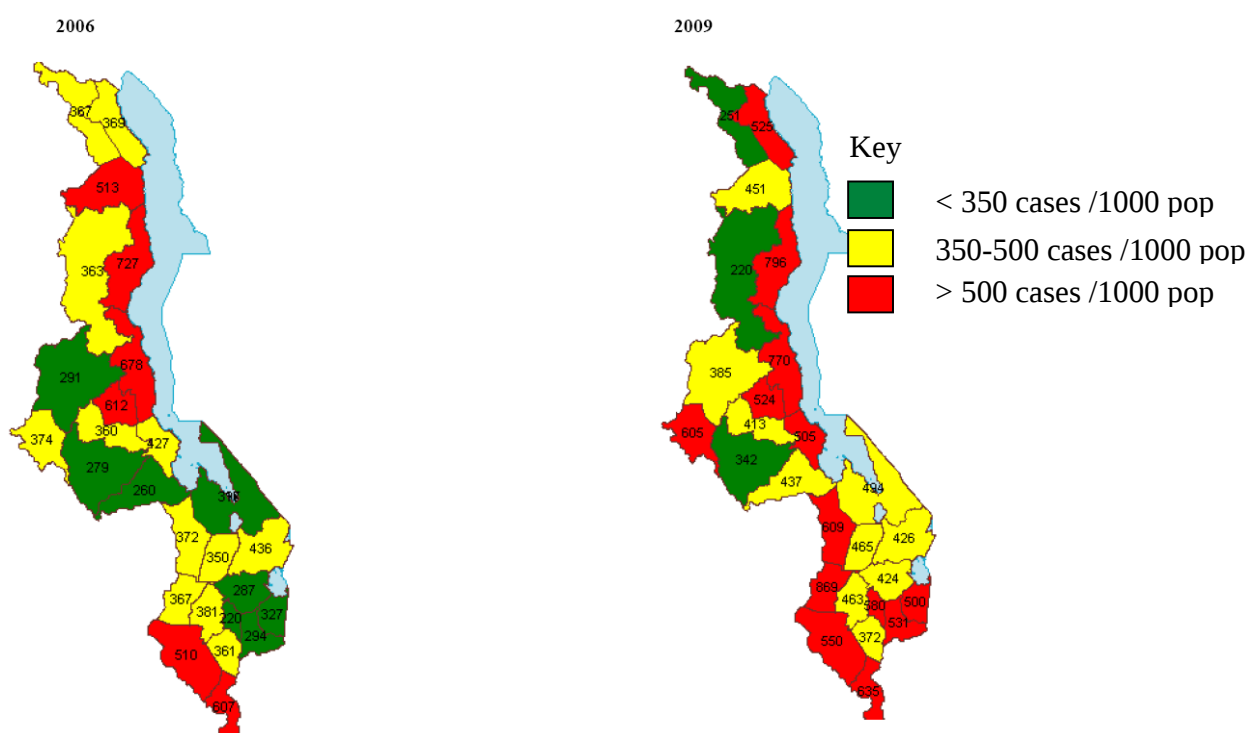
Table 4.1: New Malaria Cases 2005- 2009

Year	Total population	New Malaria Cases (OPD)			Malaria incidence per 1000 population
		< 5 years	≥ 5 years	All ages	
2005	12,400,000	1,686,040	1,977,451	3,663,491	295
2006	12,730,000	2,162,316	2,339,219	4,501,535	354
2007	13,187,632	2,282,360	2,505,346	4,787,706	363
2008	13,077,160	2,576,931	2,608,151	5,185,082	396
2009	13,448,495	3,027,629	3,133,792	6,161,421	458

Source: HMIS

Figure 4.2 below shows that there is an increase in malaria incidence in Karonga, Salima, Chiradzulu, Mchinji and Mulanje districts. A decrease in malaria incidence has been noted in Rumphi districts while districts of Nkhata bay, Nkhatakota, Mwanza, Neno, Nsanje and Chikwawa have maintained an incidence of above 500 cases per 1,000 population. The districts of Chitipa, Lilongwe and Mzimba districts have maintained an incidence of below 350 per 1000 population per annum.

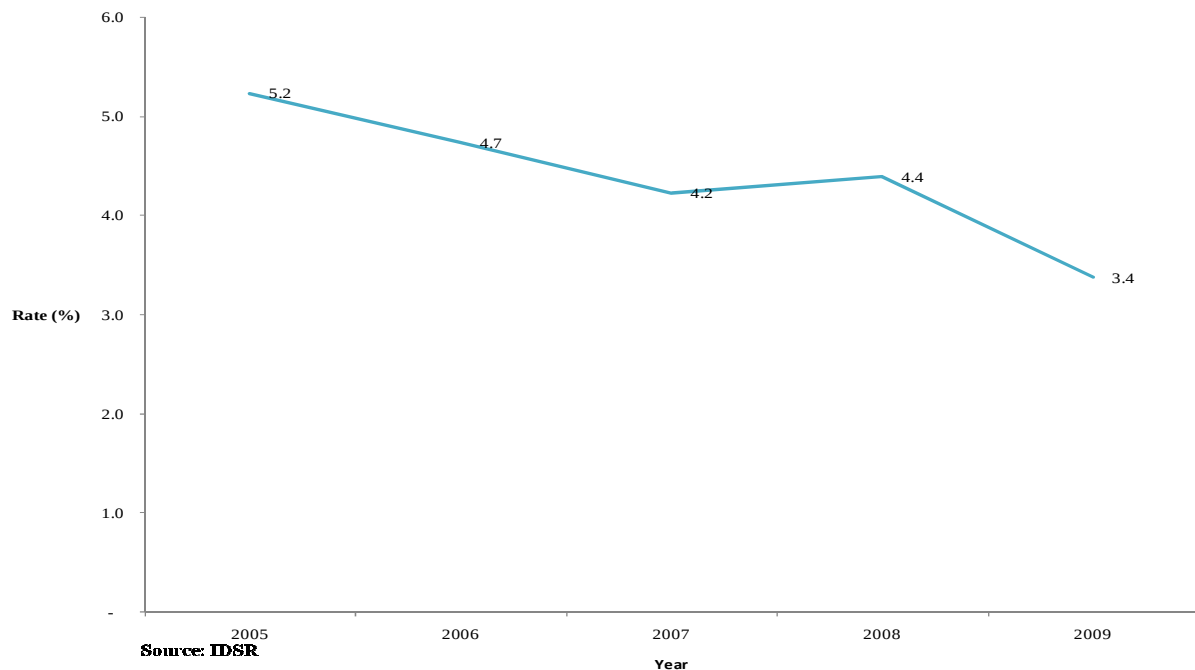
Figure 4.2 Malaria incidence rates



Source: HMIS

Despite an increase in the number of suspected malaria cases, data show that malaria case fatality rate has been decreasing over the years (See Chart 4.1 below). There has a decrease in case fatality rate from 5.6% in 2004 to 3.4% in 2009. There was a slight increase in case fatality in 2008, possibly due to the 2007 change in treatment policy. However, it is observed that there is a tremendous decrease in malaria deaths both under five and above five years old despite an increase in malaria new cases in all age groups in 2008.

