

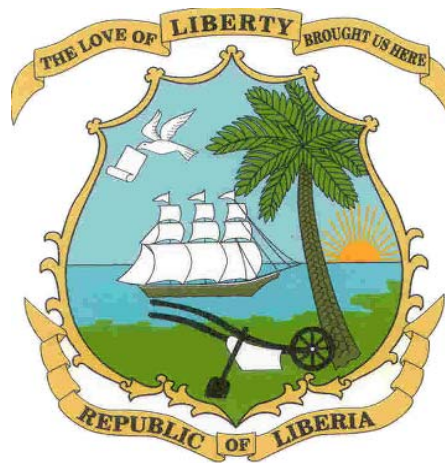
DRAFT NATIONAL MALARIA STRATEGIC PLAN

2009 – 2013

MALARIA CONTROL PROGRAM

MINISTRY OF HEALTH & SOCIAL WELFARE

REPUBLIC OF LIBERIA



GLOSSARY OF TERMS

ACT	Artemisinin-based Combination Therapy
BCC	Behavior Change Communication
CCA	Common Country Assessment
CHD	Community Health Department
CHO	County Health Officer
CHT	County Health Team
CHW	Community Health Workers
CMO	Chief Medical Officer
CWG	County Working Group
DCMO	Deputy Chief Medical Officer
GOL	Government of Liberia
HDI	Human Development Index
HPI	Human Poverty Index
IRS	Indoor Residual Spray
IEC	Information Education and Communication
ITM	Insecticide Treated Material
ITN	Insecticide Treated Net
ITPS	Insecticide Treated Plastic Sheeting (Tarpaulins)
IPT	Intermittent Presumptive Treatment
IDPs	Internally Displaced Persons
KAP	Knowledge Attitude and Practice
LLITN	Long Lasting Insecticide Treated Nets
MCD	Malaria Control Division
MENTOR	Malaria Emergency Technical and Operational Research
MOE	Ministry of Education
MOH&SW	Ministry of Health & Social Welfare
MPEA	Ministry of Planning & Economic Affairs
MSC	Malaria Steering Committee
NDS	National Drug Service
NGOs	Non-Governmental Organizations
NPM	National Program Manager
NMCP	National Malaria Control Program
OR	Operational Research
OPD	Out Patient Department
RBM	Roll Back Malaria
RFTF	Result Focus Transitional Framework
SP	Sulphadoxine-Pyrimethamine
UL	University of Liberia
UNDP	United Nations Development Programmed
UNHCR	United Nations High Commission for Refugee
USAID	United States Agency for International Development
UN	United Nations
WHO	World Health Organization

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EXECUTIVE SUMMARY

Malaria is endemic in Liberia and the entire estimated population of more than 3.6 million is at risk of the disease. Children under five and pregnant women are the most affected groups.

The Liberia Malaria Indicator Survey (LMIS, 2005), the only national malaria survey done in post-war Liberia, show that malaria accounts for over 38% of out patient department OPD attendance and 42.30% of in-patient death (compared to 18% prior to the war). Based on the current estimated access to health care of 41%, approximately 1,813,709 cases of malaria are expected to be treated in 2007.

Since August 2005, with funding largely from the Global Funds, some progress has been made in terms of the use of more effective malaria control and prevention strategies based on WHO Roll Back Malaria recommendations. Major achievements made from August 2005 to February 2007 are as follows:

- more than 1.4 million people treated with effective antimalarial, especially ACT
- provision of more than 600,000 Long-Lasting Insecticide Treated Mosquito Nets (LLITNs) to children under five and pregnant women
- more than 150,000 doses of Fansidar (SP) given to pregnant women as IPT (IPT-1 & IPT-2 combined)
- the completion of the only major malaria survey in Liberia, LMIS 2005

This Draft Liberia Malaria Strategic Plan addresses the gaps observed in the implementation of the current Strategic Plan (2004-2008) and also puts forth a more detailed and well-assessed strategy in dealing with the malaria situation in an increasingly more stable Country for the next five years. The objectives and activities set out in this document respond to the situation aiming to scale-up the most effective malaria control and prevention measures, already introduced, from the health facility down to the community level.

The first way to achieve effective malaria control and preventive measures is by scaling up efficacious therapies already introduced in 2003, which are in line with acceptable best practices. The approach is two-tiered: firstly, making available combination therapies to health facilities whose health staffs have been trained. Secondly, reinforcing the role of the community and the community health workers at the grass root level through capacity building as well as providing them with malaria control tools; in an effort to help resolve the problem of accessibility which has an inevitable effect on attendance and referral at the peripheral levels.

This Draft Malaria Strategic Plan also provides personal protective measures, such as LLITNs, to the general population, which have previously been available only to vulnerable groups such as pregnant women and children under five years. Advocacy, health education and behaviour change communication; operational research; and monitoring and evaluation will continue to serve as the fulcrum for malaria control and prevention in Liberia. IRS was used during the emergency period in displaced camps and refugee communities. The use of IRS in selected communities will be explored further and supported by operational research looking at factors such as vector susceptibility.

The capacity of the National Malaria Control Program (NMCP) will further be strengthened to improve management, monitoring and evaluation, coordination and decentralization of malaria control activities throughout the Country. Partnership will further be forged to reinforce and expand the program activities.

CHAPTER 1

1.1 Introduction

This Draft Malaria Strategic Plan was developed in consultation with partners and stakeholders in malaria control and prevention. The plan aims at creating a framework of priority activities that should be carried out at various levels.

Through previous analysis and reviews, factors that exacerbate the malaria situation in Liberia have been identified. This document proposes strategic approaches and activities that can alleviate these problems in a feasible standardized way, coordinate efforts and facilitate the achievement of the overall goal of malaria control.

Political commitment exists at the highest level as exemplified by the fact that Liberia is a signatory to the Abuja Declaration on Roll Back Malaria (RBM) and through the reduction of tariffs and taxes from 25% to 2.5% on insecticide treated nets (LLITNs) and insecticides.

This Draft Malaria Strategic Plan is being developed at the time when Liberia is transitioning from a post-conflict situation to an increasingly more stable development stage, characterized by low access to health care estimated at 41% (Interim Poverty Reduction Strategy (IPRS, 2006¹)) due to breakdown of health services and bad road conditions, poor staff motivation due to lack of both remuneration and incentives and lack of adequately trained manpower resulting from brain-drain and few training institutions in country.

This Draft Plan is based on international best practices and is in line with the RBM recommended strategies for malaria control in malaria endemic countries. This document provides a blueprint for malaria control in Liberia for the next five years taking into consideration the present post-war transition period and moving on towards a more stable development period. It is being developed based on the recommendation put forth in the previous Strategic Plan (2004-2008) that the Plan be reviewed periodically and necessary strategic changes be made to conform to the existing reality.

Consequently, the NMCP organized a three-day review meeting with key partners to review malaria control activities and the Strategic Plan (2004-2008) and make necessary recommendations for improvement.

The participants recognized that indeed, since the development and subsequent implementation of the Strategic Plan from 2004 to present (2007), many issues have arisen which necessitate the revision of the current Strategic Plan. The issues recognized include:

- Poor information on the malaria situation in Liberia immediate following the conflict, resulting in under-costing of key malaria control activities. Hence, there was a gross underestimation of total needs
- Poor information on the health system's capacity to deliver needed services in malaria control & prevention
- The Strategic Plan was generally designed to meet the immediate needs of a complex emergency situation, which although relevant in 2004, no longer exists today.
- The Strategic Plan was developed at a time when only 1/3 of the country was accessible due poor road conditions and insecurity in the rest of the country, a situation which has

¹ Interim Poverty Reduction Strategy (IPRS, 2006)

- changed since the election of a democratic government in 2005. Presently all 15 counties are now accessible.
- The previous Strategic Plan targeted only children under five and pregnant women for free LLITNs distribution and yet aimed for a national household coverage of 80%. Since the targeted population constitutes only 20% of the total population, achieving a 100% coverage in that population does not necessarily translate into 80% national household coverage.
 - Some targets were too high and did not take into consideration the low access to health care services (16%) at the time.

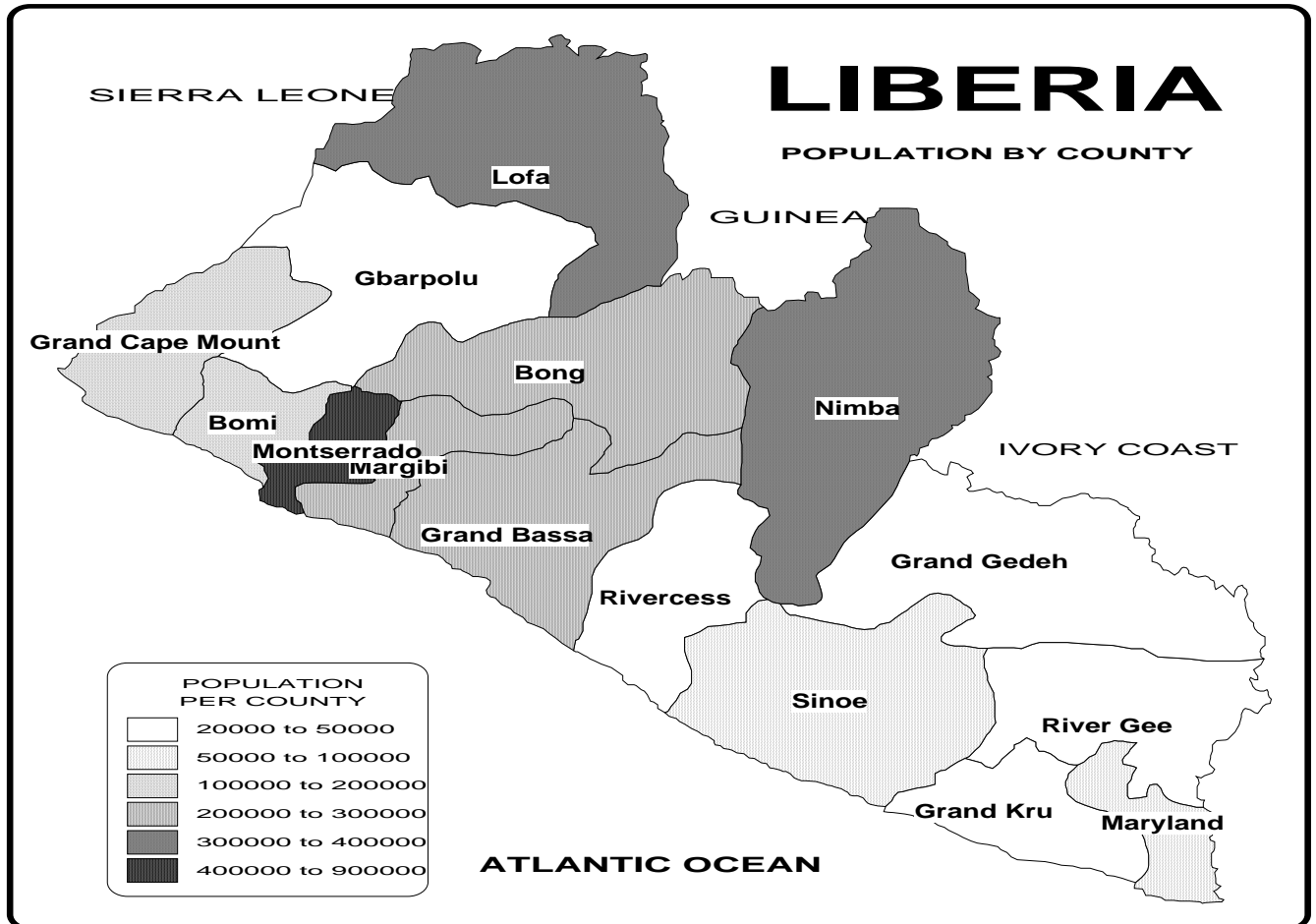
At a national stakeholders meeting in May, 2007 a consensus was reached on the current Draft Malaria Strategic Plan (2009-2013). The current Plan addresses all of the above issues in ways that conform to the existing realities in Liberia.

