

# NATIONAL MALARIA CONTROL PROGRAMME STRATEGY

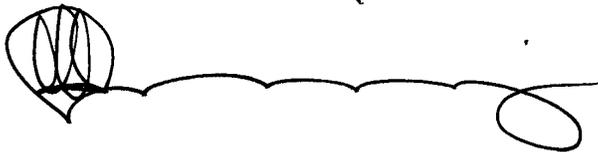
**2008 – 2013**

**MINISTRY OF HEALTH AND CHILD WELFARE**

**ZIMBABWE**

## *Foreword*

Malaria is a major public health problem in Zimbabwe, alongside such diseases as tuberculosis and HIV and AIDS, with about 50% of the country's population being at risk of developing the disease annually. Malaria prevention and control activities include Vector control (which comprises of Indoor Residual Household Spraying, use of Insecticide Treated Mosquito Nets, larviciding and Environmental management and manipulation), Intermittent Preventive Therapy in Pregnancy (IPTp), Case management, Epidemic Preparedness and Response, Operational Research, Surveillance, Monitoring and Evaluation and Behaviour Change Communication among others. To achieve effective malaria prevention and control in the country, Zimbabwe develops strategic documents from time to time which guide all provinces and districts in the implementation of standardized malaria prevention and control activities. It is my sincere hope that this current Strategic Document, which covers the period 2008 to 2013, will assist all our health delivery structures to understand the national focus, and will provide guidance in malaria prevention and control activities for the next five years. I recommend that all stakeholders use and refer to this document consistently for the benefit of our population.



**BRIGADIER GENERAL (DR) G GWINJI**  
**SECRETARY FOR HEALTH AND CHILD WELFARE**

## Table of Contents

NATIONAL MALARIA CONTROL PROGRAMME.....	1
Acknowledgements.....	5
List of Abbreviations .....	7
EXECUTIVE SUMMARY .....	9
CHAPTER ONE.....	10
1.INTRODUCTION .....	10
1.1 Country Profile.....	10
1.2 Organization of the health system.....	11
1.2.1Health Service Delivery .....	11
1.2.2 Organization of National Malaria Control Programme .....	12
CHAPTER TWO .....	13
2. EPIDEMIOLOGY OF MALARIA IN ZIMBABWE.....	13
2.1 Malaria Transmission.....	15
2.2 Malaria Data Capturing System .....	15
2.3 Malaria Morbidity and Mortality Trends.....	15
2.4 Malaria Control Activities in Zimbabwe.....	16
CHAPTER THREE .....	17
3.1 Background.....	17
3.2 Overview of 2001 – 2007 RBM Strategic Plan .....	17
3.3 Summary of achievements.....	18
3.3.4 Epidemic Preparedness and Response .....	19
3.3.5 Surveillance, M&E and Research .....	19
3.3.6 BCC, Advocacy, IEC, Community mobilization.....	20
3.3.7 Programme Management .....	20
3.3.8 Disease Surveillance and Epidemic management.....	20
3.4 MALARIA SERVICE DELIVERY AREA CHALLENGES .....	21
CHAPTER 4 .....	23
4. STRATEGIC PLAN 2008 – 2013 .....	23
4.1 INTRODUCTION .....	23
4.2 Vision, Mission and Goal .....	23
4.3 Global, Regional and National Targets.....	24
4.4 Implementation Framework.....	26
4.4.1 Principles of Operations for the National Malaria Strategic Plan 2008-2013. ....	26
4.5.0 Strategic Planning Matrix .....	26
4.5.1 Case Management.....	26
4.5.2 Anti-malarial Drug Assessment and Efficacy Monitoring .....	27
4.5.3 RDTs and Antimalarials Procurement, supply Management .....	27
4.5.4 Quality Control and Assurance.....	288
4.5.5 Epidemic Preparedness and Response.....	28
4.5.6. Vector Control Services.....	28
4.5.7 Quality Monitoring of Insecticides, Larvicides and Mosquito Nets.....	30

4.5.8 Advocacy, Social Mobilisation and Behaviour Change Communication (BCC).....	30
4.5.9 Monitoring and Evaluation .....	30
4.5.10 Programme management .....	31
4.5.11 Finance And Administration.....	31
4.5.12 Surveillance, Monitoring And Evaluation .....	33

**Table**

Table 1 - Key Socio- economic and Demographic Information .....	10
Table 2 -Table 2: Malaria M&E Framework (Adopted from the RBM framework)	

Appendix 1: Budget Summary for the 5 year Strategic Period

**Table of figures**

Figure 1 - Altitude Zones .....	13
Figure 2: Malaria stratification, 2002 .....	14
Figure 3: malaria incidence rates 2000 to 2007 .....	15
Figure 4: LLINs distributed 2004 to 2007 .....	19

## Acknowledgements

The Ministry of Health and Child Welfare wishes to thank the NMCP for leading the process of reviewing the Malaria Strategy document. We would also like to extend our gratitude to WHO and PSI for the technical guidance and other partners that made very useful contributions during the reviewing of the Strategy.

Acknowledgment goes to the following people for coming up with the draft document

Dr.S.M. Midzi	MOHCW
Dr.P. Manangazira	MOHCW
Dr.J. Mberikunashe	MOHCW
Mr. M. Netsa	MOHCW
Mr. A. Tangwena	MOHCW
Ms E. Chitate	MOHCW
Mr. J. Katiyo	MOHCW
Dr. L.S. Charimari	WHO
Mr. K. Gausi	WHO
Mr. J. Pasipamire	WHO
Mr. Govere	WHO
Mrs. M. Mpisaunga	Syngenta
Dr. K. Jafa	PSI
Mrs. S. Mugaviri	PSI

Special acknowledgment goes to the following people for editing and finalising the document:

Dr. S. Mashaire	MOHCW
Mr. S. Sande	MOHCW
Dr. I. Phiri	MOHCW
Mr W. Phiri	MOHCW
Dr. S. Mutambu	NIHR
Dr. P. Dhliwayo	MOHCW
Mr. L. Maboreke	UNAIDS
Mr. J. Pasipamire	WHO
Mr. F. Chieza	PSI
Mrs. F. Manjoro	MOHCW