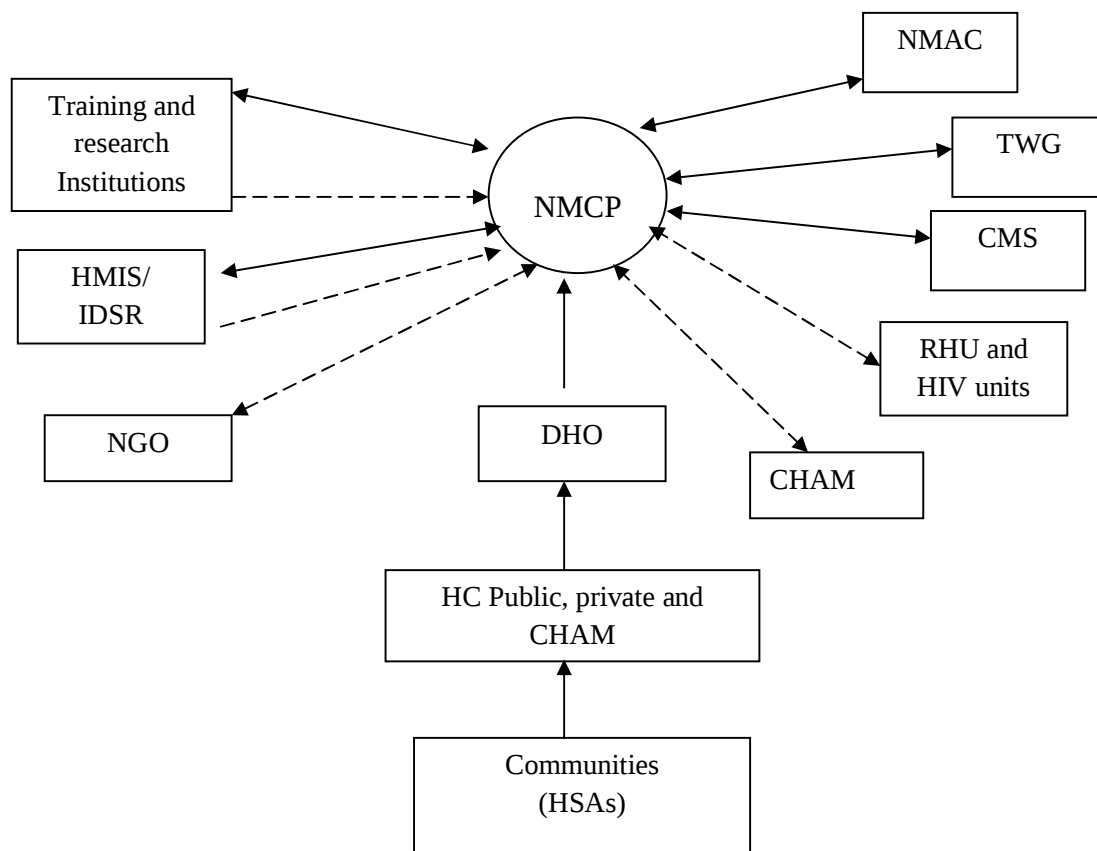
Chart 4.1: Malaria case fatality rates by year



4.2 Organization of the NMCP

The charts below highlight the linkage between National malaria Control Programme within the Ministry of Health as well as the coordination structure.

Chart 4.2 NMCP Coordination structure

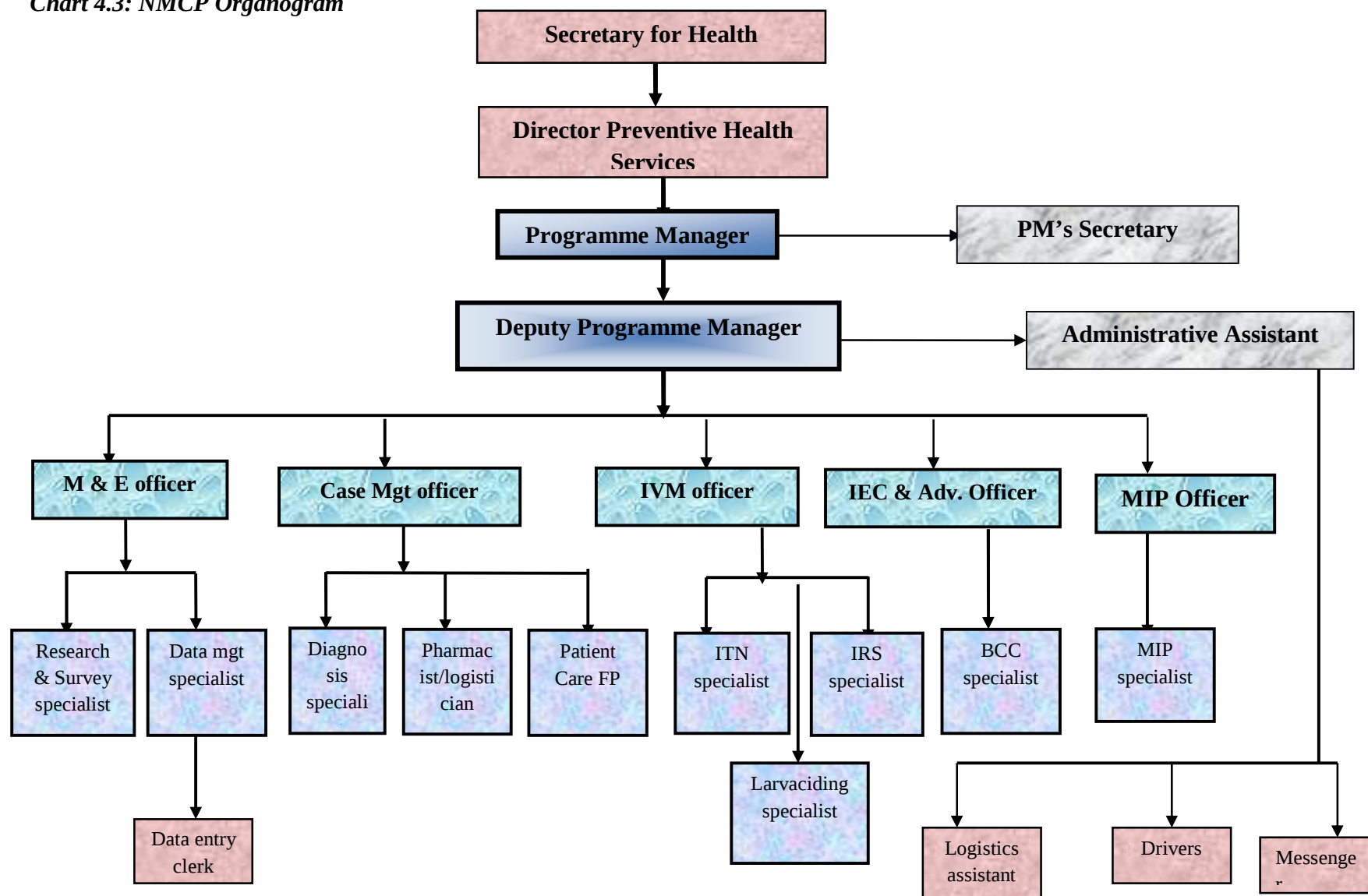


KEY

NMCP National malaria Control Programme
DHO District Health Office
HSAs Health Surveillance Assistants
NGO Non Governmental Organization
CMS Central Medical Stores
TWG Technical Working Group
NMAC National Malaria Advisory Committee

RH Reproductive Health Unit
HIV HIV Unit
CHAM Christian Health Association of Malawi
----Liaison / Consultative reporting
_____ Direct Reporting

Chart 4.3: NMCP Organogram



4.3 Achievements and Progress in Implementing Previous NMCP Strategic Plans

The first generation of the Malaria Strategic Plan 2000-2005 aimed to increase the coverage of key malaria interventions for children under five and pregnant women while the second generation MSP (2005-2010) focused on scaling up interventions in order to ensure impact on malaria cases and deaths with the goal of halving malaria morbidity and mortality by the year 2010 with further reduction of morbidity and mortality figures of 2001 by 75% by 2015.

The Targets of the 2005-2010 Plan included the overall target contained in the Abuja Declaration and Roll Back Malaria, to which Malawi has committed itself: *To halve malaria mortality and morbidity by the year 2010 with further reduction of morbidity and mortality figures of 2001 by 75% by 2015* through accomplishing:

- 80% access to appropriate treatment by all at risk of malaria;
- 80% access to malaria prevention by pregnant women;
- 80% of children under 5 years and pregnant women sleeping under ITNs.

Despite not meeting the targets from the previous MSP, there were significant increases in programme indicator results, as presented in Table 4.2 below.