This Draft Plan will be further reviewed by a broader segment of the malaria control and prevention partners including the RBM partners before the final, official copy is printed.

1.2 Country profile

Liberia covers 43,000 square miles in West Africa and is bounded by nearly 350 mile (greatest length) of Atlantic Ocean coastline off the southwest and by the neighbouring countries of Sierra Leone (Northwest), Guinea (North) and Cote D'Ivoire (East and Southeast). Its greatest width is 150 miles. Liberia is administratively divided into 15 counties and 95 political districts. **Figure 1** shows the population distribution of Liberia.

Figure 1- Population Distribution of Liberia²



Most of the country lies below 500 meters. The coastal areas are characterized by mangrove swamps, which give way to tropical rain forest that gradually thins out northwards to be replaced by deciduous forest.

The country is grouped among the least developed countries in the world ranking 174 out of 175 countries in the UNDP Human Development Index for 1999³. **Table 1** shows the Socio-economic profile of Liberia by year of estimate.

²United Nations, CCA, 1998

³ UNDPs Human Development Index, 1999

Table 1-Socio-Economic Profile⁴

Economic growth rate	5.3% in 2005
GDP Per Capita	\$163 million in 2005
External debt burden	3.7 billion as of mid-2005
Population in severe poverty	62% in 2001
Population with access to sanitary facilities	24% in 2006
Population with access to safe drinking water	32% in 2006
Illiteracy rate	70% in 2004
Employment rate	53.9% (of which 52% is self-employment)

Poor economic growth performance, high rates of inflation, massive displacements of the agricultural labor force combined with almost total disruption of farming activities in rural areas and high unemployment rate are manifested unprecedented levels of poverty.

Massive population displacement in the rural areas during the war led to artificially accelerated urbanization, resulting in severe overcrowding in towns and cities. The literacy rate is less than 40%. Three fourths of the population lives below the poverty line on less than US\$1 a day. The economy is, however, making a modest recovery, and there is a gradual improvement in security in rural areas

1.3 Demographic characteristics

Since the last census in the mid-eighties, no national population census has been conducted in Liberia. Population figures are therefore estimates and range between 3.2 to 3.6 million. The total population was estimated to be 3.2 million as shown in **Table 2** below. The most recent consensus projection gave the total population of Liberia at 3.6 million⁵.

Table 2: Projections of Demographic characteristics⁷

<i>Population</i>	3.2 million
<i>Growth rate</i>	2.4%
<i>Fertility rate</i>	6.8%
<i>Population density</i>	84 per sq mile
<i>Crude mortality rate</i>	90
<i><5 mortality rate</i>	235 per thousand live births
<i>Infant mortality rate</i>	157 per thousand live births
<i>Average life expectancy</i>	42 years
<i>Population structure⁶</i>	15.0% 0-4 yrs 16.2% 5-14 yrs 63.8% 15+ 5.0% Pregnant women

⁴ National Health Plan, 2007

⁵ HIV/AIDS GFATM Round 6 Proposal

⁶DHS 1999-2000, vol. III

⁷ Ministry of Planning & Economic Affairs, 2006

1.4 Health care services delivery

The immediate post-conflict situation in Liberia saw the return of refugees and resettlement of displaced populations throughout the country. This has created the need for more health care services. The internal conflict affected livelihoods of the general population and the ability of the Ministry of Health and Social Welfare (MOH&SW) to provide basic primary health care services. As a consequence, access to health services for much of the population, especially the most vulnerable groups, women and children, is still low (41%)⁸. Donor funding to the Ministry of Health has gradually increased as a result of the confidence the government of Madam Ellen Johnson Sirleaf continues to enjoy. Consequently, the public health system in Liberia is gradually being revitalized.

Even with these constraints, activities at the Ministry of Health and Social Welfare have continued with ongoing training and support to health services through partnership with international and national partner organizations (NGOs, Faith-based agencies and UN). Previously, health services were centralized under the MOH&SW. However, in the recent health policy developed decentralization was stressed as a strategy to improve health care services throughout the country⁹. Currently, decentralization is taking place at the county level.

The Deputy Minister for Health Services/Chief Medical Office (CMO) is the key technical advisor to the MOH&SW on health and other related matters. However, the Bureau of Planning, Research and Development is charged with overall national policy development, human resources development and research.

All programs at the Ministry of Health & Social Welfare fall under three categories: preventive, curative and social services. Each program including the National Malaria Control Program (NMCP) develops their activities, which are implemented at county level through the county health teams. The county health teams deal directly with health centers providing training and supervision on the ground. Health teams then deal directly with community health workers.

Supervision is undertaken at county health team level supported by international non-governmental organizations (INGOs) in many areas.

Drug delivery is carried out by MOH & SW through the National Drug Service (NDS). The National Drug Service is a semi-autonomous body whose role is to procure, store and distribute drugs and consumable supplies to health facilities around the country. Support to the NDS is through the European Union/USAID and the Global Fund to Fight AIDS, Tuberculosis and Malaria.

Although the above describes the health system in a normal setting, it is necessary to understand that many of the health centers are functioning because of donor funding through INGOs. Funding through donors to INGOs and national NGOs, and their subsequent activities, has greatly improved the health system since 1997 resulting in many health centers being reopened. Their activities are carried out in collaboration with the Ministry of Health and all partners.

WHO, UNDP and other partners are involved in building capacity of the Ministry of Health & Social Welfare especially regarding national health policy.

As a response to the current malaria situation in the country, a malaria steering committee (MSC) was formed in line with the Roll Back Malaria (RBM) Initiative to strengthen partnerships and

⁸ National Health Plan, 2007

⁹ National Health Policy, 2007

coordination. The committee advises and guides the NMCP and other participating partners on the content and organization of their malaria work plan and projects. The MSC consists of the NMCP as well as all implementing partners, including relevant government ministries and agencies, international and national NGOs and funding agencies. The MSC meets every month and as necessary. The current average monthly attendance at MSC meetings is 30 representatives from partners.

Prior to the 1989 civil war, there were 30 hospitals, 130 health centers and 330 health posts. During the war, 90% of the health facilities were destroyed with only 20% being renovated immediately after the war. By 2006, the number of health facilities had increased to 18 hospitals, 50 health centers and close to 286 health clinics. However, these health facilities are not equally distributed, nor equally supported.¹⁰ There has been an increase in access to health facility from 16% during the conflict to 41% post conflict. Immediately following the conflict, there were only 43 Liberian Medical Doctors and 21 nurse midwives.

Currently, the main referral hospital, John F. Kennedy Medical Center, is gradually functioning but not yet at full capacity.

1.4.1 Current Health Situation

Liberia's health services have been severely disrupted by years of conflict and looting. While revitalization of the health services has begun, but is still far from satisfactory or completed, as may be seen in the following descriptions of health status, infrastructure, workforce, utilization of services and challenges.

A. Health Status

The health status of Liberia may be summarized as follows:

- 1) Infant mortality rate of 157/1,000 (compared to Sub-Saharan average of 102);
- 2) Under-Five/Child Mortality rate of 235/1,000 (Sub-Saharan average of 171);
- 3) Maternal mortality ratios of 580/100,000 (among the highest in the world);
- 4) HIV prevalence rate estimated at 5.2 %.
- 5) Exclusive breast-feeding of children less than six months of only 35%;
- 6) Moderate and severe underweight rates of under-fives of 27% and 7% respectively;
- 7) Access to safe water and sanitation estimated at 24% and 26% respectively;

B. Health Infrastructure and Utilization of Services

The MOH Rapid Assessment identified 354 functional public health facilities, including 286 clinics, 50 health centers and 18 hospitals. An additional 200 health facilities are currently nonfunctional. Access to health services is estimated to be 41%. The definitions of "functional" and "access" are only rough approximations, but will be developed with precision around the Basic Package of Health Services.

1.4.2 Challenges¹¹

The challenges for rebuilding the health system are many and diverse. The immediate challenge is expanding access to basic health care of acceptable quality by:

- Ensuring the availability of funds at county level to support the continuous delivery of basic services;

¹⁰ National Health Policy, 2007

¹¹ National Health Plan, 2007

- Improving the availability of essential medicines and other critical health commodities;
- Rehabilitating health facilities in under-served areas;
- Upgrading the skills of health workers and redeploying them to areas where they are most needed;
- Boosting management capacity at all levels to support the delivery of services. The first step in this direction is improving the information base and monitoring and evaluation capacity.
- Improving availability of safe water and sanitary facilities.

Long-term challenges include:

- Ensuring the availability of adequate resources to sustain the investments called for by reconstruction, as well as the increased recurrent expenditure induced by it;
- Restructuring resource allocation patterns, so that underserved communities benefit adequately from health sector recovery;
- Reducing the present strategic and operational fragmentation, in order to ensure coherence of sector development and attain efficiency gains;
- Upgrading, streamlining and restructuring the workforce, through a long-term training program and the introduction of effective personnel management practices;
- Strengthening the supply chain and rationalizing pharmaceutical management to ensure the availability of affordable, safe, effective essential drugs and other critical commodities;
- Revamping the health care network, through targeted investments in health care and support facilities, in view of increasing access to primary and referral health services;
- Establishing effective management systems capable of operating a modern health sector and evolving as the context and health needs of the Liberian population change over time;
- Introducing effective regulatory provisions and mechanisms to ensure adhesion to norms, fair and productive competition and quality health services.

The current health workforce consists of approximately 4,000 full-time and 1,000 part-time staff. This includes 168 physicians, 273 physician assistants, and 453 registered nurses, more than 1,000 nurse aides and other health professionals.

The health care system is fragmented, uneven, and heavily dependent on vertical programs and many NGOs are still operating in a humanitarian mode. These programs have resulted in some significant achievements, e.g., 35% of health facilities have received some rehabilitation and EPI has increased to 87%.

1.5 The malaria problem

1.5.1 Morbidity and Mortality

Malaria is endemic in Liberia and one of the main public health problems. The entire estimated population of more than 3.6 million is at risk of the diseases. It is the leading cause of OPD attendance (38%) and is also the number one cause of inpatient deaths.¹² Hospital records suggest that about 42.30% of inpatient deaths are attributable to malaria¹³. In addition, accessibility due to bad road conditions has meant that medications and control tools have not been available to most of the population.

¹² Liberia Malaria Indicator Survey, 2005

¹³ Ibid

1.5.2 Socio-economic impact

Even though the socio-economic impact of malaria has not been assessed, the cost of treatment to families and the cost of lost days of work can be considerably high. The effects of malaria on the community may include substantial financial loss due to the payment of treatment/consultation costs, antimalarial drugs and vector control measures at the household level. Due to the Global Funds round 3 Grant to Liberia, some of the economic burden of malaria in terms of cost of treatment was reduced for some time (August 2005-May 2007). Sickness may cause further losses due to an inability to work or the need to look after other family member thereby preventing attendance at work. Other impacts include absenteeism and general overburdening of the already over-stretched health service. Overall productivity for the country as a whole is significantly affected.

1.5.3 Drug Resistance

Resistance to chloroquine, which was the former 1st line drug for the treatment of uncomplicated malaria, was first noted in Liberia in 1988. Published and unpublished works by Liberians and partners suggested that chloroquine resistance was between 5% and 17% in 1993 in different parts of the country, and by 1995, had reached 38% resistance¹⁴. Extrapolations from studies done in 2001 in Maryland County revealed that resistance to chloroquine was 74% (CI 59.7-85.4) on day 14 and 84% (CI 95%: 70.9 – 92.8%) on day 28 after PCR analysis.