## List of Abbreviations

ACT	Artemisinin based Combination Therapy
AIDS	Acquired Immuno Deficiency Syndrome
BCC	Behavior Change Communication
BHC	Benzene Hexa Chloride
CHW	Community Health Worker
CQ	Chloroquine
CSO	Central Statistical Office
DDT	Dichloro Diphenyl Trichloroethane
DEHO	District Environmental Health Officer
DHE	District Health Executive
EDC	Epidemiology and Disease Control
GFATM	Global Fund to fight Against HIV/Aids, Tuberculosis and Malaria
GIS	Geographical Information System
GoZ	Government of Zimbabwe
GPS	Geographical Positioning System
HIMS	Health Information Management System
HIV	Human Immuno Deficiency Virus
HR	Human Resources
ICT	Information and Communication Technology
IDSR	Integrated Disease Surveillance and Response
IEC	Information Education and Communication
IPTp	Intermittent Preventive Treatment in Pregnancy
IRS	Indoor Residual Spraying
ITM	Insecticide Treated Materials
ITN	Insecticide Treated Net
IVM	Integrated Vector Management
LLIN	Long Lasting Insecticidal Net
LMIS	Logistics Management Systems
MDGs	Millennium Development Goals

MERG	Malaria Evaluation Reference Group
MIP	Malaria In pregnancy
MIS	Malaria Indicator Survey
MOHCW	Ministry of Health and Child Welfare
NGOs	Non Governmental Organizations
NHIU	National Health Information Unit
NIHR	National Institute of Health research
NMCP	National Malaria Control Programme
PDA	Personal Digital Assistant
PEDCO	Provincial Epidemiology and Disease Control Officer
PHC	Primary Health Care
PHE	Provincial Health Executive
QC	Quality Control
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
SADC	Southern Africa Development Committee
SOPs	Standard Operating Procedures
SP	Sulfadoxine Pyrimethamine
VIDCO	Village Development Committee
WARDCO	Ward Development Committee
WHOPES	World Health Organization Pesticide Evaluation Scheme
WHR	World Health Report
WHT	Ward Health Team
ZimVAC	Zimbabwe Vulnerability Assessment Committee

## EXECUTIVE SUMMARY

Malaria remains a serious public health challenge causing immense mortality, and morbidity. It is a major impediment to socio-economic development leading to poverty. Malaria transmission is largely unstable in Zimbabwe and all age groups are at risk of malaria. There are however, some malaria endemic districts where the burden of malaria is greatest among under-fives, pregnant women and people living with HIV/AIDS. It is estimated that about 50% of the country's population are at risk of contracting malaria each year.

The National Malaria Control Programme (NMCP), a unit of the department of Disease Prevention and Control in the Ministry of Health and Child Welfare (MOHCW) spearheads malaria prevention and control in Zimbabwe. The program implements many strategies including vector control, case management, epidemic preparedness and response, intermittent preventive therapy, research, monitoring and evaluation, information education and advocacy for malaria treatment and prevention. Indoor residual spraying (IRS) is the main strategy used to reduce malaria transmission through reduction of mosquito density.

Zimbabwe has a long history of implementing IRS dating back to 1949. Indoor residual spraying started as a pilot project and later extended to cover all epidemic prone areas. Benzene Hexachloride (BHC) was the first insecticide to be used and was later replaced with Dichloro Diphenyl Trichloroethane (DDT). DDT was used up to 1991 when it was replaced with Pyrethroids. However, the replacement of DDT saw a marked increase in clinical cases of malaria in Zimbabwe. This increase prompted the MOHCW to reintroduce DDT in 2004, and in line with the Stockholm Convention requirements or recommendations. DDT was the insecticide of choice because of its cost effectiveness and long residual effect of 9-12 months on sprayed surfaces. The use of DDT is also in line with other SADC countries, which have adopted IRS with DDT for malaria vector control.

This current malaria strategic plan is for six years (2008- 2013)and focuses on universal access of malaria control interventions and calls for scaling up of these interventions for impact. This means it aims at scaling up all interventions to levels of at least 80% coverage. As such, resources will be mobilized towards achieving this goal, which should go a long way in ensuring that the country meets the target for the Millennium Development Goals for malaria.

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Country Profile.

Zimbabwe shares borders with Mozambique to the east, South Africa to the south, Botswana to the west and Zambia to the north and north-west. Its population was estimated at 12.2 in the 2002 census, with 41% of the population below 15 years of age, 55% between the ages 15-64 and only 4% in the age group 65years and above. The country has experienced a decline in fertility, falling from 5.4 births per woman in 1988 to 3.8 in 2005-6. The crude birth rate (CBR) and the crude death rate (CDR) in the 2002 census are estimated to be 30 births per thousand population and 17 deaths per thousand population respectively. The Census reported life expectancy at birth at 45 years while the World Health Report (WHR) of 2006 reported a life expectancy of 36 years.<sup>1</sup>

The macro-economic environment in Zimbabwe has shown negative growth over the past decade with levels of poverty worsening steadily, however signs of improvement have been noted ever since the introduction of the multi-currency in 2009.

Several policies have been put in place to redress the economic decline: the Zimbabwe Programme for Economic and Social Transformation, the Millennium Economic Recovery Programme, the National Economic Revival Programme, and the Short Term Emergency Recovery Plan (STERP) amongst others.

Despite all the policies, the country continues to experience high unemployment rate, and challenged social services including health, education and housing. The main socio-economic and demographic indicators are summarized in the table below:

**Table 1 - Key Socio- economic and Demographic Information**

Variable/Indicator	Value	Period	Source
Population	12.2million	2007	Population projections 1992-2007, CSO
Population Growth rate	1.1%	1992-2002	Census 2002
Total fertility rate	3.8 birth	2005-6	ZDHS 2005-6
Crude Birth Rate (CBR)	30/1000 pop	2002	Census 2002
Crude Death Rate (CDR)	17/1000 pop	2002	Census 2002
Life expectancy at birth	43 yrs	2008	World Health Statistics)
Literacy rate	97%	2003	ZimVAC report 2006
GDP	-4.6%	2007	ZEDS
Inflation	>100 000%	Dec 2007	CSO
Food poverty line	58%	2003	Zimbabwe 2003 PASS
Total Consumption Line	72%	2003	Zimbabwe 2003 PASS

## **1.2 Organization of the health system**

### **1.2.1 Health Service Delivery**

Primary Health Care (PHC) remains the major strategy for delivering health care in the country. Service delivery has been hampered by several challenges such as brain drain, reduced funding for health, population movements, shortage of essential drugs and equipment and lack of resources mainly related to foreign currency shortages that have been faced by the country.