Table 4.2: Malaria Programme Indicator Results 2000-2010

<i>Thematic area</i>	<i>Indicator</i>	<i>2000 (DHS)</i>	<i>2004 (DHS)</i>	<i>2006 (MICS)</i>	<i>2010 (MIS)</i>	<i>Comments</i>
Vector Control	% households owning at least one ITN/LLIN.	13.1%	27.4%	37.8%	58.1%	The increases in indicator results can be attributed to the following activities from the previous MSP: • Intensive distribution of ITNs/LLINs • Collaboration among various stakeholders • Intensive IEC campaigns • Distribution of free targeted nets
	% under-5 children who slept under an ITN last night.	7.6%	14.8%	24.7%	55.4%	
	% pregnant women who slept under an ITN last night	7.6%	14.7%	25.0%	49.4%	
Malaria in Pregnancy	% of pregnant women who received at least 2 doses of IPTp.	29.3%	42.9%	47.0%	60.3%	The increases in indicator results can be attributed to the following activities from the MSP 2005-2010: • Direct Observation of Treatment (DOT) for IPTp patients • Provision of DOT equipment
Case Management	% of under-5 children with access to anti-malarials within 24 hours of onset of symptoms.	9.7%	22.7%	21.0%	21.9%	There is an increasing need for BCC activities in communities to improve care-seeking practices for malaria.

Some of the programme activities that were undertaken during MSP 2005-2010 which contributed to the achievement of the above results included:

- New National Malaria Policy Developed in 2009;
- Indoor Residual Spraying (IRS) introduced and IRS Guidelines developed as an intervention for vector control in the country and is being expanded from one to seven districts;
- Malaria treatment policy changed from Sulfadoxine-pyrimethamine (SP) to ACTs in 2007;
- National policy on Free Bed nets developed; new strategy and distributor now in place;
- Malaria in Pregnancy Guidelines developed;
- IEC/BCC Strategy and Policy developed;
- New M&E Plan Developed and M&E Working Group established;
- Strengthened and expanded staff at the NMCP: According to the National Control Programme administrative records; number of NMCP staff has increased from 3 in 2005 to 13 in 2010.

4.4 Critical Gaps, Challenges and Threats

The recent Malaria Programme Review identified strengths, weakness, threats, as well as opportunities, for the achievement of the set targets of the National Malaria Control Programme. The strengths included presence of policies in all key intervention areas; availability of supply chain systems, strong partnership and resources to scale up LLINs. Some of weaknesses include limited facilities for confirmed diagnosis, in adequate capacity of data management and analysis at all levels and reliance on donor funding. Opportunities identified were resources for scaling up diagnosis and partnership in strengthening monitoring and evaluation. Additional strengths, weaknesses, threats as well as opportunities for programming areas are listed in SWOT tables below.

In addition, among the many malaria lessons that have been learned from the previous MSPs is the need to recognize and ensure that malaria reduction issues are integrated into development priorities and are adequately addressed by implementable and fundable national strategies that are linked to the MGDS/MDGs. Listed below are some of the issues that have been identified both at national and community levels:

- Malaria is attributed to increased morbidity and mortality in under five children and is the most cause of hospital outpatient visits, and hospitalization and deaths among under five children;
- Increasing need for capacity development based on comprehensive training needs assessment (TNA) for health workers is required at district/grassroots level, especially in new malaria treatment regimes (ACTs);
- Greater and increased awareness of malaria has been achieved at community level;
- Occurrence of diversion and misuse of ITNs in the communities not adequately addressed;
- Absence of an exit strategy for free distribution of ITNs;
- Growing concerns about weak quality control systems for laboratory and inadequate financial resources for malaria in pregnancy (MIP);
- NMCP missing key targets and deadlines for most of the MSP 2005-2010 programme outputs and outcomes;

- Inadequate collaboration between District Health Education Officers and District Malaria Coordinators, and limited integration of malaria programme service delivery at district level;
- Focusing on particular individual malaria goals or targets has the potential to seriously undermine the achievement of other goals in the programme/sector;
- Access to treatment within 24 hours of onset of symptoms of malaria for under five children;
- Inadequate and poor quality data and data analysis undermines the available information base on malaria incidence and disease burden at the community level.

In preparation for the 2011-2015 Strategic Plan, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis was conducted by the NMCP staff and key stakeholders to assess the current status of NMCP activities in 6 primary intervention areas:

- Vector Control
- Case Management
- Malaria in Pregnancy
- Social Mobilization and Advocacy
- Monitoring & Evaluation
- Programme Management

The results of this analysis are below in Tables 4.3-4.8.

Table 4.3: SWOT Analysis - Vector Control

STRENGTHS	WEAKNESS
• Evidence of many partners especially in implementation of LLINs • Availability of guidelines and policies for key interventions • Extensive experience in distribution of nets • Regular annual review and planning meetings • Significant increase in LLIN coverage and use • Availability of vector control technical working group	• Inadequate information on vector behaviour and/or distribution • Inadequate number of entomologists in NMCP and sub-national level • Inadequate resources to carry out IRS i.e. vehicles, few partners involved, human resource) • Little involvement of communities in Integrated Vector Management programs • Interrupted supply of nets leading to stock outs • Lack of experience in other IVM activities such as larvaciding and biological control at all levels
OPPORTUNITIES	THREATS
• Availability of local capacity to produce LLINs within the country • High demand for LLINs • Availability of partners in implementation of IVM	• Evidence of insecticide resistance to pyrethroids in some parts of Malawi • High reported incidences of net misuse • Lack of consensus on use of DDT for IRS

Table 4.4: SWOT Analysis - Case Management

STRENGTHS	WEAKNESS
• Policies for management of malaria are in place • Availability of up-to-date treatment guidelines • Availability of strong partnership among the stakeholders through the case management subcommittee • The presence of comprehensive future plans for rolling out diagnosis • Strong collaboration with other programmes such as with IMCI & ARI	• Only 25% of health facilities have capacity to conduct malaria microscopy • Over reliance on presumptive treatment resulting in over prescription and irrational use of drugs • Lack of diagnostic equipments in health centres • Inadequate human resource capacity for malaria microscopy such as microscopists, laboratory assistants, laboratory technicians • Limited capacity at reference laboratory • Inadequate infrastructure such as laboratory space as well as microscopes • Lack of good system for maintenance and repair of microscopes and hemocues • Non availability of ACTs beyond health facilities • Mismatch between consumption and supply data • Unavailability of ACTs in private sectors • Poor adherence to treatment guidelines among health workers (quinine overuse against resistance; use of monotherapies)
OPPORTUNITIES	THREATS
• Availability of RDTs to support diagnosis • Existence of national policy and strategic plan for laboratory services • Existence of village clinics that will facilitate expansion of community case management • Ongoing pilot of community case management will help inform better case management practices • Tracking of commodities such as drugs and RDTs through the supply chain system that is being developed	• Policies colliding (over the counter treatment against requirement for confirmed case management) • Case management practice by private sector • Uncertainty of the PSM system on the distribution of malaria commodities

Table 4.5: SWOT Analysis - Malaria in Pregnancy

STRENGTHS	WEAKNESS
• Expansion of DOT for IPTp through provision of equipment such buckets, trays & cups • No stock out of SP for IPTp • Incorporation of Focused Antenatal Care module into pre-service curriculum in	• Inadequate number of health workers trained on malaria in pregnancy • Lack of indicators for routine monitoring of malaria in pregnancy • Low uptake of 2nd dose of SP, nationally at 60% despite higher ANC attendance

- training institutions - Availability of Malaria In Pregnancy technical working group	Low utilisation of LLINs amongst pregnant women, nationally at 49% despite targeted distribution
OPPORTUNITIES	THREATS
- There is strong commitment from partners - The research currently being conducted to determine effectiveness of SP for IPTp is an opportunity as it will promote evidence based management. - Presence of District Malaria and Safe motherhood Coordinators who could collaborate their functions.	- Over reliance on donors for MIP - Late attendance for antenatal care - Mixed messages about the use of SP for IPTp against efficacy of SP for treatment of malaria