Resistance to Sulphadoxine Pyrimethamine (SP) which was 2nd line drug for treatment of uncomplicated malaria, was also documented in one site in the country. Those results show a resistance level of 48.5% (CI 95%: 36.2-61.0) on day 14 and 69% on day 28 (CI 95%: CI 95%-71)¹⁵

During the complex emergency period (2003), a consensus was reached on policy change of antimalarial treatment after Artemisinin-based combination therapy or ACT (Artesunate + Amodiaquine) was introduced by humanitarian INGOs working in South-eastern Liberia where Chloroquine resistance had been noted. The new policy recommended the use of ACT instead of Chloroquine for the treatment of uncomplicated malaria and Fansidar (S/P) was reserved for use by pregnant women as IPT.

Currently, the first line drug for treatment of malaria is the Artemisinin-based combination therapy (ACT) comprising of Artesunate and Amodiaquine. No resistance to these drugs has been reported to date.

1.5.4 Mosquito Net Utilization

The proper use of insecticide treated nets (LLITNs) has been shown to reduce the incidence of malaria in the population, especially those who regularly use them. In Liberia, LLITN availability is now widespread due to the Global Fund round 3 grant and support from other partners like UNICEF and INGOs. The recent national survey on measles coverage in 2007 shows that about 54% of households nationwide have at least one LLITN, while the percentage of children under five who slept under an LLITN last night is about 45%¹⁶. Studies carried out by NMCP and other partners show that the population's knowledge on the control and prevention of malaria is about 43%¹⁷.

¹⁴ Freeman, T.L., & Bolay, F.T (1995). In vivo response of *Plasmodium falciparum* to standard chloroquine to standard chloroquine regimen in Buchanan, Grand Bassa County, Liberia (Unpublished)

¹⁵ Checchi, F *et al* (2002) High *Plasmodium falciparum* resistance to chloroquine and sulfadoxine-pyrimethamine in Harper, Liberia: results *in vivo* and analysis of point mutations

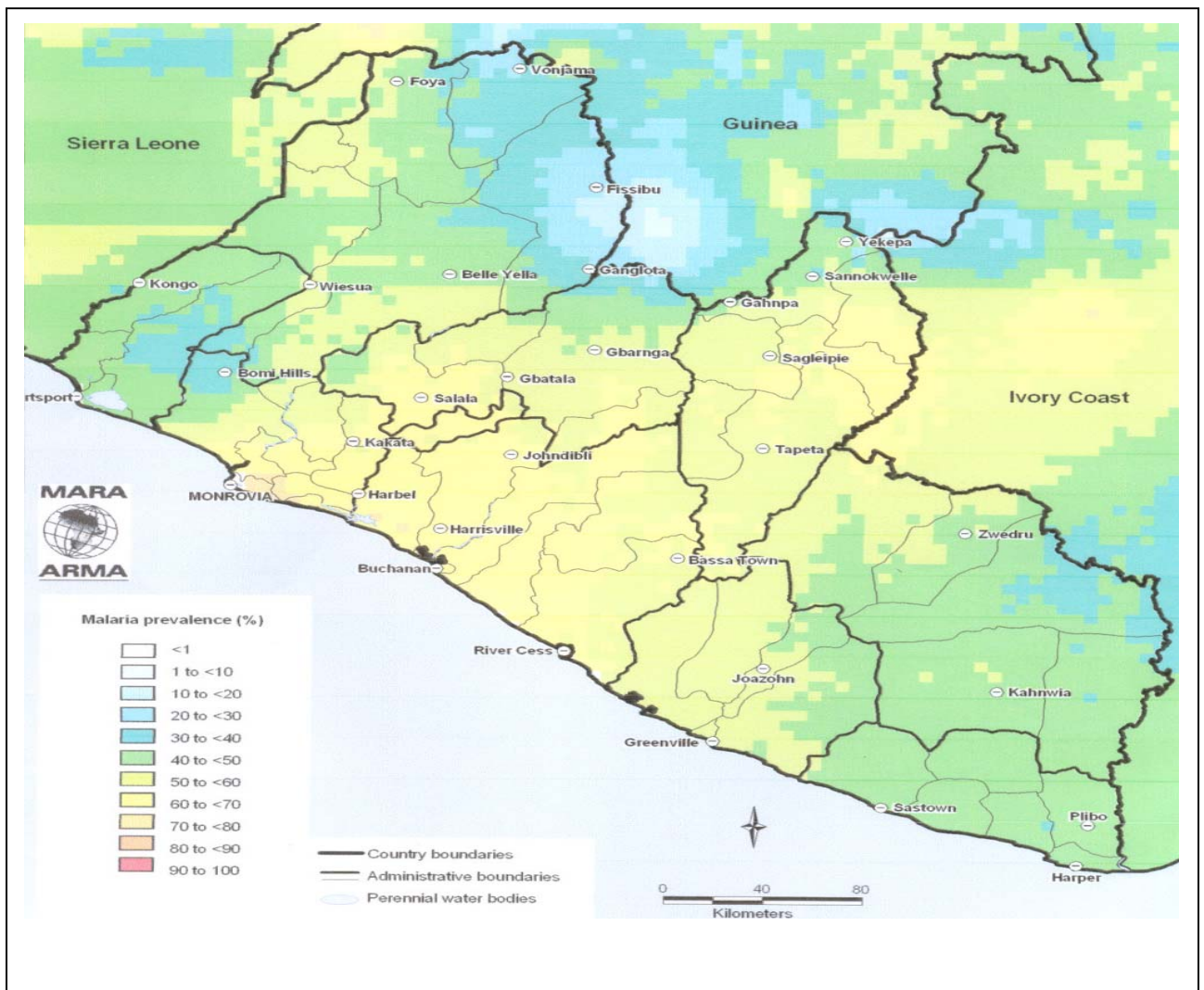
¹⁶ Post-Integrated Measles Coverage Survey, 2007

¹⁷ LMIS, 2005

1.5.5 Epidemiology

Although no thorough studies have been conducted over the last 16 years, there is no reason to believe that the situation has improved but rather deteriorated due to collapse of health system. Results from previous prevalence studies show hyper-holoendemicity (perennial intense transmission with considerable immunity outside of childhood). Prevalence rates have since increased with the displacement, drug resistance problems experienced with chloroquine and poor access to health services. According to the Liberia Malaria Indicator Survey (LMIS) 2005, the prevalence of malaria in children under five is 66%. The major vectors for malaria are *An gambiae* s.s, *An funestus*, *An melas*. The major parasite species are, *P falciparum* (>90%), *P. Ovale*, *P. malariae*¹⁸. **Figure 2** below shows the dynamics of malaria in Liberia.

Figure 2: Dynamics of malaria epidemiology in Liberia



1.6 Current Malaria Control and Prevention Activities

Since 2005, there has been widespread malaria prevention and control activities in Liberia. This is due to the introduction of a policy and strategic plan for malaria control and prevention by the Ministry of Health & Social Welfare in 2004 and subsequent funding of part of this plan by the Global Funds and other key partners like UNICEF and WHO. The current Draft Strategic Plan

¹⁸ Roll Back Malaria-National Desk Analysis-Liberia- 2001

(2009-2013) like the 2004 Strategic Plan, is in line with the Abuja declaration, which the government of Liberia signed in 2000. The measures laid out in this draft national strategy are attempts to fulfill the WHO/RBM objective for reducing malaria morbidity and mortality by 50% by the year 2010. This target is for all African countries including Liberia. However, low access to health care in Liberia, coupled with the disruptions in social services experienced during the 15 years conflict continue to have a negative impact on Liberia's efforts to achieve the Global RBM targets. In addition, effective implementation of RBM strategies started later in Liberia (2005), unlike the rest of Africa that started in 2000 and thus have made considerable progress in achievement of their targets.

For Liberia, a more modest target of 25% reduction in morbidity and mortality due to malaria by 2010 and 50% reduction by 2013 is more realistic considering the remaining challenges in the health system, including current low access to health care.

The main focus of the control activities are:

- Malaria case management using effective antimalarial
- Multiple preventive measures including intermittent preventive treatment for pregnant women,
- The use of insecticide treated nets
- Indoor residual spraying, especially in, targeted communities
- IEC/BCC activities
- Effective stewardship and partnership
- Operational Research
- Monitoring and evaluation (M&E)

1.6.1 Achievement of current Malaria Control and Prevention Activities

Prior to August 2005, large scale interventions to control and prevent malaria were not widespread in Liberia. Although resources from the GFATM were available, procurement and disbursement bottlenecks caused delay in widespread intervention activities until August 2005. **Table 3** on the next page summarizes the major achievements in malaria control and prevention since August 2005.

Table 3: Major achievements in malaria control and prevention since August 2005

Area of Intervention	Key Achievement (2005-2007)	Key Partners
Malaria case management using effective antimalarial (ACTs, Quinine, IM artemether etc)	1,480,531 patients treated	GFATM, UNITAID/UNICEF, WHO, MENTOR, INGOs and LNGOs
Implementation of new antimalarial policy (using ACT)	About 373 health facilities (public & private) implementing the new policy	GFATM, UNITAID/UNICEF, WHO, MENTOR, INGOs and LNGOs
Multiple preventive measures such as intermittent preventive treatment for pregnant women	IPT 1=90,452 IPT 2=68,172	GFATM, Japan/UNICEF, Family Health Division/MOH&SW
Malaria prevention with long-lasting insecticide treated nets (LLITNs)	645,000 LLITNs distributed	GFATM, UNICEF, WHO
Households ownership of LLITNs	54%	GFATM, UNICEF, WHO
IEC/BCC activities	KAP of population on malaria control and prevention is <43%	GFATM, UNICEF
Effective stewardship and partnership	<ul style="list-style-type: none"> • 35 RBM partners to date • 3 pickups, 1 jeep, 1 truck and 1 bus 	GFATM
Operational Research	1 antimalarial drug efficacy study conducted on current drug ACT	GFATM, WHO, MENTOR
Monitoring and evaluation	<ul style="list-style-type: none"> -M&E Unit at NMCP with some capacity -Data base established at NMCP 	GFATM

1.6.2 Challenges in controlling and preventing malaria in Liberia

Despite the achievements from 2005 to 2007, enormous challenges still face the delivery of quality malaria control and prevention services to the Liberian population. Key aspects among these are:

- The general health system challenges such as: low access to health care, low human resource capacity, poor remuneration of staff, brain drain due to civil crises, high illiteracy rate, bad roads, non-functional Health Management Information System resulting in vertical M&E processes with low quality of data, limited county staff capacity to collect, analyze and report data etc.
- The malaria specific challenges include: limited staff capacity in key program areas and limited resources needed to achieve the desired coverage of malaria control and prevention interventions in Liberia.

This five year Draft Malaria Strategic Plan builds on the achievements made thus far while recognizing the challenges and addresses the essential actions to be taken to reduce the morbidity and mortality trend of malaria in Liberia.

CHAPTER 2

2.1 Vision:

A healthier Liberia with universal access to high quality malaria control and preventive services

2.2 Mission Statement:

The Ministry of Health and Social Welfare is dedicated to the provision of comprehensive, accessible and affordable quality malaria control and preventive services, focusing on the reduction of malaria burden in the population, especially among vulnerable groups including pregnant women and children under five years old.