The public sector (Ministry of Health and Child Welfare, uniformed forces, local government and Church related mission hospitals) remains the major provider of health services, though the role of the private and traditional sectors has increased over the past few years. A small proportion of the population has been turning more and more to traditional medicine as a source of health care because it is presumed cheaper, available and more readily accessible. The Traditional Medical Practitioners Act was promulgated in 1981, setting the stage for regulation of the practice. However, the enactment was not followed up with the necessary institutional and financial support. In an effort to re-dress this gap, in 2006 the Ministry of Health and Child Welfare developed a Traditional Medicine Policy. The overall purpose of the national policy is to declare the government's commitment and provide broad and specific directions for institutionalization, research and development of traditional medicine in order to bring traditional medicine to its rightful platform as a key health service in the country<sup>1</sup>.

The organization of the public sector remains unchanged and is divided into four functional levels: national, provincial, district and primary/rural health facility levels. The national level is responsible for policy formulation, regulation and resource mobilization. The provincial level is responsible for providing technical and management support to the district level including coordination of planning, ensuring that national standards and guidelines are followed, and disbursement of resources for programme implementation, training, coordination of research activities and monitoring and evaluation. The district level provides the support and supervision for implementation of primary health care and coordinates health care in the entire district. The rural health facility level (primary level) is the first point of contact between the community and the health sector and provides essential primary health care services.

The PHC strategy adopted by government emphasizes the importance of community participation and intersectoral collaboration. Commitment to community participation is seen in the establishment of Village Development Committees (VIDCOs) and Ward Development Committees (WARDCOs) to participate in the planning and implementation of health services – unfortunately, however, these structures have not been completely functional.

---

<sup>1</sup> Zimbabwe Traditional Medicine Policy

### **1.2.2 Organization of National Malaria Control Programme**

The National Malaria Control Programme (NMCP) falls under the Department for Disease Prevention and Control in the MOHCW, and is responsible for the day-to-day co-ordination of the malaria control programme.

The unit is led by a National Malaria Programme Manager, who is supported by technical officers responsible for vector control, Monitoring and Evaluation, Information, Education and Communication (IEC), Case Management, Finance and Administration.

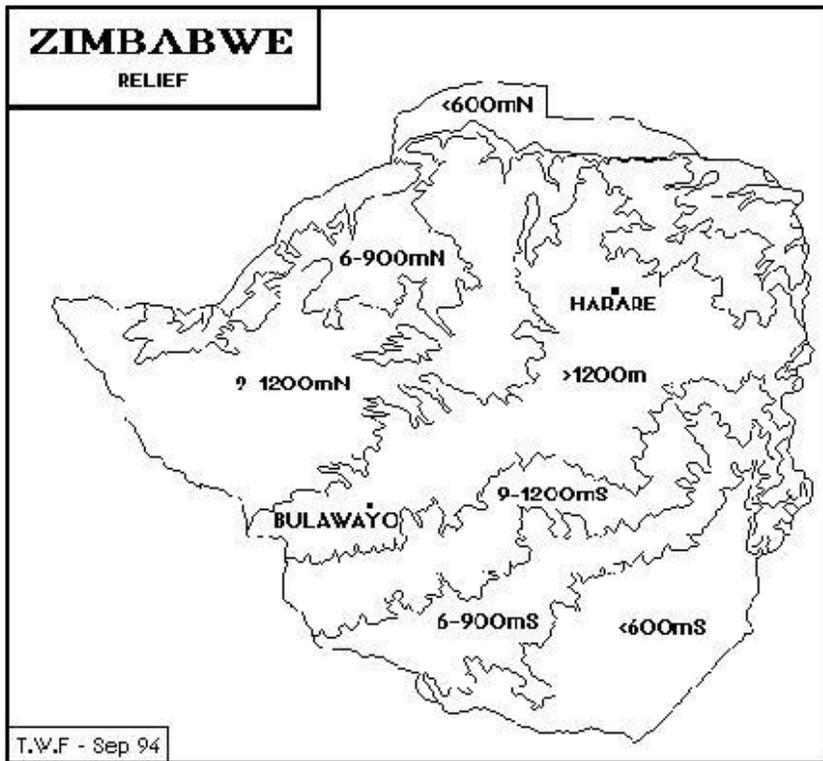
The NMCP coordinates programme implementation through the Provincial Medical Directors (PMD), who in turn are supported by the Provincial Health Executive (PHE). At the district level, which is the implementation level, the District Medical Officer (DMO) is responsible for malaria activities and coordinates with the Rural Health Council (RHC) staff, Ward Health Teams (WHTs) and Community Health Workers (CHWs). Communication and reporting lines through the administrative levels are well defined and widely respected throughout the health system.

## CHAPTER TWO

### 2. EPIDEMIOLOGY OF MALARIA IN ZIMBABWE

Zimbabwe is divided by a central watershed lying above 1200 metres above sea level and flanked north and south by low lying areas. Originally, it was thought that malaria was transmitted throughout the country except in the Eastern Highlands. By 1943, it was then thought that transmission was limited to areas below 1500m. In 1986 the country was divided into three epidemiological malaria areas (Fig 2.1). The three epidemiological zones in terms of malaria transmission were: Areas below 900 metres below sea level, to the north and below 600 metres in the southern parts, where malaria was considered to be perennial. Areas between 900-1200 metres north and 600-900 south where malaria was said to be seasonal and were prone to epidemics. In areas above 1200 metres north and 900 metres south malaria transmission did not normally occur. Traditionally higher areas have been described as unstable, and lower areas as stable.