Table 4.6: SWOT Analysis – IEC, BCC and Advocacy

STRENGTHS	WEAKNESS
- Availability of Malaria Communication Strategy - Availability of IEC and Advocacy working group that comprises of different partners has contributed to expansion of BCC/IEC activities to the districts. - Availability of Health Education Officers in each district - Trained health personnel on malaria issues such as Development of messages, production and dissemination of IEC materials in all thematic areas i.e. posters radio/TV messages, brochures, t-shirts. - Availability IEC/BCC technical working group.	- Irregular IEC/BCC reviews and planning meetings - Limited funds for production of IEC materials - Lack of indicators in routine systems to monitor BCC interventions - Limited research on BCC/KAP. - BCC programming has been stressing on creating awareness but not on behavior change.
OPPORTUNITIES	THREATS
- Existence of a health education unit mandated to develop IEC materials and provide technical support - Mushrooming of media outlets i.e. radios (community radio stations) for dissemination of the IEC/BCC messages - Commemoration of Malaria Days and SADC Malaria weeks	- Partners may pull out due to limited funding in their respective organization - Poor community perception of malaria as they take malaria as part of life resulting in community not taking responsibility to seek treatment on time

Table 4.7: SWOT Analysis – Surveillance, Monitoring, Evaluation& Operations Research (SMEOR)

STRENGTHS	WEAKNESS
• Availability of donor funding. • Commitment by all stakeholders to support malaria programs in Malawi • Availability of several sources of information malaria such as HMIS, IDSR, HIS, (PPPMIS), IFMIS, LMIS, PAMIS and PRMIS	• Inadequate capacity for data management and analysis at all levels especially at district and health facilities • Non availability of robust monitoring and surveillance system • Inadequate human resource for surveillance, monitoring, evaluation at all levels • Lack of equipment for data collection • Non standardized tools for monitoring • Poor record keeping and report writing-from zones, Districts and Regional offices to the Ministry of Health Head Offices • Lack of timeliness and completeness of reporting • Few malaria data elements collected from routine monitoring systems • Lack of culture to collect and utilize appropriately available data at all levels
OPPORTUNITIES	THREATS
• Availability of the WHO database which can be adopted by the program • Availability of technical support from the M & E working group • Availability of M&E officers within the NMCP seconded by other partners as well deployed from government • Research institutions interest in malaria related studies	• Inadequate sharing of information for timely decision makers at all levels

Table 4.8: SWOT Analysis - Programme Management

STRENGTHS	WEAKNESS
• Availability of active leadership at NMCP • Availability of malaria policy and guidelines for key interventions • Increasing number of staff at NMCP • Development of malaria strategies • Strong partnerships among malaria partners	• Irregular quarterly review meetings involving the DMCs • Lack of systematic approach for new staff inductions and irregular supervision by the NMCP to enhance their performance • Inconsistent inclusion of malaria control activities in the DIPs • Lack of career paths for staff at NMCP • Lack of focal person in some thematic areas such as IEC and Advocacy • Lack of authorized positions at all levels of malaria control programme • Weak procurement supply-chain management (PSM),

	including logistics management information system (LMIS) • Limited storage capacity for malaria commodities
OPPORTUNITIES	THREATS
• Availability of strong political will • Presence of commitment by government and donors to support malaria program activities. • Increasing funding from government	• High donor dependency • Critical shortage of staff at all levels of health care service delivery • Lengthy government procurement procedures resulting into delays in procurement of commodities • Pilferage of malaria commodities such as drugs and nets

5 Strategic Framework

5.1 Vision

All people in Malawi are free from the burden of malaria.

5.2 Mission

To reduce the malaria burden to a level of no public health significance in Malawi

5.3 Strategic Goal

The goal of this strategic plan is to achieve universal access of all malaria control interventions in Malawi by 2015. This will be achieved through improved diagnosis to strengthen malaria case management, integrated vector management, efficient supply chain management, BCC and advocacy, robust monitoring and surveillance system and programme management.

5.4 Guiding Principles

The implementation of the Malaria Strategic Plan 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 programmes.
- **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 maximise health gains.
- **Accountability:** All stakeholders will take full responsibility for the decisions made and actions taken in the course of 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 Multisectoral Collaboration:** Public-Private Partnership (PPP) and multisectoral collaboration will be encouraged and strengthened in malaria control and prevention.
- **Decentralisation:** 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 Technology:** All health care providers will use health care technologies that are appropriate, relevant and cost effective

5.5 Strategic Objectives

The **objectives** of the Malaria Strategic Plan 2011-2015 are:

- To achieve universal coverage of all interventions by 2015 in order to have 80% utilization rate of the interventions;
- To strengthen advocacy, communication and social mobilization capacities for malaria control by 2015 in order to improve use and adherence;
- To strengthen surveillance, monitoring and evaluation systems including operational research for tracking progress in the implementation of malaria control activities by 2015;
- To strengthen capacity in programme management in order to achieve malaria programme objectives at all levels of health service delivery.

The specific targets to address these goals and targets under this Plan are included in Box 6.1 below.

Box 6.1 Key Malaria Control Goals and Targets

Global Malaria and RBM Partnership

- To halve malaria-associated mortality by 2010 and again by 2015.

Millennium Development Goals

- Target 8: to have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.
 - Indicator 21: Prevalence and death rates associate with malaria.
 - Indicator 22: Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures.

Malaria Strategic Plan 2011-2015 Coverage Targets

<i>Indicator</i>	<i>Baseline (2010)</i>	<i>Target (2015)</i>
% of those suffering from malaria who have access to and are able to use correct, affordable and appropriate treatment within 24 hours of onset of symptoms	21.9%	50.0%
% of pregnant women who have access to and receive two or more doses of IPTp for malaria prevention	60.3%	80.0%
% of children under 5 years of age sleep under an ITN	55.4%	80.0%
% of pregnant women sleep under an ITN	49.4%	80.0%
Number of high burden districts implementing IRS	1	12
% of households owning at least one ITN	58.1%	90.0%
% of outpatient suspected malaria cases who are confirmed by microscopy	(Not available)	50.0%
% of outpatient suspected malaria cases who are confirmed by RDT	0%	80.0%

5.6 Key Assumptions

In order to achieve the set targets and objectives by 2015, the following assumptions have to be met by both the malaria programme and the RBM Partnership.

- Political commitment will continue at all levels to support the national strategic plan
- The financial and technical support from partners will continue in the next five years
- Continued availability of commodities and supplies at international market to suffice the country's needs
- Improvement in health system performance such as supply chain management, human resources and infrastructure
- The strong partnership will prevail during the period of the new MSP

6 Strategic Priorities for 2011 – 2015

6.1 Moving towards Universal Coverage for All Interventions

During the next five years the programme will focus on moving towards Universal Coverage of interventions especially: improved diagnosis to strengthen malaria case management, integrated vector management (IVM), LLINs distribution, supply chain management, BCC and advocacy, robust monitoring and surveillance system and programme management.

Objective 1: To achieve universal coverage of all interventions by 2015 in order to have 80% utilization rate of the interventions.