2.3 Program Goal, Objectives and Strategic Interventions:

Goal:

To reduce malaria related morbidity and mortality among the population, especially children under five and pregnant women

General objective:

The overall objective of malaria control in Liberia is to reduce morbidity and mortality due to malaria by 50% by 2013.

Specific objectives:

- To increase access to prompt and effective treatment at health facility and community levels to 70% by 2013
- To increase the use of Intermittent Preventive Treatment (IPT) among pregnant women in Liberia to 70% by 2013
- To increase to 85% the use of Insecticide Treated Nets (LLITNs) among the whole population, especially vulnerable populations such as pregnant women and children under five by 2013
- To ensure effective stewardship of malaria control activities by the National Malaria Control Program
- To increase the use of combination of personal and community protective measures (such as IRS, etc.) among those at risk of malaria in targeted communities

Cross-cutting areas

- To monitor progress and evaluate the impact and outcome of planned interventions
- To increase awareness, knowledge and skills on malaria control and prevention to 80% by 2013
- To generate evidence for policy planning and program management.

Strategic Interventions:

- Case (Disease) Management
- Multiple Prevention Tools (IPT, LLITNs etc)
- Advocacy; Information, Education and Communication
- Strengthening Partnership and Programme Management
- Operation Research
- Monitoring and Evaluation
- Implementation Arrangements

2.5 Programme Targets:

The targets reflect the WHO/RBM objective for reducing malaria morbidity and mortality. However, unlike the WHO/RBM targets of 50% reduction that are set for 2010, the targets covered under this Draft Malaria Strategic Plan are up to 2013. This is because Liberia went through a period of conflict from the signing of the Abuja Declaration to Roll Back Malaria in April 2000 up to 2003. Thus, effective implementation of RBM strategies started in 2005 in Liberia, unlike the rest of Africa that started in 2000. Considering the current low access to health care and limited resources, Liberia will be able to reduce malaria morbidity and mortality by 25% by 2010; and 50% by 2013.

All set targets relating to health facility-based services (for example, access to treatment) took into account the current low access to health care which is 41%. Thus, based on the Ministry of Health's own plan to increase access by providing additional health facilities (on average, 9% annually), this Draft Malaria Strategic Plan estimated an annual increase of 5% in access to health care. It is therefore projected that from 2008 to 2009, access to health care will increase from 45% to 50%, respectively. By 2013, access will have increased to 70%. This Plan is structured to provide malaria control and prevention services to the population accessing health care through the health facilities.

Detailed Program indicators and targets (per objective) are found at the end of this document.

Currently, the national data that exists as baseline is 2 years old (2005). This is because nationwide implementation of activities began 2 years ago, in 2005. A survey needs to be conducted to determine the progress thus far. By 2008, it is hoped that this information will be available.

The following documents were reviewed for baseline data:

1. Demographic and Health Survey 1999/2000, volume III Analytical Report; MPEA and UL
2. The State of the World's Children 2003; UNICEF
3. The Liberia Malaria Indicator Survey, 2005
4. National Malaria Control Program, Routine data, 2006
5. Post-Integrated Measles Coverage Survey, 2007

CHAPTER 3

STRATEGIC INTERVENTIONS (2009 – 2013)

3.1 Case Management

3.1.1 Background/Rationale

Malaria is the leading cause of morbidity and mortality in the Republic of Liberia. It accounts for 38% of the total out patient consultation, 42.30% of inpatient deaths, and 46.41% of under fives deaths.

This high mortality is linked to several factors which include:

- Inadequate supply of effective drugs,
- inadequately trained personnel
- destroyed health infrastructures at all levels of the health care delivery system
- Poor performance of trained health personnel in assessing and managing malaria cases.

To improve the management of malaria, the MOH&SW/NMCP shall ensure adequate supply of effective antimalarial to health facilities in the country. Health workers will also be trained in malaria case management. The strengthening of the community health workers (CHW) system to disseminate malaria control and prevention messages in the communities will also be prioritized. CHWs will be empowered to ensure early referral at the community level. This is more important because at least 60% of the population does not have access to adequate health care services (IPRS, 2006). Prompt access to effective treatment of antimalarial within 24 hours will minimize avoidable deaths from malaria thus decreasing overall deaths due to malaria.

3.1.2 Policy Statement

The Ministry of Health and Social Welfare/NMCP:

- Shall scale up the use Artemisinin-Based Combination Therapy (ACT) by ensuring that all functional public health facilities in the country are implementing the new antimalarial policy
- Shall ensure prompt and effective treatment of malaria at health facility, community and household levels where appropriate. In this light, strategies for home-based management of malaria shall be studied and explored where necessary in order to increase access to health care which currently stands at only 41%.
- Shall ensure that the use of Rapid Diagnostic Tests is encouraged at levels where microscopy or adequately trained staff is lacking.
- Shall ensure laboratory diagnosis is improved through training of laboratory staff and provision of laboratory equipment.
- Sentinel sites shall be established to monitor the efficacy of the recommended anti-malarial drugs to guide policy revision when necessary.

- Shall ensure the establishment of a functional pharmacovigilance system to monitor adverse effects to drugs, especially antimalarial

The Ministry of Health and Social Welfare has approved the use of the following:

- a. Artesunate + Amodiaquine as 1st line drug for the treatment of uncomplicated malaria
- b. Oral Quinine as 2nd line drug for the treatment of uncomplicated malaria
- c. Parenteral Quinine (quinine IV) and IM Artemether for complicated/severe malaria
- d. Oral Quinine for the treatment of pregnant women with uncomplicated malaria during the 1st trimester and Oral Quinine or Artesunate + Amodiaquine during the 2nd and 3rd trimesters.

3.1.3 Objective

To increase access to prompt and effective treatment at health facility and community levels to 70% by 2013.

3.1.4 Targets:

By 2013

- Train 90% of targeted health facility workers in malaria case management
- Train 80% of targeted community health workers, care givers and medicine store dispensers in malaria case management.
- Train all paramedical and medical clinical students
- 95% of targeted health facilities have anti-malarial drugs at all times
- 85% of targeted health facilities have at least 1 trained lab technician
- 80% of targeted health facilities carry out accurate malaria diagnostic tests
- Anti-malarial drugs used in the country are tested for quality

3.1.5 Strategies:

Key strategies will include the following: review of malaria treatment policy; capacity building to improve skills; improving access to diagnostics and treatment services at health facility and community level; and strengthening of health support systems to implement planned activities.

3.1.6 Main Activities

- a. Training of health facility and community level health workers including care-givers, medicine stores and drug peddlers in malaria case management
- b. Procuring, distributing and monitoring drugs and supplies
- c. Strengthening of laboratory services
- d. Undertaking quality assurance of medications

3.1.7 Milestones

- National drug policy on malaria treatment & Intermittent Preventive Treatment revised by March 2009.
- Dissemination and Implementation of revised policy commences by May 2009.
- Availability of effective treatment scaling up plan by May 2009.

3.2 Multiple Prevention

3.2.1 Malaria in Pregnancy

3.2.1.1 Background/Rationale

Malaria infection especially with *P.falciparum* during pregnancy results in a wide range of adverse consequences for the pregnant woman, the developing fetus and the newborn infant. One main effect of malaria infection in pregnant women is anemia, which is often severe and may be life threatening. The main effect on the newborn infant is low birth weight, which is associated with greater risk for disease and death.

The strategic framework for malaria prevention and control during pregnancy in areas of stable transmission recommends three interventions: intermittent preventive treatment (IPT), long-lasting insecticide treated nets (LLITNs) and effective case management of malaria illness and anemia. It has been shown that the use of IPT by pregnant women can improve the outcome of pregnancies both for the mother and the fetus. Use of LLITNs has also shown in a number of studies to reduce both morbidity and mortality from malaria. Thus, it is essential to focus on cost-effective interventions such as IPT and the use of LLITNs to prevent malaria in pregnant women to protect both mother and newborn. These interventions were introduced during the policy change made in 2004.

Since the introduction of IPT in Liberia, the use of Fansidar (S/P) as IPT has been gradually increasing now that access to health care is also gradually increasing (from 16% to 41%). However, because IPT administration is restricted to health facilities, only pregnant women who visit anti-natal clinics (ANC) benefit from the service. Current estimates by the Family Health Division of the MOH put the IPT coverage in Liberia at around 60%. The current Draft Malaria Strategic Plan will support pilot studies on scaling up IPT in communities using trained mid-wives under Operational Research.

3.2.1.2 Policy Statement

The Ministry of Health and Social Welfare

- Has approved the use of Sulphadoxine Pyrimethamine (SP) for Intermittent Preventive Treatment (IPT) for pregnant women and promotes the use of LLITNs for all pregnant women.
- The Ministry of Health & Social Welfare shall ensure that all partners utilize or implement the national strategy.
- Advocacy is an integral component of the malaria control communication strategy as public policy and social norms influence individual behavior. The advocacy component of the National Strategic Plan aims to build a supportive environment for acceptance as well as improvement in access to antimalarial medicines, LLITNs and quality of health service. There are several policy issues that need further clarification and promotion. Example:

3.2.1.3 Objective

- To increase the use of Intermittent Preventive Treatment (IPT) among pregnant women to 70% by 2013
- To increase to 85% the use of LLITNs among pregnant women by 2013

3.2.1.4 Targets:

By 2013

- Train 90% of targeted health workers in the use of IPT
- 95% of pregnant women attending antenatal clinics have access to IPT at no cost to them
- 85% of pregnant women have access to LLITNs at no cost to them

3.2.1.5 Strategies

Key strategies will include the following: periodic review of drug policy on IPT, improving and increasing access to IPT and LLITNs, capacity building and health system support (including integrating the implementation of IPT and LLITNs into relevant programmes such as Reproductive Health and EPI).

3.2.1.6 Main Activities

- Train Health workers to administer IPT
- Procure and distribute SP
- Procure and distribute LLITNs

3.2.1.7 Milestones

- Review of Malaria in Pregnancy policies and strategies conducted by end of January 2009.
- Development of revised IPT implementation guideline by February 2009.
- Dissemination of revised implementation policy guideline by March 2009.
- Develop a scaling up of IPT implementation plan by March 2009.
- Wide scale implementation of IPT by December 2009.

3.2.2 Vector Control

3.2.2.1 Background/Rational

Prevention of malaria contributes to reducing the risk of infection and saving lives. Malaria prevention strategies include vector control measures and personal protection against mosquito bites.

The proper use of long-lasting insecticide treated nets (LLITNs) has been shown to reduce the incidence of malaria in the population, especially those who regularly use them. In Liberia, the use of LLITNs is now widespread due to increased support from donors and partners. Current estimates put the LLITNs coverage at 54% at household level and 45% for children under five who slept under an LLITN. However, this group constitutes only about 20% of the population of the country. In order to achieve high coverage at household level, the rest of the population groups (80%) need to benefit from LLITNs distribution.

One key strategic action to be taken under this Draft Malaria Strategic Plan is the provision of LLITNs to the general population, instead of concentrating on only pregnant women and children. This action is necessary if Liberia is to attain the RBM target of 85% LLITNs coverage at household level.

Indoor residual spraying (IRS) has been shown as an effective malaria control measure in an emergency setting such as the one experienced in Liberia in the past few years. IRS will continue to be used in selected areas in Liberia where the need is greatest. Prior to using IRS in communities, pilot studies will be conducted to guide the exercise.

Environmental modification techniques such as laticiding and biological control using organisms that feed on larval of mosquitoes will be explored through the Universities in an appropriate manner that will help to minimize the vector population in mosquito-infested communities.