**Figure 1 - Altitude Zones**



The above definition gives a good guide to malaria situation in Zimbabwe. However, another variable affecting the pattern is temperature. Temperature governs the life cycles of both *P. falciparum* and *A. arabiensis*. Zimbabwe is warm and wet from November to April, cold and dry from May to August, and hot and dry from September to October. Most of the malaria transmission

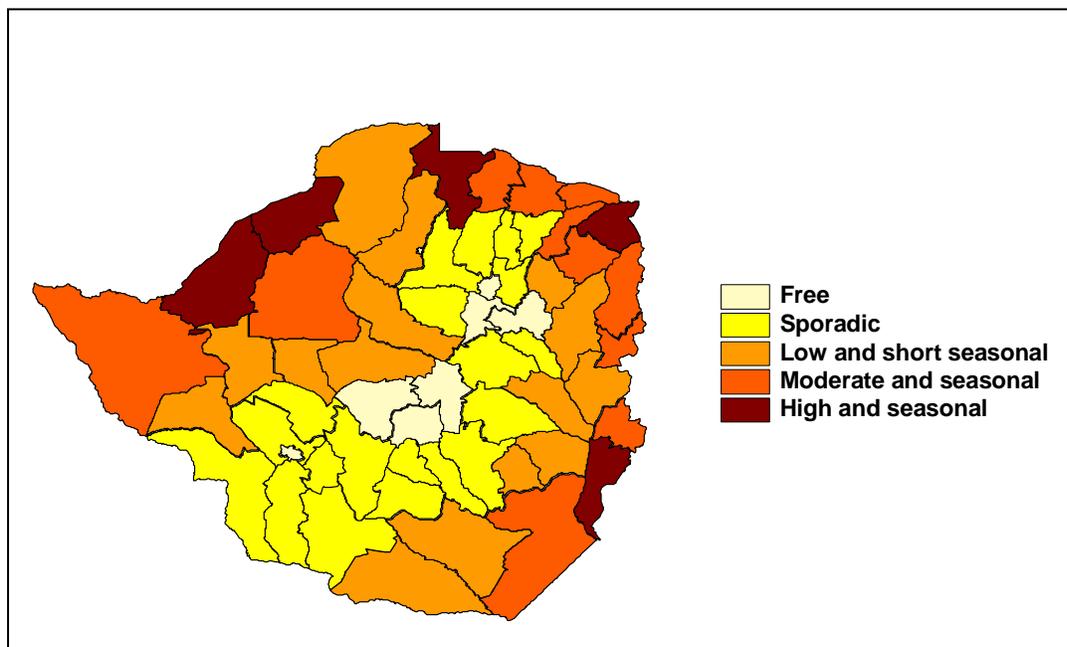
occurs during the warm and wet season with peak from February to April. Cold months in June and July limit malaria transmission even in endemic malaria areas. Although temperatures from September to October are suitable for malaria transmission, dry conditions limit mosquito breeding.

In 2002 a new malaria stratification was formulated using both expert opinion, epidemiological and entomological data. Out of the 59 rural districts, malaria occurs in 54 districts whose levels of transmission vary from very high and seasonal to sporadic. The districts were therefore classified as follows:

1. Six with high and seasonal transmission
2. Twelve with moderate and seasonal transmission
3. Fifteen with low and short seasonal transmission
4. Twenty-one with one sporadic transmission
5. Five are free of malaria

This stratification is shown in the figure below. A total of 33 districts are considered to be high burden malaria transmission districts warranting some interventions.

**Figure 2: Malaria stratification, 2002**



## 2.1 Malaria Transmission

The predominant malaria parasite in Zimbabwe is *Plasmodium falciparum* which accounts for 98% of all reported malaria cases. *Plasmodium ovale* and *P. malariae* account for the remainder. *Anopheles arabiensis* is the major vector for malaria transmission. It rests both outdoors and indoors and feeds both on humans and animals making it difficult to eliminate by IRS. *A. merus* has been reported in Zimbabwe in isolated localities but its role in malaria transmission is yet unclear. The most abundant species of the *An. gambiae* complex in Zimbabwe is *An. quadriannulatus* which is not a vector of malaria but coexists with *An. Arabiensis*. This underlines the importance of species identification to guide targeted malaria vector control.

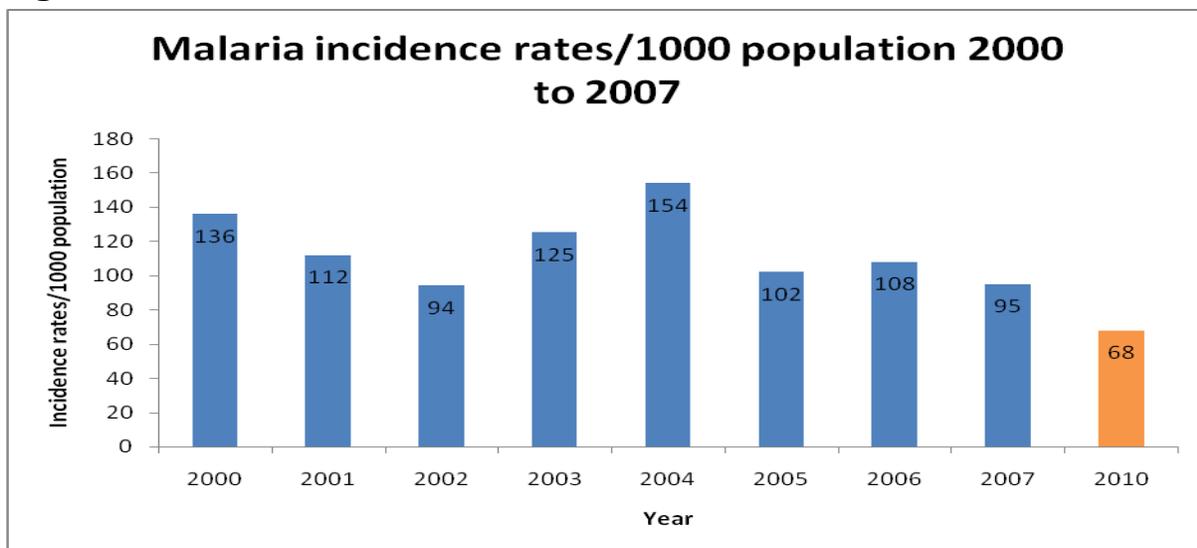
## 2.2 Malaria Data Capturing System

Malaria case reporting is carried out in Zimbabwe using the Health Information Management System (HIMS). Malaria is reported weekly, monthly and quarterly. The data since 2005 is now being collected by age and gender. In 2005 there was a 17% drop in malaria cases and a 50% drop in malaria deaths when compared to 2004. This was due to the revival of the IRS, ITNs programmes and the strengthening of case management activities.

## 2.3 Malaria Morbidity and Mortality Trends

There has been a marked decline in malaria incidence from 2004 to 2007. This decline could be due to intensified malaria control interventions in the ten malaria high burdened districts from 2001 to date under the Roll Back Malaria (RBM) era, or due to other confounding factors amongst them a weakened surveillance system and poor reporting of the condition by the health facilities. If this trend is a true decline, then sustained efforts could mean that the RBM target of reducing malaria morbidity and mortality by half by 2010 may be realized.

**Figure 3: malaria incidence rates 2000 to 2007**



The red bar showing incidence of 76/1000 indicates the target to be achieved by 2010.