Strategies:

- Ensuring Effective and Prompt Diagnosis and Treatment
- Strengthening of Integrated Vector Management
- Continuing Provision of Malaria in Pregnancy Services

6.1.1 Ensuring Effective and Prompt Diagnosis and Treatment

Case management includes the identification, diagnosis, and rapid treatment of all malaria cases with appropriate and effective anti malarial drugs. The main focus in case management will be to strengthen diagnosis and ensure access to prompt and effective treatment.

i. Improving Diagnostic Capacity

Prompt and accurate diagnosis of malaria is key to effective disease management and reduction of unnecessary use of anti malaria medicines. In the next 5 years, the Ministry of Health will:

- Expand parasitological confirmation of malaria through use of microscopy at Central and District Hospital levels, as well as in high patient-load health facilities;
- Roll out RDTs to all health facilities, village clinics and where possible use alongside microscopy;
- Provide a standardized pre-service training curriculum that emphasizes Universal Access, Diagnosis and Treatment.
- Provide in-service training for key health workers and laboratory technicians in diagnostic tools and procedures;
- Procure and distribute RDT kits to all health facilities and village clinics;
- Procure and distribute microscopes and reagents to all health facilities;
- Conduct quality assurance and quality control in diagnostics in all service delivery points in collaboration with the National Public Health Reference Laboratory and the Health Technical Support Services (HTSS-Diagnostics);
- Coordinate regular joint supportive supervision of health workers at all levels.

ii. Improving Patient Care

The main aim in patient care will be increasing access to prompt and effective anti malarial treatment to all confirmed or suspected malaria cases. In order to achieve this, the Ministry of Health will:

- Intensify training of health workers in malaria case management and use of RDTs;
- Follow-up of trained health workers to monitor the application of the gained skills;
- Conduct special reviews to understand the underlying causes for non compliance of health workers to national malaria treatment guidelines.
- Revise the malaria treatment guidelines to be in line with the concept of universal access.
- Conduct regular supportive supervision for health workers on malaria case management at all levels.
- In collaboration with other partners, roll out community case management through village clinics.
- Conduct refresher training of HSAs on community case management;
- Provide equipment for referral system such as push bicycles;
- Revise the Community Case Management (CCM) policy to incorporate all ages
- In collaboration with the Pharmacy, Medicines and Poisons Board (PMPB), conduct regular post marketing surveillance to monitor quality of drugs at service delivery points.
- Train health workers on Pharmacovigilance and encourage them to report any adverse drug reactions to the Pharmacovigilance Centre housed at the PMPB;
- Comply with the ban on the use of artemisinin mono therapies for treatment of uncomplicated malaria according to WHO guidelines
- Monitor malaria drug efficacy on a regular basis through the established sentinel sites.

6.1.2 Strengthening of Integrated Vector Management (IVM)

Integrated Vector Management, as its name implies, uses multiple and integrated interventions to attack the mosquito from many directions. In line with WHO recommendations for malaria control, focus will be given to the universal coverage of mosquito nets and the use of Indoor Residual Spraying (IRS) when appropriate. In addition, capacity to undertake entomological surveys will be strengthened to review and document geographic distribution of malaria vectors. Efforts will be directed at exploring larvaciding, environmental management, and other community level interventions. The main focus of IVM will be to minimize exposure to malaria vector bites through universal access of the proven interventions.

i. Insecticide Treated Mosquito Nets (ITNs)

The role of the bed net is to physically separate people at risk from the bites of infective mosquitoes. Malawi has moved to the use of LLINs, which are heavy duty, pre-treated and longer lasting.

Currently about 4 million nets are in circulation with an estimated coverage of 58% of households owning at least one LLIN. The national policy is that nets are provided at no charge

to the end-user. Subsidized delivery through the private sector will also be used to compliment free public sector distribution.

In order to achieve universal coverage of ITNs and increase usage, MoH will:

- Scale up procurement and distribution of LLINs, targeting **one LLIN for every two people**. This is expected to increase net usage to at least 80%. The nets will be distributed through time-limited campaigns while keep up through public health facilities will be used to maintain coverage between the campaigns;
- Intensify IEC and BCC campaigns in communities;
- In collaboration with relevant departments and ministries, promote community-based initiatives such as establishment of village bylaws and special committees to reduce misuse of LLINs.
- Advocate for investment incentives for local manufacture of the LLINs.

ii. Indoor Residual Spraying

IRS uses chemical insecticides sprayed on the walls of dwellings to kill mosquitoes, thus reducing the malaria vector population. Malawi began the IRS programme in one district in 2007 and has expanded it to a total of seven districts in 2010.

In order to improve IRS coverage in the next five years, MoH will:

- Expand IRS to 12 highly endemic districts through public, private sector and community partnerships. (See Box 6.2 for more detail on IRS in Malawi.)
- Advocate for the removal of taxes and tariffs for IRS commodities and supplies;
- Advocate for more resources for IRS from government and external funders.

Box 6.2 IRS Strategy for 2011-2015

Entomological surveillance results from Malawi in August 2010 documented evidence of insecticide resistance to pyrethroids and carbamate classes in Nkhosha and Salima Districts. As a result, the 2010 IRS activities in these districts will use pirimiphos-methyl while alpha-cypermethrin will be used in the remaining 5 districts.

Part of the IVM strategy will address how emerging pyrethroid resistance may impact LLIN effectiveness. Resistance management strategies will be employed that include rotational or mosaic approaches as well as engagements with the research community to address innovations such as insecticide treated durable residual wall linings as an alternative approach to IRS. The cost effectiveness of various approaches will be evaluated. Though organophosphates have been used in the agricultural sector in Malawi they have only recently been introduced as an insecticide for malaria vector control. Rotational choices for insecticides will include the feasibility and acceptance of dichloro-diphenyl-trichlorethane (DDT) for IRS as requested by the Parliamentary Committee Task Force Recommendations.

iii Other IVM Interventions

Other IVM activities that will be implemented to compliment the core vector control include environmental management and larvaciding. The Ministry in collaboration with the Department of Environmental Affairs, research institutions, City and District Councils will undertake the following:

- Reinforce Environmental Management Guidelines in the implementation of IVM activities to reduce transmission of malaria;
- Map out mosquito breeding sites in selected districts and embark on larvaciding where feasible and promote the draining of the breeding sites;
- Educate community members on how to drain mosquito breeding sites and practice other environmental measures within their surroundings to protect themselves and their families;
- Conduct vector susceptibility studies regularly in order to monitor the effectiveness of insecticides;
- Review and document geographic distribution of malaria vectors and their behavior nationwide;
- Conduct bioassay in all sprayed districts and vector susceptibility sentinel sites.
- Construct two insectaries at the NMCP Secretariat to facilitate vector bionomics studies;
- Implement mosaic or rotational methods of resistance management.

6.1.3 Provision of Malaria in Pregnancy Services

Pregnant women are particularly vulnerable to malaria because their immune systems are suppressed. Malaria causes anaemia, low birth weight and spontaneous abortions. In the next five years, the MOH will plan to reach a target of 80% of all pregnant women receiving at least 2 doses of Intermittent Preventive Treatment (IPTp) to protect the mother and her child from malaria transmission during the second and third trimesters of pregnancy

i. Intermittent Preventive Treatment (IPT)

The NMCP, Reproductive Health Unit (RHU), Health Education Unit and other partners will:

- Ensure that appropriate drugs for IPTp are available at all facilities and outreach clinics;
- Continue to promote Directly Observed Therapy (DOT) through provision of relevant equipments to health facilities;
- Provide guidelines, job aides, training and supervision in all focused antenatal care programmes;
- Explore ways of expanding delivery of IPTp at community level in order to increase access

ii. Long Lasting Insecticide Treated Nets (LLINs):

The Ministry of Health will continue to encourage pregnant women to sleep under LLINs through increased awareness campaigns and provision of LLINs. This will be in addition to the mass distribution campaigns that will be done every three years.

iii. Prompt Treatment and Diagnosis

The Ministry will promote the prompt and accurate diagnosis as well effective treatment for malaria during pregnancy according to National Malaria Treatment Guidelines. To achieve this, the Ministry will:

- Revise and distribute guidelines and job aids on treatment of malaria in pregnancy;
- Continue building capacity of health workers;
- Continue conducting joint supportive supervision of health workers for compliance with National Malaria Treatment Guidelines for preventing and treating malaria in pregnancy.

6.2 Behavioral Change, Communication and Advocacy

Objective 2: To strengthen advocacy, communication and social mobilization capacities for malaria control by 2015 in order to increase the use of all malaria interventions.