3.2.2.2 Policy Statement

The Ministry of Health and Social Welfare:

- Shall continue to advocate for the use of Long Lasting Insecticide Treated Nets
- Shall provide LLITNs at low and/or at no cost to the vulnerable populations (which is the entire population of Liberia)
- Reduce taxes and tariffs on LLITNs

3.2.2.3 Objectives

- To increase to 85% the use of Insecticide Treated Nets (LLITNs) among the whole population, especially vulnerable populations such as pregnant women and children under five
- To increase the use of combination of personal and community protective measures (such as IRS, etc.) among those at risk of malaria in targeted communities

3.2.2.4 Targets:

By 2013

- 90% of households have at least one LLITN
- 85% of vulnerable groups(<5 and pregnant women) have at least one LLITN at no cost to them
- Mosquito-infested communities in Liberia are implementing IRS, environmental and biological control methods where appropriate

3.2.2.5 Strategies

Key strategies will include the following: revision and dissemination of new LLITN policy implementation guideline, development of mechanism to increase access to LLITNs and conduct of IRS, capacity building and health system support (strengthen logistics mechanism to support distribution channels and integrating the use of LLITN into relevant programmes such as Reproductive Health and EPI), provision of support to begin environmental and biological control efforts in targeted communities

3.2.2.6 Main Activities

- Increase access to LLITNs
- Undertaking Indoor Residual Spraying in selected communities
- Undertaking IRS, environmental and biological control measures in targeted communities

3.2.2.7 Milestones

- A task force for vector control activities operational by end of January 2009.
- Revision of LLITN policy implementation guideline by February 2009.
- Dissemination of LLITN policy implementation guideline by March 2009.
- Develop a scaling up LLITN implementation plan by March 2009.
- Wide scale LLITN implementation by December 2009 among the entire population.

3.3 Advocacy; Information, Education & Communication and Behavior Change Communication

3.3.1 Background/Rationale

The Liberia Malaria Indicator survey conducted in 2005 show that 43% of the population knew the cause of malaria. The NMCP will continue to work along with the IEC Division of the Ministry of Health and Social Welfare, media institutions, the Ministry of Education and other stakeholders to revise, test and disseminate current health messages relating to all aspects of malaria control so as to increase the population's knowledge, attitude and practice of malaria control and prevention. Advocacy will also continue at the highest levels of both the government and international community.

Recognizing the important role of international and national agencies as well as religious groups, the Ministry will continue to reinforce partnerships with these and other health care providers in Liberia in order to strengthen the system.

Beyond the implementation of the national plan, the Ministry will act to solicit funds internationally in order to ensure the sustainability of currently planned and supported interventions.

3.3.2 Policy Statement

The Ministry of Health and Social Welfare:

- Shall ensure standardize malaria messages are used by all partners in country
- Shall promote the use of IEC/BCC materials in the community and in schools

3.3.3 Objective

To increase awareness, knowledge and skills on malaria control and prevention to 80% by 2013

3.3.4 Targets:

By 2013

- 85% households nationwide receive malaria related messages
- Train 80% of targeted community health workers, care-givers, and medicine store sellers in the dissemination of malaria related messages
- 35% of households who receive IEC/BCC messages have changed their behaviors.
- 95% of schools receive IEC materials on malaria control and prevention

3.3.5 Strategies

Key strategies will include the following: revision of advocacy strategies with regards to policy issues for the accelerated implementation of RBM activities, Communication strategy, social mobilization and health system support (collaborations with multi-media support, involvement of key stakeholders/partners including faith based organizations and capacity building at all levels).

3.3.6 Main Activities

- a. Knowledge, Attitudes, Beliefs and Practices (KABP) study
- b. Community-Mobilization at all levels
- c. Revision of Strategies (Advocacy & BCC)
- d. Development and revision of IEC/BCC materials
- e. Mass Media (print & electronic)
- f. Training of service providers
- g. Provide IEC/BCC materials to all schools
- h. Integrate Malaria messages into other activities

3.3.7 Milestones

- Revision of Advocacy and IEC materials conducted by end of February 2009.
- Revision of current communication strategy document and advocacy and IEC materials by March 2009.
- Dissemination of revised communication strategy document and its wide scale implementation by December 2009.

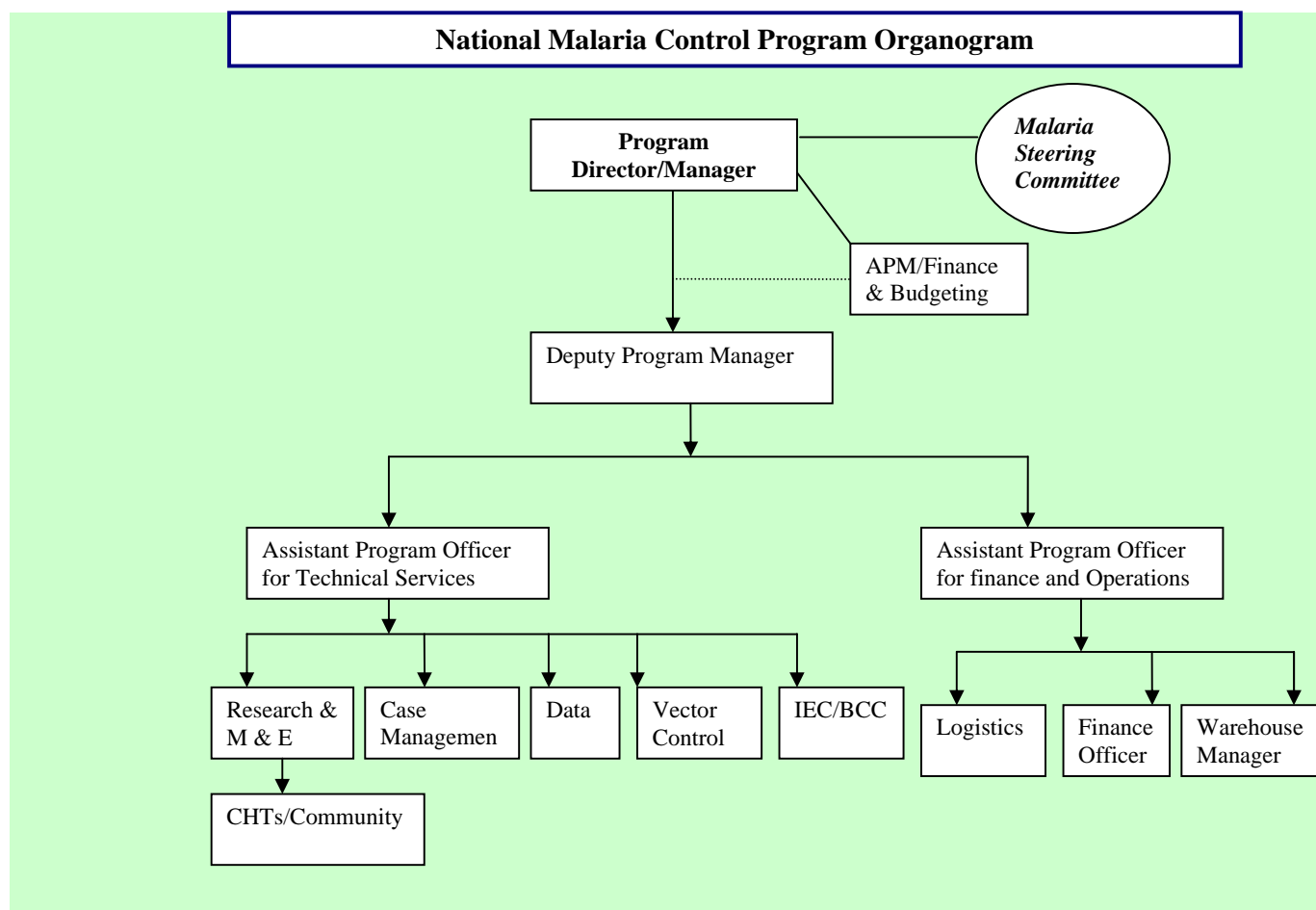
3.4 Program Management and Partnership

3.4.1 Background/Rationale

In order to ensure that the National Malaria Control Program is able to carry out its function of coordinating and providing expert advice on malaria prevention and control activities in the country, it is necessary that the capacity of the program be upgraded in the area of program management, monitoring & evaluation and partnership. This will be a continuous process to ensure that the program at all times has the necessary technical capability and information needed to carry out its roles including fostering effective partnership among all the stakeholders.

Historically, health care delivery in Liberia has been one of partnership between government, religious organization, concessions, international and local humanitarian agencies and private practitioners, including traditional healers and community health workers.

Appropriate mechanisms will be established at national, county and community levels to promote coordination and collaboration among partners.



3.4.2 Policy Statement

The Ministry of Health and Social Welfare:

- Shall encourage all partners and relevant stakeholder to participate in malaria control and prevention activities.
- Encourages and strengthen partnership at all levels.

3.4.3 Objective

- To ensure effective stewardship of malaria control activities by the National Malaria Control Program (NMCP).
- To effectively coordinate malaria control activities at county, districts and community levels.

3.4.4 Targets:

By 2013

- NMCP new headquarters is renovated/built, refurbished and equipped by 2009
- 3 public health specialists trained
- 2 Entomologists trained
- 2 Parasitologist trained
- 2 Data Managers trained in data management and disease surveillance

- 2 Monitoring and Evaluation Specialist trained
- All Units (Data, IEC/BCC, Vector, Case management, Malaria in Pregnancy, Finance & M&E) at NMCP strengthened
- 2 IEC/BCC focal person trained
- 2 Procurement and supply management specialist trained
- 2 Financial management specialist trained
- All malaria control personnel receive incentives commensurate with qualifications and experience.
- At least four consultants provided for operational research, epidemiology and statistical training
- MSC meeting minutes available monthly
- Logistics (Vehicles, stationery, fuel, generator, and administrative support)

3.4.5 Strategies

Key strategies will include the following: partnership strengthening at all levels (developing partnership profile, partnership coordinating mechanism and mobilizing other potential partners); programme management support, capacity building at all levels, resource mobilization and health system support/strengthening.

3.4.6 Main Activities

- a. Building Capacity of the National Malaria Control Program and all Counties staff responsible for malaria control & prevention
- b. Promote coordination and collaboration among partners (sector-wide approach) at community, district, county and national levels.
- c. Promotion of public-private initiatives
- d. Periodic review of national malaria control and prevention documents including strategic plan, policies and guidelines

3.4.7 Milestones

- Inventory of program management needs developed by end of February 2009.
- A partnership framework and profile established by February 2009.
- Partnership structures established and functional at all levels.

3.5 Operational Research

3.5.1 Background/Rationale

Issues related to malaria control including interventions must be based on evidence that is generated through various forms of research. Operational research is an important component of malaria control in that evidence generated can be used to fill gaps and to help policy makers to make informed decisions. It can also be used to assess, monitor and evaluate program interventions in order to continually strengthen programs.

The introduction of LLITNs, ACT, IPT and IRS will necessitate research to determine the continued appropriateness of the approaches taken and ensure that targets are met.

The NMCP has in the past worked with research institutions and technical agencies to carry out research in several aspects of malaria control. During the life of this strategic plan the capacity of the Program will continue to be strengthened to conduct operational research in collaboration with other research institutions. Additional funds to carry out research will be mobilized and provided to the Program for this purpose.

Areas of interest shall include the following:

- Case management Studies
- Vector and vector control studies
- Factors influencing the uptake and proper use of LLITNs
- Studies on malaria epidemiology in Liberia

3.5.2 Policy Statement

The Ministry of Health and Social Welfare:

- Encourages the use of operational research in malaria prevention and control

3.5.3 Objective

To generate evidence for policy planning and program management

3.5.4 Targets:

By 2013

- Sentinel sites established in each of the 4 regions
- 4 sensitivity studies on current and alternative antimalarial drugs conducted
- 2 studies on current and alternative insecticides conducted
- 2 studies on adherence to ACT conducted
- 2 studies on malaria epidemiology conducted

3.5.5 Strategies

Key strategies will include the following: collaboration with research institutions, universities and other researchers to undertake relevant malaria control related operation research for program and policy improvement; capacity development at all levels in operational research and strengthening the health system.