## **2.4 Malaria Control Activities in Zimbabwe**

Malaria control in Zimbabwe started with environmental control in urban areas and health education in rural areas (MOHARs – 1901 -1923). Indoor residual spraying started in 1949 in the Mazowe Valley using BHC. This was gradually extended over the years so that by 1955 a large area of the middle veld was sprayed forming a barrier around the high parts of the country (Alves & Blair 1955). Despite the various efforts to control and eliminate the disease over the years, outbreaks of malaria still occurred (Ministry of Health Annual Report, 1958). Barrier spraying continued with varying success right up to 1980. However, the program was severely disrupted during the Liberation War that ushered independence in 1980. From 1980, malaria control was revitalised to cover all malarious areas, both stable and unstable using DDT until 1988 when it was replaced with Deltamethrin but re-introduced in 2004. While mosquito resistance was recorded to BHC, no resistance to either DDT or Pyrethroids has been recorded to date. Until now IRS has remained the mainstay for malaria vector control and has increased malaria-free and low transmission areas in Zimbabwe.

## **CHAPTER THREE**

### **3. REVIEW OF THE PREVIOUS STRATEGIC PLAN (2001/07)**

#### **3.1 Background**

Following the 2001 baseline study and in line with the National Health Strategy (1997-2007), the National Malaria Strategic Plan (2001-2007) was developed and adopted. The National Health Strategy considered malaria prevention and control as a crucial element to improve health status of the population and for poverty alleviation. This document laid out the key strategies and interventions for the prevention and control of malaria in Zimbabwe. Both documents highlight the use of IRS, ITNs and case management as key malaria interventions.

The RBM Strategic Plan 2001-2007 was developed to align the national malaria strategy with the Declaration made by the African Heads of State in Abuja, Nigeria in 2000. This strategic plan was in line with the National Health Strategy 1997-2007. The main thrust of the 2001-07 malaria strategy was to align the strategy to the global Roll Back Malaria Strategy with a goal of preventing mortality and reducing morbidity, social and economic losses due to malaria in Zimbabwe using a multi-sectoral approach involving government, NGOs, private sector, civil societies, research institutions and communities. The strategy was based on key RBM intervention areas of vector control, case management, prophylaxis in pregnancy, epidemic control, disease surveillance, monitoring and evaluation, research, advocacy, community based malaria control and programme management issues.

#### **3.2 Overview of 2001 – 2007 RBM Strategic Plan**

##### **3.2.1 Goal**

Preventing mortality and reducing morbidity, social and economic losses due to malaria in Zimbabwe using a multi-sectoral approach

The 2001 – 2007 Zimbabwe Malaria Strategic Plan focused on the following strategic areas:

- 1) Vector control
- 2) Case management
- 3) Prophylaxis and pregnant women
- 4) Epidemic management
- 5) Disease surveillance
- 6) Management and Coordination
- 7) Community based malaria control
- 8) Research
- 9) Advocacy
- 10) Monitoring and Evaluation, especially the use of RBM Indicators

### **3.3 Summary of achievements**

#### **3.3.1 Case Management**

In 2004, Zimbabwe changed the drug policy from Chloroquine (CQ) to the more effective Artemisinin based combination therapy (ACTs). Rapid Diagnostic Tests (RDTs) were also introduced to allow immediate confirmation of malaria cases. Due to inadequate funding, an interim policy to use a free combination of Chloroquine and Sulfadoxine/Pyrimethamine (SP) was implemented until 2007, when ACTs were made available through the Global Fund (GFATM). Malaria case management at community level was strengthened with the CHW, School Health Master and volunteers being given anti-malarials to treat uncomplicated malaria to those above 5 years.

#### **3.3.2 Malaria in pregnancy**

After the RBM survey, pregnant women were sited as vulnerable group to malaria. Decisions were made to prioritize them in ITN distribution and chemoprophylaxis initially with Chloroquine, and later on with Sulfadoxine/Pyrimethamine. Several parts of Zimbabwe were assessed to be suitable for implementation of intermittent preventive treatment. These areas were essentially in the moderate to high transmission areas of the country.

#### **3.3.3 Vector Control**

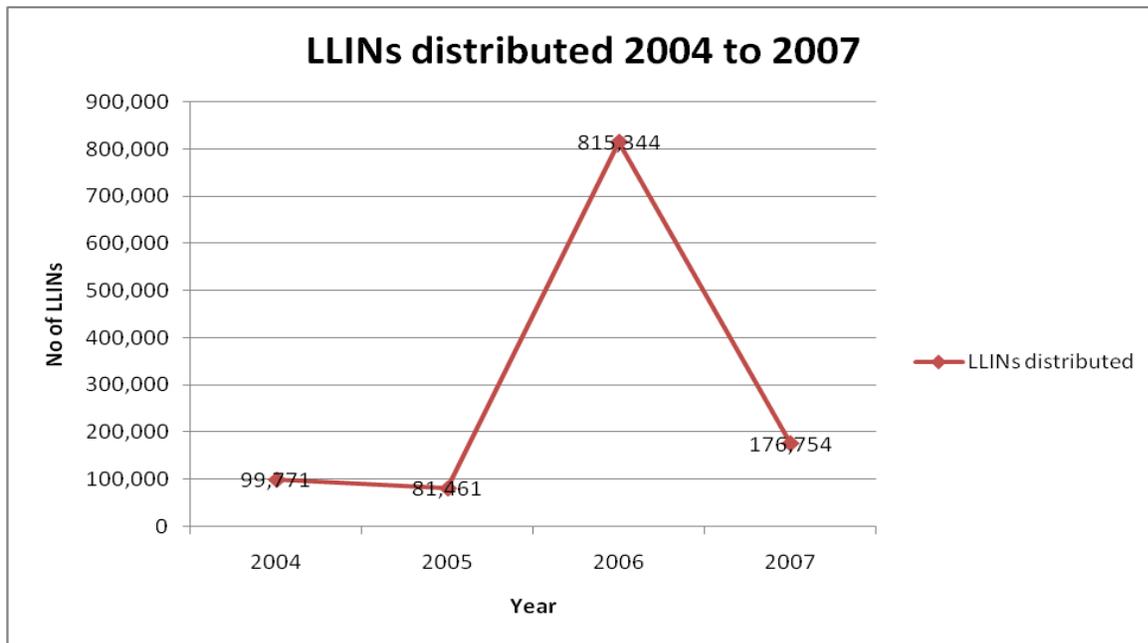
##### **Indoor Residual Household Spraying (IRS)**

The country continued with the IRS as the main vector control strategy using pyrethroids and DDT. DDT was reintroduced in 2004 and is limited to non tobacco growing areas where pyrethroids continue to be used. Funding for IRS was mainly from the GOZ, the Global fund and partners. In 2007, the programme achieved 65% coverage and protected 50 % of the targeted population through IRS. Larviciding was carried out in selected districts to complement IRS. Insecticide resistance monitoring and susceptibility tests were carried out in the ten front runner districts through the research institute guidance.