Strategies:

- Social mobilization
- Advocacy

The primary challenge in the uptake of malaria control interventions is the social perception that malaria has “always been with us and will always be with us”; it is too often accepted as part of Malawians lives and is surrounded by myths and misunderstandings about the benefit of evidence-based malaria interventions endorsed by the international scientific community, such as the WHO and RBM.

This is made worse when, despite availability of diagnostic facilities in many health centres, health workers continue treating patients routinely and presumptively for malaria and do not seek out or comply with the laboratory results, creating more opportunities for anti-malarial drug resistance and lack of treatment for the true cause of the symptoms in the patient, further endangering the patient’s health and well-being.

To counteract this and in line with the Malaria Communication Strategy for Malawi 2009-2014, the Ministry of Health over the next five years will implement the following social mobilization and advocacy strategies.

6.2.1 Social Mobilization

The role of the community in the control of malaria and increasing the uptake of interventions is essential. In order to understand perceptions, behaviors and practices of individuals, communities, and health workers on malaria, the Ministry of Health will:

- Prioritize the promotion of positive behaviour to increase utilization of all malaria interventions;
- Build the capacity of health workers to use RDTs and laboratory test results to accurately diagnosis and treat malaria;
- Carry out qualitative and quantitative research to develop appropriate and compelling malaria messages and disseminate them through multiple channels such as radios, print and electronic media;
- Empower communities to take charge of malaria control through local initiatives, such as social gatherings, village meetings, community interactive radio, household visits, open days, training of theatre for development clubs and school health programmes that focus on prevention and care-seeking for malaria as well as adherence to treatment and quality home care for malarial patients;
- Develop communication interventions targeted at health workers and communities to improve their behavior in malaria case management to comply with National Malaria Treatment Guidelines
- Monitor and evaluate IEC and BCC efforts

6.2.2 Advocacy

The role of political and local leaders is critical in mobilizing resources and influencing behavior change. As such, the Ministry of Health and its partners will:

- Advocate for malaria control to be a priority agenda issue;
- Appoint celebrity ambassadors to raise awareness of malaria;
- Establish fora such as parliamentary caucuses, press conferences, symposiums, networks and coalitions, meetings with decision makers, and talk shows to increase knowledge and understanding of malaria issues;
- Continue sourcing funds to implement the Malaria Communication Strategy

6.3 Surveillance, Monitoring, Evaluation and Operational Research

Objective 3: To strengthen surveillance, monitoring and evaluation systems including operational research for tracking progress in the implementation of malaria control activities and assessing impact of interventions by 2015

The goal of the national monitoring and evaluation system for malaria control is to provide reliable and regular information on the progress made in preventing and controlling malaria in the entire country.

Strategies:

- Strengthening routine data systems
- Strengthening surveillance and operational research
- Promoting use of information for planning and decision making
- Strengthening M & E capacities at all levels

The main activities in the next five years will be strengthening routine data systems, conducting surveillance and operational research, promoting use of information, and strengthening M & E capacities at all levels.

6.3.1 Strengthening routine data systems

The Health Management Information System (HMIS) and Integrated Disease Surveillance and Response (IDSR) are the main sources of routine data on malaria. In the next five years, the NMCP will:

- Strengthen the linkages by instituting regular meetings among the NMCP, Central Monitoring & Evaluation Department (CMED) and Epidemiology Unit to ensure timely access to data to guide decision making;
- Collaborate with CMED and the Epidemiology Unit to train health workers at the District and Health Centre level on collection and data management, periodic analysis, and use of data to guide decision making;
- Advocate for the inclusion of more RBM and other core malaria indicators into HMIS;
- Establish a malaria database to act as a repository for all data from MOH and partners on malaria control activities;
- Develop a system for stakeholders to share data that is not routinely collected through IDSR and HMIS to NMCP for entry into the database;
- Procure innovative information and communication technologies (ICT) equipment for use in management of malaria data.

6.3.2 Strengthening surveillance and operational research

Robust surveillance systems will be critical as the country moves into a position of providing Universal Access to malaria interventions: Over the next five years, the Ministry of Health will:

- Strengthen the Sentinel Surveillance systems by providing commodities,
- Train Sentinel Site staff in management of surveillance data;
- Institute quality assurance and control procedures at sentinel sites;
- Encourage participation of key stakeholders in the running of the sentinel sites through regular joint planning and review meetings;
- Conduct joint supervision of activities at sentinel sites with key stakeholders.

In order to update national strategies and guide programme implementation, the MOH will:

- Review and update the Monitoring and Evaluation plan to be aligned with the MSP 2011-2015.
- Update and prioritize the research agenda;
- Build local capacity to conduct operational research;
- Conduct Malaria Indicator and Health Facility Surveys every two years;
- Participate actively in other surveys such as the Demographic and Health Survey (DHS) and Multiple Indicator Cluster Surveys (MICS);

- In collaboration with research institutions, conduct entomological surveillance in the sentinel sites as well as sprayed district to monitor the vector susceptibility to insecticides as well as vector behavior;
- Continue to monitor malaria drug efficacy and molecular markers of resistance on regular basis through sentinel sites;
- Conduct regular post marketing surveillance to monitor quality of drugs at service delivery points in collaboration with the PMPB;
- Conduct active Pharmacovigilance to monitor adverse drug reactions;
- Review information from routine adverse drug reaction to guide malaria case management;
- Continue to support research initiatives such as vaccine and drugs trials as they arise.
- Conduct impact assessment at end of strategic plan 2015.

6.3.3 Promoting Use of Information

Results-based management requires use of information for evidence-based planning and decision making. To improve the evidence base for malaria programme management throughout the health system, the Ministry of Health will:

- Encourage regular feedback at all levels and use of data at the point of collection;
- Promote use of data for planning and decision making using special fora for Ministry of Health stakeholders to disseminate malaria data;
- Develop a website and produce a quarterly malaria bulletin to share information with and among stakeholders.

6.3.4 Strengthening M & E capacities at all levels

In the next five years the programme will aim to develop capacity of staff to acquire specific skills to facilitate analysis of routine data, critical appraisal of health outcomes and impact assessments.

6.4 Programme Management

Objective 4: To strengthen capacity in programme management in order to achieve malaria programme objectives at all levels of health service delivery

Strategies:

- Strengthening human resource capacity
- Resource mobilization
- Provision of policy direction
- Strengthening coordination
- Strengthening procurement and supply chain management

Strong programme management capacity is very important for effective malaria programme delivery and achieving the objectives. In the next five years, the main focus will be on strengthening capacity of the programme in planning, partnership, coordination and resource mobilization. This will be achieved through strong leadership and creation of a supportive environment by the NMCP. In addition, the programme will aim to provide adequate

infrastructure, equipment and supplies at all levels. It will also initiate cross-border malaria control activities with neighbouring countries with the goal of regional elimination of malaria.

6.4.1 Strengthening human resource capacity

Implementation of malaria control interventions relies on integrated human resources at all health system levels, including the District level. In the current set up, there are District Malaria Coordinators who have other responsibilities apart from malaria and are unable to devote adequate time to malaria control activities. Within the NMCP, currently there are no established positions and no clear career paths for staff members.

In the next five years, the Ministry of Health will:

- Provide a clear terms of reference for the district malaria coordinators;
- Advocate to the Department of Human Resource for established posts at the National Malaria Control Programme level so that staff have clear career paths;
- Advocate for deployment of more people to the NMCP in support of each thematic area;
- Continue training of health workers and staff in relevant areas to improve their capacity for effective programme delivery;
- Ensure that a national system is in place for malaria-related pre-service and in-service training and curriculum development;
- Continue conducting regular joint supportive supervision with partners

6.4.2 Resource mobilization

The successful implementation of NMCP activities will depend on availability of adequate resources on a timely basis. In the next five years, the Ministry of Health will:

- Train NMCP technical staff in proposal development and resource mobilization;
- Advocate for more funding through roundtable meetings with national and international institutions and agencies;
- Develop concept papers and funding proposals to be submitted to the funding institutions;
- Continue to access funds from the existing Global Fund malaria grants to support scale-up of interventions towards Universal Access.
- Advocate for more malaria specific funding from the Ministry of Finance

6.4.3 Provision of policy direction

The Ministry of Health will provide policy direction and guidance in the implementation of malaria control strategies. This will be achieved through the development, revision and dissemination of relevant malaria policies and guidelines in line with national and global developments.