3.5.6 Main Activities

- Adaptation of regional guidelines on operational research for RBM
- Training of health personnel at national and county levels on operational research
- Support the conduct of operational research

3.5.7 Milestones

- Revision of a research agenda by February 2009.
- Revised guidelines on operational research adapted by March 2009.

3.6 Monitoring and Evaluation

3.6.1 Background/Rationale

Monitoring and evaluation is a crosscutting issue and major component of the National Malaria Control Program. Information gathered will be used to track performance and implementation.

The NMCP will develop an elaborate monitoring and evaluation system for the current Draft Strategic Plan in collaboration with the Department of Planning at the Ministry of Health and Social Welfare and other technical partners. This system will be integrated with the Health Management and Information System (HMIS) of the Ministry of Health. A more detailed operational monitoring & evaluation plan will be prepared for use yearly and revised when necessary. Malaria specific indicators will be selected from the RBM core indicators to measure performance. Data collected will be analyzed and discussed with stakeholders.

3.6.2 Policy Statement

The Ministry of Health and Social Welfare:

- Shall encourage monitoring and evaluation at all levels.

3.6.3 Objective

To monitor progress and evaluate the impact and outcome of planned interventions

3.6.4 Targets:

By 2013

- A functional monitoring and evaluation system, including surveillance, with regular feedback mechanisms established at the national level.
- M&E Units established in each county
- 44 County registrars from the CHT trained in data management
- Periodic review of program activities
- Annual Malaria Report Produced

3.6.5 Strategies

Key strategy will include the following: strengthening of M&E at all levels especially national and county levels.

3.6.6 Main Activities

- Development of yearly M&E Plan based on yearly work plan
- Revision and standardization of Monitoring and Evaluation tools
- Strengthen data units at county level
- Routine data collection, collation, analysis, and reporting at all levels
- Conduct Liberia Malaria Indicators Survey (LMIS) every 2-3 years
- Carry out monthly field visits by County Health Teams
- Quarterly field visits by the National Malaria Control Program
- Activities reviewed Annually and Bi-annually
- Production of Annual report for malaria Control and prevention

3.6.7 Milestones

- Revised M&E guidelines adapted and disseminated by February 2009.
- LMIS results available by February, 2009.
- Strengthening M&E capacity at National and County levels by December 2009.
- M&E Tools revised and disseminated by January 2009

3.7 Implementation Arrangements

The National Malaria Control Program is the technical arm of the Ministry of Health and Social Welfare that is responsible for planning, training, monitoring, coordinating, and mobilizing resources as well as the evaluation of malaria control activities throughout the country. The Program has the capacity to provide support for the following:

- Training / Malaria Case Management
- Malaria in Pregnancy
- Research, Monitoring and Evaluation
- Data Management
- Prevention and Vector Control
- IEC/BCC /Advocacy

At the national level, there is a Malaria Steering Committee made up of partners. This body serves as an advisory body to the Program and is chaired by the National Program Manager.

Consistent with the MOH current plans of decentralization, the activities under each unit at the county level are integrated into the Community Health Department under the supervision of the Community Health Director. The County Health Team (CHT) lead by the County Health Officer (CHO) coordinates appropriate activities at their level.

The Ministry will bring effective malaria control as close as possible to the community. As part of primary health care systems, Community Health workers will be trained, equipped and deployed. Mothers and caregivers will also be trained in home-based management of fever and the prevention of malaria.

CHAPTER 4
BUDGET SUMMARY (USD)
ESTIMATES BY INTERVENTION AND YEAR
(2009 – 2013)

Intervention	2009	2010	2011	2012	2013	TOTAL
Case Management	11,688,618	12,286,158	13,365,325	13,683,036	13,987,771	65,010,908
Multiple Disease Prevention (LLITNs, IRs, MIP etc)	3,821,673	4,434,329	6,005,751	6,405,273.05	2,316,800	22,983,826
Advocacy, IEC/BCC	1,237,500	958,000	970,000	969,000	963,000	5,097,500
Program Management and Partnership	1,622,191	646,800	594,800	595,800	602,800	4,062,391
Operational Research	413,482	270,515	20,000	225,515	20,000	949,512
Monitoring and Evaluation (includes systems strengthening)	1,518,041	2,757,675	1,862,282	2,962,327	2,571,201	11,671,524
TOTAL ESTIMATE	20,301,504	21,353,476	22,818,158	24,840,951	20,461,572	109,775,661

CHAPTER 5

OVERALL PROGRAM INDICATORS

GENERAL OBJECTIVE: To reduce morbidity and mortality due to malaria by 50% by 2013.

	INDICATOR(S) (impact)	BASELINE (LMIS, 2005)	TARGET %				
			2009	2010	2011	2012	2013
1. To reduce the malaria morbidity and mortality among the under fives by 50 % of the 2005 baseline year by 2013	% reduction of malaria morbidity among under fives at health facility level	59.15%		14.78%			29.6%
	% reduction of malaria mortality among under fives at health facility level	46.41%		11.6%			23.2%
	% reduction of malaria morbidity among under fives at community level	90.5%		22.63%			45.25%
2. To reduce the malaria morbidity and mortality among pregnant women by 50% of 2005 baseline year by 2013.	% reduction of malaria morbidity among pregnant women at health facility level	30.65%		7.66%			15.33%
	% reduction of malaria mortality among pregnant women at health facility	42.35%		10.60%			21.20%

MALARIA CASE MANAGEMENT INDICATORS

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year]	Targets				
			2009	2010	2011	2012	2013
1. To increase access for early diagnosis and prompt treatment of all malaria cases to 70 % by 2013	% of U5s affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at health facility level	-		30%		50%	70%
	% of U5s affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at community level	5.26%		30%		40%	50%
	% of Pregnant women affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at health facility level	-		30%		50%	70%
	% of Pregnant women affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at community level	-		30%		40%	50%

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year]	Targets				
			2009	2010	2011	2012	2013
1. To increase access for early diagnosis and prompt treatment of all malaria cases to 70 % by 2013	% of all cases affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at health facility level	-		30%		50%	70%
	% of targeted health facility workers trained in case management	>50%, 2007 estimates		60%		80%	90
	% of targeted community health worker, care givers, medicine store dispensers trained in case management	>50%, 2007 estimates		65%		75%	80%
	% of paramedical and medical clinical students trained in case management	50%, 2007 estimates		70%		90%	100%
	% of targeted health facilities without stock-outs of anti-malarial drugs during the last 3 months	48% [NMCP monitoring report, 2006]		70%		90%	95%
	% of targeted health facilities that carry out accurate malaria diagnostic tests	41.43% (clinical) [LMIS, 2005]		65%		75%	80%

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year]	Targets				
			2009	2010	2011	2012	2013
	% of targeted laboratory staff trained in microscopic diagnosis of malaria	< 25% [NMCP routine data, 2006]		50%		75%	85%
	Number of quality assurance reports on anti-malaria drugs	0 [2006]		1		2	2

MULTIPLE DISEASE PREVENTION INDICATORS

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year]	Targets				
			2009	2010	2011	2012	2013
To increase to 85% the percentage of children under-five sleeping under LLITNs in all the districts	% of children under five sleeping under LLITNs.	45% [Measles Coverage Survey, 2007]		70%		80%	85%
To increase to 85% the percentage of pregnant women sleeping under LLITNs in all the districts	% of pregnant women sleeping under LLITNs.	31% [LMIS, 2005]		60%		80%	85%
To increase the percentage of the use of LLITNs at household level	% of households having at least one ITN	54%, [Measles Coverage Survey, 2007]		75%		85%	90%
To attain 95% of pregnant women receiving IPT in all the districts	% of pregnant women receiving IPT at targeted clinics with antenatal services	60% [FHD/MOH routine data, 2006]		75%		80%	95%
	% of targeted health facility with antenatal services implementing IPT	>65%, 2007 estimates		85%		95%	95%
To increase the use of IPT	% of targeted health workers trained on the implementation of IPT in targeted ante-natal clinics	>50%, 2007 estimates		60%		80%	90%

INDICATORS FOR ADVOCACY, IEC/BCC INDICATORS

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year]	Targets				
			2009	2010	2011	2012	2013
1. To increase awareness and knowledge and skills on malaria control and prevention	% of households nationwide that received malaria related messages	>43%, LMIS, 2005		60%		80%	85%
	% of targeted community health workers, care-givers, medicine store sellers trained in the dissemination of malaria control and prevention messages.	-		50%		70%	80%
	% of households, whose behaviors have changed as a result of the IEC/BCC messages they received.	<5%, 2005 estimates		20%		30%	35%
	% of schools that received IEC materials on malaria control and prevention	<10%, 2007 estimates		50%		85%	95%

PROGRAM MANAGEMENT AND PARTNERSHIP INDICATORS

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year, 2006]	Targets				
			2009	2010	2011	2012	2013
To ensure effective stewardship of malaria control activities by the National Malaria Control Program.	Infrastructural strengthening of NMCP.	Small building used as office	Completed multi-purpose building	-	-	-	-
	Number of NMCP staff trained in public health (epidemiologist etc.)	1	1	1	1	-	-
	Number of NMCP staff trained in Entomology.	N/A	1	-	1	-	-
	Number of NMCP staff trained in Parasitology	1	1	-	-	1	-
	Number of staff adequately trained in data management and disease surveillance	1 (not adequately trained)	1	-	-	-	-
	Number of staff adequately trained in procurement and supply management	N/A	-	-	1	-	-
	Number of staff adequately trained in financial management	N/A	1	1	-	-	-

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year, 2006]	Targets				
			2009	2010	2011	2012	2013
	Number of NMCP staff with adequate training in Monitoring & Evaluation	1 (not adequately trained)	1	-	1	-	-
	Strengthening of all NMCP Units	Not adequately strengthened	strengthened	strengthened	strengthened	strengthened	strengthened
	Number of NMCP staff trained in IEC/BCC	1 (not adequately trained)	1	-	1	-	-
	Number of national malaria control staff that received incentives commensurate with qualification	17 out of 23 (74%)	29	31	33	35	37
	Number of technical support received for operational research, program management, epidemiology, PSM, and statistics	1	1	1	1	1	-
To effectively coordinate malaria control activities at county, districts and community levels	Number of MSC meeting minutes available	12	12	12	12	12	12
	Number of identified RBM partners implementing RBM interventions (activities)	35	35	40	40	45	45
	% of districts with functional RBM partnership	25%	50%	65%	60%	65%	70%

OPERATIONAL RESEARCH INDICATORS

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year, 2007]	Targets				
			2009	2010	2011	2012	2013
To generate evidence for policy planning and program management	Number of sentinel sites established	1	1	1	-	-	-
	Number of anti-malarial drug (CT, preferable ACT) sensitivity studies conducted	1	1	-	1	-	-
	Number of malaria vector sensitivity studies conducted with insecticide (in current use)	0	-	1	-	1	-
	Number of drug adherence studies conducted	0	-	1	-	1	-
	Number of studies on malaria epidemiology	0	1	-	-	-	-

MONITORING AND EVALUATION INDICATORS

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE [year, 2006s]	Targets				
			2009	2010	2011	2012	2013
To establish a functional monitoring and evaluation system by end of 2013.	No. of regular M&E feedback reports produced	4	4	4	4	4	4
	Functional malaria databases at national and county levels.	1	8	16	16	16	16
	Number of review meetings conducted by NMCP at national level	2	2	2	2	2	2
	Availability of Abuja targets data	Yes	Yes	-	Yes	-	Yes