##### **Insecticidal Treated Nets (ITNs)**

In 2001, Zimbabwe introduced the use of ITNs in 10 front runner districts with support from the RBM movement and other partners. By 2006, the districts had increased to 26. The ITN policy was produced in 2003. In 2006, it was reviewed and guidelines developed and distributed to all stakeholders in malaria control. The programme adopted the use of LLINS in replacement of conventional nets in 2006 in line with the global recommendations. More partners came on board to support the provision and distribution of ITNs. Community net making groups were established and remain important in the provision of nets, their use and maintenance at community level. Between 2004 and 2007 a total of 1,173,330 nets were distributed as follows:

**Figure 4: LLINs distributed 2004 to 2007**



### **3.3.4 Epidemic Preparedness and Response**

The weekly rapid disease notification system (RDNS) which captures information on malaria and other epidemic prone diseases (cholera, diarrhea, anthrax, plague) is the backbone of disease surveillance. The country was awarded a trophy in 2004 for having the best disease surveillance system in the region. A reduction in the completeness and timeliness of reporting by centers stimulated the Epidemiology and Disease Control department (EDC) with support from partners to start the process of repairing existing radio communication system and installation of new ones in order to return to the high reporting standards.

### **3.3.5 Surveillance, M&E and Research**

In 2001, a district situation analysis followed by an RBM baseline survey was carried out. A malaria stratification map which took into account epidemiological, expert opinion, entomological and quantitative analysis was produced. The programme continued with operational research in areas such as bioassays, drug efficacy monitoring and insecticide resistance monitoring. A case management audit and rapid assessment were carried out to determine achievements made during the implementation of the Global Fund round 1 and also to assess the achievements made towards meeting the Abuja targets and MDGs. Field evaluation of products for malaria control activities including traditional repellents was done.

### **3.3.6 BCC, Advocacy, IEC, Community mobilization**

The community continued to play a crucial role in malaria control particularly to support the IRS programme, ITN production and use and presentation for treatment. Community awareness was also enhanced through the commemoration of SADC and Africa Malaria Day annually and partners were mobilized to support malaria programs. Information, Education and Communication (IEC) materials on malaria for various target audience were developed and distributed during these commemoration days. This has seen a marked improvement in the treatment seeking behavior of the communities and political and influential leaders' commitment in malaria control. Advocacy meetings were held with political leaders and the civic society. The malaria communication strategy was developed.

### **3.3.7 Programme Management**

In 2004, additional posts to the NMCP were created and filled. These include an Epidemiologist, Vector Control Officer, Monitoring and Evaluation Officer, Financial and Administration Officer, IEC Officer and a secretary. The GFATM supported the provision of transport for programme implementation, support and supervision. The Case Management, Vector Control, IEC and Surveillance subcommittees which had been established in 1998 were strengthened and continued to be functional. The programme received funds from RBM, GFATM and from other partners. In 2006, a separate national budget line dedicated for malaria was created.

### **3.3.8 Disease Surveillance and Epidemic management**

Integrated Disease Surveillance and Response (IDSR) training was carried out at all levels, national, provincial and district to equip the health workers with skills to be able to detect and respond to malaria epidemics, amongst other epidemic prone diseases. Malaria thresholds were calculated for all the health facilities with support from the district offices allowing them to detect and effectively manage outbreaks on time. The National and Provincial levels supported with pre-season assessment to determine level of preparedness as well as mobilize resources to deal with the outbreaks.

### **3.4 MALARIA SERVICE DELIVERY AREA CHALLENGES**

#### **a. Insecticidal Treated Nets**

- Distribution of ITNs to the vulnerable groups at no cost
- Improper use of ITNs
- Inadequate funding
- Low utilization of nets (MIS)

#### **b. Indoor Residual Spraying**

- Shortage of spraying commodities and supplies including Personal Protective Equipment and pump spares
- Inadequate transport
- Outdated malaria stratification map
- Inadequate funding
- Inadequate partner support

#### **c. Case Management**

- Lack of awareness on importance of IPT services
- Late presentation
- Poor compliance
- Inadequate laboratory support for correct diagnosis
- Inadequate supervision
- Low coverage of trained health personnel in case management
- High staff turn over
- Inadequate transport and communication
- Limited funding

#### **d. Disease surveillance, epidemic preparedness and response**

- Malaria mapping for Zimbabwe
- Poor disease surveillance due to staff attrition
- Poor communication system
- Weakening of NHIS
- Inadequate funding

**e. Behaviour Change Communication**

- Inadequate funding
- Poor mass media coverage in some of the malarious areas
- Inadequate information, education, communication and advocacy for malaria

**f. Programme Management**

- Inadequate Information Communication Technology (ICT).
- Lack of advocacy skills to mobilize resources
- Poor progress tracking mechanisms
- Weakening of partnerships
- Cumbersome procurement process last reviewed in 2002
- Logistical problems in distributing commodities to the points of use
- Hyper-inflationary environment
- Lack of incentives for staff retention
- Inadequate information management system for procurements and supplies
- Inadequate security of drugs throughout the distribution chain

**g. Monitoring & Evaluation**

- Poor coordination and monitoring of all research activities in malaria
- No malaria research agenda
- Lack of systematic insecticide resistance and susceptibility testing system
- Lack of appropriate equipment for vector mapping and meteorological data collection
- Absence of malaria focal persons at provincial and district level
- Absence of malaria Data Manager
- Poor transport and communication network
- Inadequate stationery, equipment and software for data processing

## CHAPTER 4

### 4. STRATEGIC PLAN 2008 – 2013

#### 4.1 INTRODUCTION

While malaria remains a major public health and development challenge in Zimbabwe, we have an opportunity to scale up malaria-related interventions, strengthen health systems, and make a major effort to reduce the effects of malaria. Malaria currently accounts for nearly 20% of Outpatient attendances, and from a study up to 21.6% of maternal mortality<sup>2</sup>. In addition to the direct health impact of malaria, there is also a severe social and economic burden on our communities and country as a whole, but especially on the poorest of our population and those vulnerable individuals and households who are also trying to cope with the HIV/AIDS pandemic. Thus malaria control is addressed as part of an integrated health delivery system that aims to provide holistic services in all facets of care.