6.4.4 Strengthening partnership and coordination

In order to strengthen coordination among all partners in malaria control, the Ministry of Health will continue working through established coordinating mechanisms such as the Malaria

Technical Working Group, the adhoc National Advisory Group and thematic area technical working groups.

The Ministry of Health will from time to time revise the terms of references for the malaria technical working groups and will continue to play the role of Secretariat for the working groups.

The Ministry of Health will continue collaborating with the private sector, including CHAM, as well as community groups, line ministries, such as the Ministries of Education, Defence, Internal Security, Information, Local Government and Finance, as well as the Departments of Fisheries and Environmental Affairs.

Within the Ministry of Health, the NMCP will continue working together with Health Education Unit (HEU), Planning Unit, Epidemiology, Reproductive Health, IMCI, ARI HTSS-Pharmacy, HTSS- Diagnostics, Public Health Laboratory, Directorate of Clinical Services, Directorate of Nursing Services, and other partners and programmes.

In addition, the Ministry of Health will:

- Conduct joint programme reviews and planning meetings with stakeholders and establish database of partners at all levels. The partners will be encouraged to report on progress.
- Strengthen collaboration with neighbouring countries through cross-border malaria initiatives to work towards the goal of regional malaria elimination.

6.4.5 Strengthen Procurement and Supply Chain Management

The NMCP, like all other disease control programmes, is dependent on procurement, distribution and the supply chain system of the MOH. A significant concern for the success of the MSP 2011-2015 is the non-availability of essential commodities and supplies, such as drugs, diagnostics, LLINs, IRS commodities, and other critical inputs through existing system. The main focus in the next five years will be to have uninterrupted supplies of health and non-health products for malaria prevention and treatment. To achieve this, the MOH will:

- Conduct annual forecasting and quantification of commodities;
- In collaboration with HTSS-Pharmaceuticals, build the capacity of health workers in forecasting and quantification of malaria commodities;
- In collaboration with HTSS and CMS, strengthen the logistics management information system (LMIS) in order to monitor the consumption levels and relate to morbidity data;
- Develop an annual procurement plan for malaria commodities in collaboration with partners, implementing through national and, where applicable, international procurement systems to ensure timely availability of essential commodities;
- In collaboration with HTSS and Central Medical Stores (CMS), ensure adequate storage capacity is available at service delivery points, including assessment and, where necessary, improvements of storage capacity at service delivery level;
- In collaboration with other stakeholders, undertake a review of the current system of distributing medicines and other commodities to explore ways of strengthening the system;

- Support national and international efforts in strengthening and expanding the procurement and supply system and, where feasible, utilize complementary mechanisms in the delivery of commodities.

7 Linkage to National and Global Development Strategies

The Government of Malawi is committed to reducing poverty and improving the welfare of its people. This commitment is manifested in the signing of the Millennium Declaration adopted at the United Nations (UN) General Assembly in New York in September, 2000. The Government of Malawi (GOM) and its development partners have developed the Malawi Growth and Development Strategy (MGDS) in order to achieve the Millennium Development Goals (MDGs). The MGDS has six key priority areas and five thematic components in which malaria is part of the social component. Government believes that progress in both key priority and thematic areas will assist in the achievement of the MDGs.

The Ministry of Health's contribution to poverty reduction is through the EHP. It is based on a defined range of cost-effective and well-proven interventions using a targeted approach and aims to strengthen community based health interventions. The EHP addresses the major causes of morbidity and mortality and focuses on those health conditions and service gaps that disproportionately affect the poor. As a strategy to deliver the EHP, GOM adopted the SWAp in which Government and its partners in health have shared goals to be achieved through a joint Programme of Work (PoW). Furthermore, the SWAp rationalizes scarce resources and maximizes the efficient use in the health sector in Malawi. Malaria is one of the major health conditions included in the package.

The strategy takes cognizance of the Roll Back Malaria target of halving malaria morbidity and mortality by the year 2010 with further reduction by 75% by 2015, Abuja Call for Universal Access, UN Secretary General's Call for Universal Access, and AU Conference of Ministers of Health declaration on elimination of malaria in Africa.

The 2011-2015 Malaria Strategic Plan has taken advantage of the existing national and international development frameworks to push the agenda of malaria forward.

8 Institutional and Implementation Framework

Under the auspices of the Ministry of Health, the NMCP takes the lead in coordinating efforts to control malaria. The implementation of the MSP 2011-2015 will be a joint effort by all partners and stakeholders at all levels. The Ministry of Health will coordinate the consultative planning, implementation, research, monitoring and evaluation of malaria prevention and control activities. The NMCP will also be responsible for reporting strategic plan implementation progress and performance to the Ministry of Health, WHO and RBM.

At the national level the implementation will be through the SWAp PoW. At District levels, the implementation of the strategic plan will be through the District Implementation Plan (DIP) with the leadership of the District Health Management Team (DHMT).

It is expected that all implementing partners will work and contribute towards the achievement of this strategic plan through one coordination mechanism to ensure maximum synergy and avoidance of duplications, and one M&E plan to measure progress and assess impact. This will align with the RBM “three ones” principles for malaria: one coordinating mechanism; one plan and one monitoring and evaluation system at country level.

The detailed Implementation Matrix for the 2011-2015 Strategic Plan is included in Annex1.

8.1 Partners and Their Key Roles

This section describes each of the partners in the national efforts towards malaria control and their key roles.

8.1.1 Ministry of Health

The Ministry of Health will be responsible for:

- Policy Formulation and Enforcement
- Quality Control/Assurances
- Resource Mobilisation

This will be done in collaboration with the Zones, Districts and among key stakeholders.

The NMCP will:

- Coordinate the consultative planning, implementation, research, monitoring and evaluation of malaria prevention and control activities.
- Take responsibility for reporting implementation progress to the MOH and other partners.

With the assistance of the NMCP, Zone Offices will be responsible for: consultative planning, implementation, research and M&E of malaria control and preventive activities in collaboration with DHMTs at district level. The DHMT will be responsible for:

- Appointing relevant qualified health personnel as District Malaria Coordinators capable of enforcing all malaria interventions within the EHP;
- Sharing of ideas and networking of experiences with all relevant stakeholders

In addition, the District Executive Committee (DEC) will facilitate the integration of activities in the district development plans. The Health Centre Focal Point Person will be involved in planning and supervising the implementation of malaria control activities in collaboration with Health Surveillance Assistants (HSAs) who form the main link between health workers and the community.

8.1.2 Other Government Sister Ministries and Departments

The Ministry of Health through the NMCP will work with a number of line ministries such as Ministry of Education, Ministry of Defence, Ministry of Agriculture, Ministry of Finance, Ministry of Home Affairs, Ministry of Local Government and Ministry of Information in the

implementation of this strategic plan. The NMCP will also work with the Department of Environmental Affairs, Department of Fisheries, Reproductive Health Unit, Epidemiology Unit, Health Education Unit, city and town assemblies. Their roles will include:

- Management of malaria cases
- Promote 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 larvaciding and environmental management
- Participate in the planning of IVM activities such as larvaciding and IRS
- Participate in the planning and implementation of mass distribution of LLINs
- Participate in 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
- Review BCC materials for the various interventions
- Participate in joint supervisions visits

8.1.3 Political Leaders and Other Decision Makers

Political leaders will be critical in the implementation of the strategic plan. These include the members of cabinet, members of parliament and political parties at national and district levels. Their expected roles include:

- Advocate for allocation of more resources for malaria prevention and control from the government
- Participate in resource mobilization for malaria preventions and control
- 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 programme delivery
- Advocate for enactment of by-laws to support vector control

8.1.4 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 areas particularly in activities related to case management and vector control. They will also be involved in direct contribution of resources. They will also play a critical role in IEC and BCC including advocacy through community outreach programmes.