CHAPTER 6

FRAMEWORK FOR STRATEGIC PLAN MONITORING

INDICATOR	SOURCE OF DATA	PERIODICITY/ FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
IMPACT				
Morbidity & mortality rate: % reduction in morbidity and mortality due to malaria	Service statistics /Routine HF data	Monthly, Quarterly, Annually	Periodic validation	MOH & SW/NMCP and partners
	Household survey reports	Every two years	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions
	Operational research reports	Annually/as necessary	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions
COVERAGE/ OUTCOME				
% of Pregnant women affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs	Routine HF reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
	Health Facility survey	Annually/as necessary	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
	Household/	Annually/two	Peer review of study	MOH &

INDICATOR	SOURCE OF DATA	PERIODICITY/FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
	Community survey	yearly	design and analysis	SW/NMCP/Research Institutions/other partners
% of all cases affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs	Routine HF reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
	Health Facility survey	Annually/as necessary	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
	Household/Community survey	Annually/two yearly	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
% of children under five sleeping under LLITNs.	Household/Community survey	Annually/two yearly	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
% of pregnant women sleeping under LLITNs.	Household/Community survey	Annually/two yearly	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
% of households having at least one ITN	Household/Community survey	Annually/two yearly	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
% of pregnant women receiving IPT at targeted	Health Facility	Monthly, Quarterly,	Periodic validation/	MOH & SW/NMCP and

INDICATOR	SOURCE OF DATA	PERIODICITY/ FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
clinics with antenatal services	reports	annually	Monitoring visits	partners
% of targeted health facility with antenatal services implementing IPT	Health Facility reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of households nationwide that received malaria related messages	Household/ Community KAP survey	Annually/two yearly	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
INPUT/PROCESS/ OUTPUT				
% of targeted health facility staff and community health workers trained in case management and MIP	Training reports	Periodically	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of paramedical and medical clinical students trained in case management	Training reports	Periodically	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of targeted health facilities without stock-outs of anti-malarial drugs during the last 3 months	Routine HF Reports/data Supply records from NDS	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of targeted health facilities that carry out accurate malaria diagnostic tests	Routine HF Reports/data	Monthly, Quarterly, annually Annually/as	Periodic validation/ Monitoring Visits Peer review of study	MOH & SW/NMCP and partners MOH &

INDICATOR	SOURCE OF DATA	PERIODICITY/ FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
	HF survey report	necessary	design and analysis	SW/NMCP/Research Institutions/other partners
% of targeted laboratory staff trained in microscopic diagnosis of malaria	Training reports	Periodically	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
Number of quality assurance reports on anti-malaria drugs	Drug quality assurance reports	Biannually	Periodic validation/ Monitoring visits	MOH & SW/NMCP/ Pharmacy division
% of shelters sprayed with IRS in the targeted communities	NMCP IRS report	Monthly, Quarterly, annually	Periodic validation/ Monitoring Visits to sprayed communities	MOH & SW/NMCP and partners
	Survey reports	Periodically	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
% of targeted health workers trained on the implementation of IPT in targeted ante-natal clinics	Training reports	Periodically	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of targeted community health workers, care-givers, medicine store sellers trained in the dissemination of malaria control and prevention messages.	Training reports	Periodically	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of households, whose behaviors have changed as a result of the IEC/BCC messages they received.	Household/ Community KAP survey	Annually/two yearly	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners

INDICATOR	SOURCE OF DATA	PERIODICITY/FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
% of schools that received IEC materials on malaria control and prevention	MCD/MOE County reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/MOE/NMCP and partners
Infrastructural strengthening of NMCP	MCD reports	Monthly, Quarterly, annually	Periodic validation/ reviews	MOH & SW/NMCP
Number of NMCP staff and other health staff trained in public health/Entomology/ parasitology/M&E/data management/disease surveillance/M&E/IEC-BCC	Training reports	Periodically	Periodic validation/ Availability of certificates	MOH & SW/NMCP
Number of technical support received for operational research, programme management, epidemiology and statistics and training	Mission Reports	Periodically	Periodic validation/ reviews	MOH & SW/NMCP
Number of MSC meeting minutes available	MSC Meeting Reports	Monthly	Periodic validation/ reviews	MOH & SW/NMCP and partners
% of identified RBM partners implementing RBM interventions (activities)	County/ MCD reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
% of districts with functional RBM partnership	Districts /County/ MCD reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
Number of sentinel sites established	Districts /County/ MCD reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
Availability of Abuja targets baseline data	Survey report	Periodically	Peer review of study	MOH &

INDICATOR	SOURCE OF DATA	PERIODICITY/ FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
			design and analysis	SW/NMCP/Research Institutions/other partners
Number of county registrars in the health facilities trained in data management	Training reports	Periodically	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
Number of anti-malarial drug (CT preferable ACT) sensitivity studies conducted	Study report	Periodically	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
Number of malaria vector sensitivity studies conducted with insecticide (in current use)	Study report	Periodically	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
Number of drug compliance studies conducted	Study reports	Periodically	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
Number of studies conducted on the use of rectal artesunate as a pre-referral drug	Study reports	Periodically	Peer review of study design and analysis	MOH & SW/NMCP/Research Institutions/other partners
M&E focal person (epidemiologist) and data manager in place	MCD report	Annual	Periodic validation/ reviews	MOH & SW/NMCP
No. of regular M&E feedback reports produced	Districts /County/ MCD M&E reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners

INDICATOR	SOURCE OF DATA	PERIODICITY/ FREQUENCY	DATA QUALITY ASSURANCE	PRIMARY RESPONSIBILITY
Functional malaria data bases at national and county levels.	County/ MCD reports	Monthly, Quarterly, annually	Periodic validation/ Monitoring visits	MOH & SW/NMCP and partners
Number of activity review meetings conducted by NMCP at national level	MCD reports Review Meeting reports	Biannually, annually	Periodic validation/ reviews	MOH & SW/NMCP

Other areas that may need monitoring:

Disease (case) Management:

- Monitoring quality of training activities at all levels
- Monitoring of service provision at facility, community and home levels
- Monitor acceptability of policy & implementation of reviewed policy guidelines
- Monitor accessibility to care
- Monitor the quality of antimalarial drugs
- Monitor the Pharmacovigilance system in place

Disease Prevention:

- LLITNs : Quality of LLITNs e.g. the nets and insecticides
- IPT in Pregnancy: Monitor implementation of IPT
- IRS: Monitor the implementation of IRS

Operational Research:

- Monitor utilization trend of research findings (i.e translating research findings into policy)

Partnership:

- Monitor process of partnership building
- Monitor output of RBM partners and stakeholders
- Monitor level of community ownership of RBM
- Monitor inter-sectoral collaboration among relevant partners

IEC/BCC and Mobilization:

- Monitor quality, quantity and efficacy (process, output, outcome and impact) of IEC/BCC materials and advocacy strategies.

ANNEX

REVISED DRAFT

NATIONAL MALARIA STRATEGIC PLAN

FOR 2008

RATIONALE FOR REVISION

This revised Malaria Strategic Plan for 2008 contains updated information on the targets and budget for 2008. This revised Plan is developed at the time when Liberia is transitioning from a post-conflict situation to a more stable development stage, characterized by low access to health care estimated at 41% (Interim Poverty Reduction Strategy (IPRS, 2006)) due to breakdown of health services and bad road conditions, poor staff motivation due to lack of both remuneration and incentives and lack of adequately trained manpower resulting from brain-drain.

This revised Plan is based on what is now accepted as best practices globally and is in line with the RBM recommended strategies for malaria control in malaria endemic countries. This document provides a blueprint for malaria control in Liberia for next year (2008) taking into consideration the present post-war transition period and moving on towards a more stable development period. It is being developed based on recommendations put forth in the previous Strategic Plan (2004-2008) that the Plan be reviewed periodically and necessary strategic changes be made to conform to the existing reality.

Consequently, the NMCP organized a three-day review meeting with key partners to review malaria control activities and the Strategic Plan (2004-2008) and make necessary recommendations for improvement.

The participants recognized that indeed, since the development and subsequent implementation of the Strategic Plan from 2004 to present (2007), a lot of issues have arisen which necessitate the revision of the current Strategic Plan. The issues recognized include:

- Poor information on the post-conflict malaria situation in Liberia, resulting in the costing of key malaria control activities not being adequately done. There was a gross underestimation of total needs
- Poor information on the health system's capacity to deliver needed services in malaria control & prevention
- The Strategic Plan was generally designed to meet the immediate needs of a complex emergency situation which no longer exists
- The Strategic Plan was developed at a time when only 1/3 of the country was accessible due to insecurity in the rest of the country, a situation which has changed since the election of a democratic government in 2005. All 15 counties are now accessible.
- The previous Strategic Plan targeted only children under five and pregnant women for free ITNs distribution and yet aimed for a national household coverage of 80%. Since the targeted

population constitutes only 20% of the total population, achieving a 100% coverage in that population does not necessarily translate into 80% national coverage.

- Some targets were too high and did not take into consideration the low access to health care services (16%) at the time.

At a national stakeholders meeting in May, 2007 a consensus was reached on this Revised Draft National Malaria Strategic Plan for 2008. The current revised Plan for 2008 addresses all of the above issues in ways that conform to the existing realities in Liberia.

This Draft Plan will be further reviewed by a broader segment of the malaria control and prevention partners including the RBM partners before the final, official copy is printed.

Case Management

Targets: (detailed indicators and targets are found at the end of this document)

By 2008

- Train 45% of targeted health facility workers in malaria case management
- Train 50% of targeted community health workers, care givers and medicine store dispensers in malaria case management.
- Train 55% of paramedical and medical clinical students
- 50% of targeted health facilities have anti-malarial drugs at all times
- 30% of targeted health facilities have at least 1 trained lab technician
- 50% of targeted health facilities carry out accurate malaria diagnostic tests
- Anti-malarial drugs used in the country are tested for quality

Strategies:

Key strategies will include the following: review of malaria treatment policy; capacity building to improve skills; improving access to diagnostics and treatment services at health facility and community level; and strengthening of health support systems to implement planned activities.

Main Activities

- e. Training of health facility and community level health workers including care-givers, medicine stores and drug peddlers in malaria case management
- f. Procuring and distributing drugs and supplies
- g. Strengthening of laboratory services
- h. Undertaking quality assurance of medications

Milestones

- National drug policy on malaria treatment & Intermittent Preventive Treatment revised by March 2008.
- Dissemination and Implementation of revised policy commences by May 2008.
- Availability of effective treatment scaling up plan by May 2008.

Multiple Prevention

Malaria in Pregnancy

Targets:

By 2008

- Train 45% of targeted health workers in the use of IPT
- 65% of pregnant women attending antenatal clinics have access to IPT at no cost to them
- 65% of pregnant women have access to ITNs at no cost to them

Strategies

Key strategies will include the following: periodic review of drug policy on IPT, improving and increasing access to IPT, capacity building and health system support (including integrating the implementation of IPT into relevant programmes such as Reproductive Health and EPI).

Main Activities

- a. Train Health workers to administer IPT
- b. Procure and distribute SP
- c. Procure and distribute ITNs

Milestones

- Establishment of a task force for review of Malaria in Pregnancy policies and strategies operational by end of September 2008.
- Development of revised IPT implementation policy guideline by October 2008.