The Zimbabwean government is determined to accelerate and intensify efforts on malaria control and elimination during the next five-year planning period. The National Malaria Strategic Plan (NMSP) was developed by the national malaria control programme in partnership with the WHO and other partners to enable national scale-up of key preventive and curative interventions in malaria.

This malaria strategic plan addresses national health and development priorities, included in the National Health Strategy for Zimbabwe, the United Nations Millennium Development Goals (MDGs) and the Abuja convention declaration. The malaria control strategy contained herein includes measurable performance results including malaria-specific morbidity and mortality targets.

The strategic plan provides a monitoring and evaluation framework, ensuring that Zimbabwe deploys an evidence-based and cost-effective package of interventions that are appropriately evaluated and documented. The strategic plan is packaged into a budget to enable optimal resource mobilisation among all the partners in the public, private and civil society sectors.

#### 4.2 Vision, Mission and Goal

##### a. Vision

The vision of the Zimbabwe National Malaria Control Programme is to have a malaria free Zimbabwe

---

<sup>2</sup> CAUSES OF MATERNAL MORTALITY IN ZIMBABWE 2000

## **b. Mission**

The Mission of the National Malaria Control Programme is to have equity in health status and health care, comprehensive quality services, cost effectiveness and efficiency, providing client satisfaction, transparency and accountability, ownership and partnership as well as monitoring and evaluation of the performance of the malaria control programme.

## **c. Goal**

To reduce malaria incidence from 95/1000 in 2007 to 45/1000 by 2013 and case fatality rate from 4.5% in 2007 to 2.5 % by 2013.

## **4.3 Global, Regional and National Targets**

The global target for malaria prevention and control is to reduce malaria specific morbidity and mortality by 50% by the year 2010 and by a further 30% by 2015, and another 20% by 2025. This is in line with the malaria component of the MDG 6 target which aims to have halted and begun to reverse the incidence of malaria by 2015. The United Nations universal access calls for achieving at least 80% coverage on all malaria control interventions by 2010, which complements the MDG target. On the other hand Abuja declaration calls for reduction of malaria morbidity and mortality by 50% of the 2000 levels by 2010 and the SADC region target is to eliminate malaria in 8 to 10 countries by 2015 and afterwards in all countries in the pre-elimination phase. Zimbabwe targets to reduce malaria incidence from 9.5% in 2007 to 4.5% by 2013.

### **4.3.1 Strategies, Objectives and Targets**

#### **A) *To achieve universal access to malaria prevention and personal protection***

- 1) To reduce the transmission of malaria by scaling up effective vector control interventions (IRS and ITNs) to 90% of the population at risk.
- 2) To achieve at least 85% of intermittent preventive treatment (at least IPT2) in pregnant women attending antenatal care in all medium to high transmission areas of Zimbabwe.

#### **B) *To improve diagnosis and treatment of uncomplicated and severe malaria.***

- 1) To provide access to appropriate malaria treatment within 24 hours of onset to 85% of all suspected malaria cases.
- 2) To confirm and correctly treat all malaria cases.

#### **C) *To improve detection and timely control of malaria epidemics***

- 1) To detect and effectively manage at least 95% of malaria epidemics within two weeks of onset.
- 2) To increase malaria free zones in Zimbabwe.

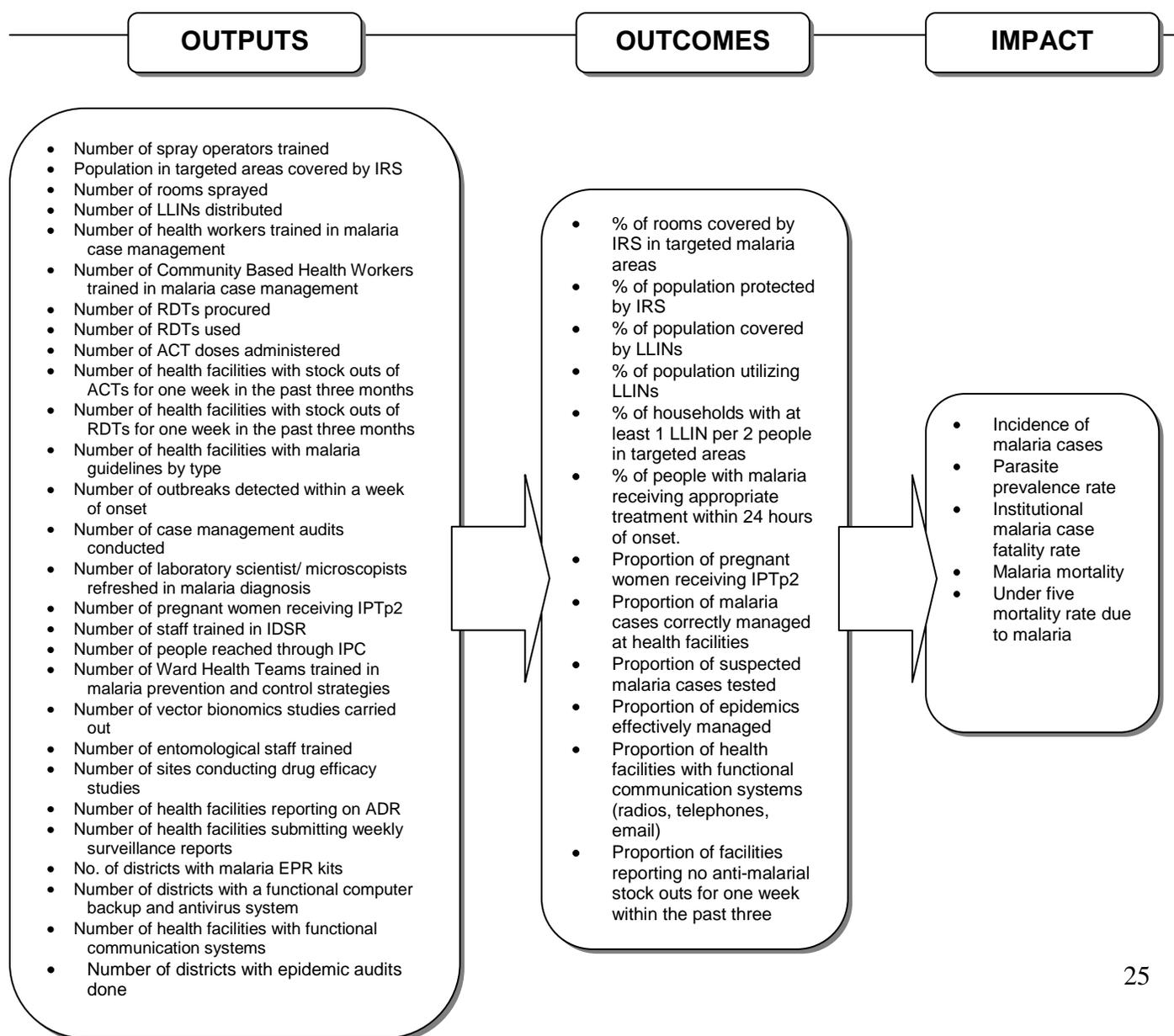
**D) To strengthen community and other stakeholder participation to maximize achievement of universal access to malaria control interventions**