Their specific roles will include:

- Contribute to the implementation of IRS activities through the provision of insecticides, protective equipments and storage space
- Participate in various technical working groups

- Participate in the mass distribution of LLINs to communities
- Management of malaria cases

8.1.5 Communities

The implementation of MSP 2011-2015 will use existing structures at the community level such as local leaders, Village Development Committees (VDCs), Village Health Committees (VHCs), Village clinic and community based organizations. Their specific roles will include:

- Support community mobilization
- Mobilise resources at the local level for malaria prevention and control
- Participate in identification and prioritization of health needs
- Support the production and dissemination of key messages to create demand for and utilization of malaria control interventions.

8.1.6 Development Partners and Other International NGOs

Bi-lateral, multi-lateral and funding organizations such as USAID, Centres for Disease Control and Prevention (CDC), Department for International Development (DfID) , NORAD, GTZ, WHO, UNICEF, World Bank, ADB and Global Fund will play a significant role in the implementation of this 2011-2015 National Strategic Plan. Their specific roles will include:

- Providing technical guidance in the implementation of malaria control interventions;
- Providing financial resources for the implementation of malaria control interventions;
- Providing evidence-based norms and standards to guide the implementation of interventions;
- Providing technical assistance in sourcing, procurement and distribution of commodities;
- Assisting in the conduct of monitoring and evaluation activities such as surveys.

8.1.7 Research Institutions

The successful implementation of the MSP 2011-2015 will rely on evidence generated from research within and outside Malawi by established research institutions. These will play a very important role in generation of research results or findings 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 research that will improve on existing interventions and support their delivery mechanisms and development of research agenda.

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

9 Monitoring and Evaluation

The Malaria Monitoring and Evaluation Plan, detailing the monitoring and evaluation processes, will be developed in early 2011 to support the implementation of this plan.

Some of the monitoring activities for this plan include meetings to review the implementation of malaria intervention and plan for the following year that will be held annually. The NMCP will produce a national action plan before the start of the new financial year. Within the year, quarterly zonal review meetings will be held during which districts will report on progress of implementation.

Technical Working Groups will meet at least quarterly during which the NMCP will be expected to report on progress of implementation against targets in the annual implementation plan, address implementation bottle necks and make necessary adjustments. The M&E sub working group will meet when deemed necessary.

The main sources of data for monitoring the implementation of the strategic plan will be national routine sources (IDSR and HMIS), programme specific data sources and population based surveys. The NMCP will create systems for collecting data that cannot be generated from either IDSR or HMIS in order to compliment these systems. Data from IDSR and HMIS will be reviewed on a monthly, quarterly and annual basis to check on validity, quality and completeness. The NMCP in collaboration with HMIS and IDSR will conduct data quality audits when necessary.

The midterm review of the strategic plan will be done during the third year (in 2013) of implementation of this plan. During the strategic plan period two malaria indicator surveys will be conducted one in 2012 and another one in 2014. The results of these surveys will input in the midterm and final evaluations of the strategic plan. The monitoring of the strategic plan will take advantage of other surveys such as MICS and DHS and operational research findings. The final evaluation of the strategic plan will be conducted in 2015.

The indicators for monitoring and evaluating malaria control in Malawi, which are part of the Malaria M&E Plan, are presented in Annex 2.

10: Summary Budget in US\$

Strategic Objective	Strategic area	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1: To achieve universal coverage of all interventions by 2015 in order to have 80% utilization rate of the interventions.	IVM: Indoor Residual Spraying	5,034,008	7,298,259	7,198,259	7,198,259	7,198,259	33,927,044
	LLINs	43,954,398	4,560,223	4,502,886	47,627,705	4,981,950	105,627,162
	Other IVM activities	6,155,260	6,155,260	6,155,260	6,155,260	6,155,260	30,776,300
	Diagnosis	15,492,853	16,652,271	16,590,559	13,809,805	13,915,465	76,460,953
	Patient care	12,120,030	11,128,703	8,936,619	7,335,706	6,467,073	45,988,131
	Malaria In pregnancy	29,400	1,173,952	185,800	1,017,552	185,800	2,592,504
	Sub total	82,785,949	46,968,668	43,569,383	83,144,287	38,903,807	295,372,094
2: To strengthen advocacy, communication and social mobilization capacities for malaria control by 2015 in order to improve use and adherence.	Social Mobilization	237,268	1,631,808	1,286,808	1,286,808	51,168	4,493,860
	Advocacy	32,250	32,250	32,250	32,250	32,250	161,250
	Sub total	269,518	1,664,058	1,319,058	1,319,058	83,418	4,655,110

Strategic Objective	Strategic area	Year 1	Year 2	Year 3	Year 4	Year 5	Total
3: To strengthen surveillance, monitoring and evaluation systems including operational research for tracking progress in the implementation of malaria control activities by 2015.	Strengthening routine data systems	536,340	63,700	63,700	63,700	63,700	791,140
	Strengthening surveillance and operational research	162,404	155,600	155,600	155,600	155,600	784,804
	Promoting use of information for planning and decision making	953,420	1,800,000	850,000	2,600,000	950,000	7,153,420
	Strengthening M & E capacities at all levels	262,745	37,620	37,620	37,620	37,620	413,225
	Sub total	1,914,909	2,056,920	1,106,920	2,856,920	1,206,920	9,142,589
4: To strengthen capacity in programme management in order to achieve malaria programme objectives at all levels of health service delivery	Human Resources	62,300	58,000	58,000	58,000	98,000	334,300
	Policies	3,555,216	219,300	219,300	219,300	219,300	4,432,416
	Resource Mobilization	35,425	35,425	35,425	35,425	35,425	177,125
	Procurement and Supply Chain	8,481,170	8,016,770	16,770	16,770	16,770	16,548,250
	Sub total	12,134,111	8,329,495	329,495	329,495	369,495	21,492,091
	GRAND TOTAL	97,104,487	59,019,141	46,324,856	87,649,760	40,563,640	330,661,884

Annex 1: Indicators for Monitoring and Evaluating Malaria Control in Malawi

Impact

All-cause, under 5 mortality rate
Outpatient Confirmed malaria cases
Outpatient Test positivity rate
Percentage of children aged 6-30 months with anemia
Malaria parasite prevalence rate among children less than five years
Inpatient malaria cases
Inpatient malaria deaths

Outcomes

Malaria prevention

Percentage of households with at least one ITN
Percentage of children under 5 years of age who slept under an ITN the previous night
Percentage of pregnant women who slept under an ITN the previous night
Percentage of targeted households sprayed in the last 12 months
Percentage of pregnant women who receive appropriate IPTp according to national malaria policy

Malaria treatment

Percentages of health facilities with no stock outs of Antimalarial drugs for more than a week during the last 3 months
Percentage of children under 5 years of age with fever in the previous 2 weeks who received antimalarial treatment according to national policy within 24 hours of onset of fever

Outputs

Malaria prevention

Number of insecticide-treated nets (LLINs) distributed
Number of targeted structures sprayed in the last 12 months
Number of districts covered by IRS
Number of pregnant women receiving IPTp 1, 2 or more
Number of insecticides susceptibility studies done

Malaria treatment

Number of first-line anti malarial drugs (ACTs) distributed to health facilities
Number of confirmed cases treated with ACTs
Number of health facilities with malaria diagnostic capacity
Number of laboratory staff trained in malaria laboratory diagnosis
Number of health workers trained in use of RDTs
Number of health workers trained in malaria treatment
Number of health facilities with no reported stock outs of anti malarial drugs
Number of districts implementing Community Case Management (CCM)
Number of community workers trained in CCM
Number of studies of drug efficacy studies done