Vector Control

Targets:

By 2008

- 65% of households have at least one ITN
- 65% of vulnerable groups (<5 and pregnant women) have at least one ITN at no cost to them

Strategies

Key strategies will include the following: revision and dissemination of new ITN policy implementation guideline, development of mechanism to increase access to ITNs and conduct studies on IRS, capacity building and health system support (strengthen logistics mechanism to support distribution channels and integrating the use of ITN into relevant programmes such as Reproductive Health and EPI), provision of support to begin environmental and biological control efforts in targeted communities

Main Activities

- Increase access to ITNs
- Undertaking Indoor Residual Spraying in selected communities
- Undertaking environmental and biological control measures in targeted communities

Milestones

- A task force for the implementation of vector control activities operational by end of March 2008.
- Revision of ITN policy implementation guideline by March 2008.
- Dissemination of ITN policy implementation guideline by April 2008.
- Develop a scaling up ITN implementation plan by April 2008.
- Wide scale ITN implementation by December 2008 among the entire population.

Advocacy; Information, Education and Communication and Behavior Change Communication

Targets:

By 2008

- 45% households nationwide receive malaria related messages
- Train 30% of targeted community health workers, care-givers, and medicine store sellers in the dissemination of malaria related messages
- 7% of households who receive IEC/BCC messages have changed their behaviors.
- 20% of schools receive IEC materials on malaria control and prevention

Strategies

Key strategies will include the following: revision of advocacy strategies with regards to policy issues for the accelerated implementation of RBM activities, Communication strategy, social mobilization and health system support (collaborations with multi-media support, involvement of key stakeholders/partners including faith based organizations and capacity building at all levels).

Main Activities

- a. Community-mass education campaigns
- b. Provide IEC/BCC materials to all schools
- c. Training in malaria messages

Milestones

- Establishment of a task force for the revision of Advocacy and IEC materials operational by end of February 2008.
- Revision of current communication strategy document and advocacy and IEC materials by March 2008.
- Dissemination of revised communication strategy document and its wide scale implementation by December 2008.

Program Management and Partnership

Targets:

By 2008

- One M&E Specialist trained
- All Units (Data, IEC/BCC, Vector, Case management, Malaria in Pregnancy, Finance & M&E) at NMCP strengthened
- 1 Procurement and supply management specialists trained
- All malaria control personnel receive incentives commensurate with qualifications and experience.
- At least four consultants provided for operational research, program management, epidemiology and statistical training
- MSC meeting minutes available monthly
- Logistics (Vehicles, stationery, fuel, generator, and administrative support)

Strategies

Key strategies will include the following: partnership strengthening at all levels (developing partnership profile, partnership coordinating mechanism and mobilizing other potential partners); programme management support, capacity building at all levels, resource mobilization and health system support/strengthening.

Main Activities

- e. Building Capacity of the National Malaria Control Program and all Counties staff responsible for malaria control & prevention
- f. Promote coordination and collaboration among partners (sector-wide approach) at community, district, county and national levels.
- g. Promotion of public-private initiatives
- h. Periodic review of national malaria control and prevention documents including strategic plan, policies and guidelines

Milestones

- Inventory of program management needs developed by end of February 2008.
- A partnership framework and profile established by February 2008.
- Partnership structures established and functional at all levels.

Operational Research

Targets:

By 2008

- 1 Sentinel site established
- 1 sensitivity studies on current and alternative antimalarial drugs conducted
- 1 studies on current and alternative insecticides conducted

- 1 studies on adherence to ACT conducted
- One study conducted on the use of rectal artesunate as a pre-referral drug.
- 1 Pilot studies conducted on scaling up IPT in communities
- 1 Study on IRS conducted

Strategies

Key strategies will include the following: collaboration with research institutions, universities and other researchers to undertake relevant malaria control related operation research for program and policy improvement; capacity development at all levels in operational research and strengthening the health system.

Main Activities

- Adaptation of regional guidelines on operational research for RBM
- Training of health personnel at national and county levels on operational research
- Support the conduct of operational research

Milestones

- Development of a research agenda by February 2008.
- Guidelines on operational research adapted by February 2008.

Monitoring and Evaluation

Targets:

By 2008

- A functional monitoring and evaluation system, including surveillance, with regular feedback mechanisms established at the national level.
- M&E Units established in some counties
- 44 County registrars from the CHT trained in data collection
- 15 data managers trained at county level
- Periodic review of program activities
- Annual Malaria Report Produced

Strategies

Key strategy will include the following: strengthening of M&E at all levels especially national and county levels.

Main Activities

- Development of Broad M&E System based on Strategic Plan
- Development of yearly M&E Plan based on yearly work plan
- Revision and standardization of Monitoring and Evaluation tools.
- Train 44 county registrars in data collection
- Train 15 data managers at county level
- Routine data collection, collation, analysis, and reporting at all levels

- Conduct Liberia Malaria Indicators Survey (LMIS) every 2-3 years
- Carry out monthly field visits by County Health Teams
- Quarterly field visits by the National Malaria Control Program
- Activities reviewed Annually and Bi-annually
- Production of Annual report for malaria Control and prevention

Milestones

- M&E guidelines adapted and disseminated by February 2008.
- LMIS conducted by December 2008.
- Strengthening M&E capacity at National and county level by December 2008

Implementation Arrangements

The National Malaria Control Program is the technical arm of the Ministry of Health and Social Welfare that is responsible for planning, training, monitoring, coordinating, mobilizing resources and the evaluation of malaria control activities throughout the country. The Program has the capacity to provide support for the following:

- Training / Malaria Case Management
- Malaria in Pregnancy
- Research, Monitoring and Evaluation
- Data Management
- Prevention and Vector Control
- IEC/BCC /Advocacy

At the national level, there is a Malaria Steering Committee made up of partners. This body serves as an advisory body to the Program and is chaired by the National Program Manager.

At the county level, the activities under each unit are integrated into the Community Health Department under the supervision of the Community Health Director. The County Health Team (CHT) lead by the County Health Officer (CHO) coordinates appropriate activities at their level.

The Ministry will bring effective malaria control as close as possible to the community. As part of primary health care systems, Community Health workers will be trained, equipped and deployed. Mothers and caregivers will also be trained in home-based management of fever and the prevention of malaria.

BUDGET SUMMARY (USD) ESTIMATES BY INTERVENTION FOR 2008:

Intervention	2008
Case Management	10,963,555.3
Multiple Disease Prevention (ITNs, IRS, MIP etc)	3,621,545
Advocacy, IEC/BCC	1,233,000
Program Management and Partnership	1,047,190.5
Operational Research	498,515
Monitoring and Evaluation	2,319,902.8
TOTAL ESTIMATE	19,683,708.6

INDICATORS FOR DISEASE (CASE) MANAGEMENT:

OBJECTIVE	INDICATOR(S) Outcome/coverage	BASELINE (year)	2008
1. To increase access for early diagnosis and prompt treatment of all malaria cases to 10 % by 2008	% of U5s affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at health facility level	<6% 2005 estimates	7%
	% of U5s affected by malaria having access to prompt, appropriate, and affordable treatment within 24 hrs at community level	5.26% LMIS, 2005	10%

INDICATOR(S) (Input/process)

1. To increase access for early diagnosis and prompt treatment of all malaria cases to 10% by 2008	INDICATOR(S) (Input/process)	BASELINE (year)	TARGETS 2008
		% of targeted health facility workers trained in case management	>40% 2006 estimates
	% of targeted community health worker, care givers, medicine store dispensers trained in case management	>40% 2006 estimates	50%
	% of paramedical and medical clinical students trained in case management	>45 %, 2006 estimates	55%
	% of targeted health facilities without stock-outs of anti-malarial drugs at all times	48% NMCP monitoring report, 2006	50%
	% of targeted health facilities that carry out accurate malaria diagnostic tests	41.43% (clinical) LMIS, 2005	50%
	% of targeted laboratory staff trained in microscopic diagnosis of malaria	< 20% NMCP routine data, 2006	30%
	Number of quality assurance reports on anti-malaria drugs	0 2006	1

INDICATOR(S) FOR MULTIPLE DISEASE PREVENTION

OBJECTIVES	INDICATOR(S) Outcome/coverage	BASELINE (year)	TARGETS (%)
			2008
To increase the percentage of children under-five sleeping under ITNs in all the districts	% of children under five sleeping under ITNs.	45% Measles Coverage Survey, 2007	55%
To increase the percentage of pregnant women sleeping under ITNs in all the districts	% of pregnant women sleeping under ITNs.	31% LMIS, 2005	45%
To increase the percentage of the use of ITNs at household level	% of households having at least one ITN	54%, Measles Coverage Survey, 2007	65%
To attain 50% of pregnant women receiving IPT in all the districts	% of pregnant women receiving IPT at targeted clinics with antenatal services	60% FHD/MOH data, 2006)	65%
	% of targeted health facility with antenatal services implementing IPT	>65%, 2007 estimates	80%
	% of targeted health workers trained on the implementation of IPT in targeted ante-natal clinics	>40%, 2006 estimates	45%

INDICATORS FOR ADVOCACY, IEC/BCC

OBJECTIVES	INDICATOR(S) Input/process/outcome	BASELINE 2005	TARGETS (%)
			2008
1. To increase awareness and knowledge on malaria control and prevention	% of households nationwide that received malaria related messages	>43	45%
	% of targeted community health workers, care-givers, medicine store sellers trained in the dissemination of malaria control and prevention messages.		30%
	% of households, whose behaviors have changed as a result of the IEC/BCC messages they received.	<5%, 2005 estimates	7%
	% of schools that received IEC materials on malaria control and prevention	<10%, 2007 estimates	20%

INDICATORS FOR PROGRAM MANAGEMENT

OBJECTIVES	INDICATOR(S) Input/process/ Output	BASELINE (2007)	TARGETS
			2008
To ensure effective stewardship of malaria control activities by the National Malaria Control Program.	Number of NMCP staff trained in public health (Biostatistics)	1	1
	Number of NMCP staff trained in Parasitology	1	1
	Number of staff adequately trained in data management and disease surveillance	1 (not adequately trained)	1
	Number of staff adequately trained in procurement and supply management	0	1
	Number of NMCP staff with adequate training in Monitoring & Evaluation	1 (not adequately trained)	1
	Strengthening of all NMCP Units	Not adequately strengthened	strengthened
	Number of national malaria control staff that received incentives commensurate with qualification	17 out of 23 (74%)	29
	Number of technical support received for operational research, program management, epidemiology, and statistics training	1	1
To effectively coordinate malaria control activities at county, districts and community levels	Number of MSC meeting minutes available	12	12
	Number of identified RBM partners implementing RBM interventions (activities)	35	35
	% of districts with functional RBM partnership	25%	50%

INDICATORS FOR OPERATIONAL RESEARCH

OBJECTIVES	INDICATOR(S)	BASELINE 2007	TARGETS 2008
To generate evidence for policy planning and program management	Number of sentinel sites established	1	1
	Number of anti-malarial drug (CT, preferable ACT) sensitivity studies conducted	1	1
	Number of malaria vector sensitivity studies conducted with insecticide (in current use)	0	1
	Number of drug adherence studies conducted	0	1
	Number of studies conducted on the use of rectal artesunate as a pre-referral drug	0	1
	Number of studies on IPT scale up	0	1
	Number of studies on IRS	0	1

INDICATORS FOR MONITORING AND EVALUATION

OBJECTIVES	INDICATOR(S)	BASELINE 2006	TARGETS 2008
To establish a functional monitoring and evaluation system in 7 counties by end of 2008.	No. of regular M&E feedback reports produced	4	4
	Functional malaria databases at national and county levels.	1	8
	Number of yearly review meetings conducted by NMCP at national level	2	2
	Number of county data managers trained in data management	0	15
	Number of county registrars in the health facilities trained in data collection	0	44