- 1) To increase community uptake on correct malaria prevention and control measures to 85%.
- 2) To increase the participation of other stakeholders in malaria.

**E) To improve coordination, management and monitoring for achieving of universal access to malaria control interventions**

- 1) To strengthen malaria surveillance, monitoring, evaluation and operational research.
- 2) To strengthen planning, partnership building and coordination.
- 3) To strengthen the management of malaria control programming through adequate financial and human resource management, logistics support and procurement and supply management.

**Figure 5: Core Indicators**



## **4.4 Implementation Framework**

### **4.4.1 Principles of Operations for the National Malaria Strategic Plan 2008-2013.**

The Ministry of Health and Child Welfare believes that the overall targets set in this Strategic Plan will be achieved using the following broad principles:

- a) That the National Malaria Control Programme is the sole body responsible for coordinating the implementation of a national malaria programme in Zimbabwe.
- b) All partners in malaria control shall implement activities outlined in this strategic plan or changes made thereof under the leadership and coordination of the National Malaria Control Programme
- c) The implementation of this plan will be based on building strong mechanisms for partnerships in malaria control.
- d) All interventions will be implemented with the ultimate aim of achieving universal coverage to malaria prevention and control interventions and ultimately eliminating it.
- e) The main thrust of this plan is to prevent the population from contracting malaria and or complications.
- f) Children under the age of five and pregnant women are the most vulnerable to malaria and will be prioritized.
- g) Achieve maximum synergy between malaria control and health system development as well as other government bodies and other stakeholders
- h) All partners involved in malaria control will be required to share information on malaria control interventions delivered in their geographical locations.
- i) Focus on a rapid scale up of all malaria control interventions for impact
- j) Emphasize communication for behaviour change and community empowerment
- k) Target particularly the economically disadvantaged (poor) or difficult to reach populations.

## **4.5 Strategic Planning Matrix**

### **4.5.1 Case Management**

#### **a. Malaria Diagnosis**

The NMCP has moved from microscopy testing of 1 in every 10 suspected malaria cases during the malaria season and 1 in every 5 during the low transmission season, to parasitological diagnosis or confirmation on all suspected malaria cases through the use of malaria Rapid Diagnostic Test kits (RDTs) or microscopy. Training will be conducted for all health workers and community based health workers throughout the country on the use of RDT's and microscopy. Medical Laboratory Scientists shall receive continued professional development in malaria microscopy.

#### **b. Treatment of uncomplicated malaria**

Zimbabwe has moved from the previous policy of using CQ and SP combination for first line treatment of malaria to the use of combination of Artemether-Lumefantrine (Coartemether) in all health facilities. Oral Quinine will remain the second line treatment for simple malaria as well as the first line treatment of patients where coartemether is contraindicated.

#### **c. Treatment of complicated/severe malaria**

Patients who present with severe or complicated cases of malaria will receive parenteral quinine or intramuscular artemether where available. Severe cases on presentation to a primary health care centre should be given a loading dose of parenteral (intramuscular or intravenous injection) quinine and referred urgently to an admitting institution.

#### **d. Community/Home management of malaria**

In line with the universal access to the malaria interventions, the new treatment policy will be cascaded down to the community based health workers after training on use of ACTs and RDTs. The NMCP will take all the necessary steps to ensure that the new anti-malarial drug, coartemether, which is registered as a prescription drug is delisted to enable its dispensing at community level. Other issues to do with the use of RDTs and blood handling by the community-based health workers will also be addressed in this strategic period.

#### **e. Malaria in Pregnancy**

All pregnant women in malaria risk areas should use malaria preventive measures. The prevailing policy on Intermittent Presumptive Treatment in Pregnancy (IPTp) stipulates that pregnant women in malaria endemic areas should receive three doses of Sulfadoxine/Pyrimethamine (SP) at specific intervals during pregnancy.

### **4.5.2 Anti-malarial Drug Assessment and Efficacy Monitoring**

Anti-malarial Drug Assessment and Efficacy Monitoring in uncomplicated *P. falciparum* infections will continue to be conducted in the existing 8 sentinel sites.

### **4.5.3 RDTs and Anti-malarials Procurement, supply Management**

Adequate stocks of RDTs, ACTs and other anti-malarials as well as other commodities used in management of malaria will be procured and distributed according to consumption patterns. Adequate storage space, optimum storage conditions and security measures will be improved.

#### 4.5.4 Quality Control and Assurance

In order to improve Quality Control (QC) and Quality Assurance (QA) activities, treatment guidelines and Standard Operational Procedures (SOPs) shall be developed and disseminated to all health facilities.

#### 4.5.5 Epidemic Preparedness and Response (EPR)

Zimbabwe is epidemic prone and as such the country will continue to mobilize resources towards controlling epidemics as and when they occur. When an outbreak of malaria occurs a district needs to be adequately prepared in terms of all the necessary resources. It is important that an outbreak is detected and controlled within two weeks of the onset, if significant morbidity and mortality are to be prevented.

All districts should have the capacity to detect malaria outbreaks using thresholds and adequately respond to outbreaks. All districts should have an EPR focal person who coordinates outbreak response. A Malaria EPR Kit, which is a basic package of commodities required by districts to react promptly and adequately to malaria outbreaks will be constituted and districts supported to ensure that they access these kits timeously.

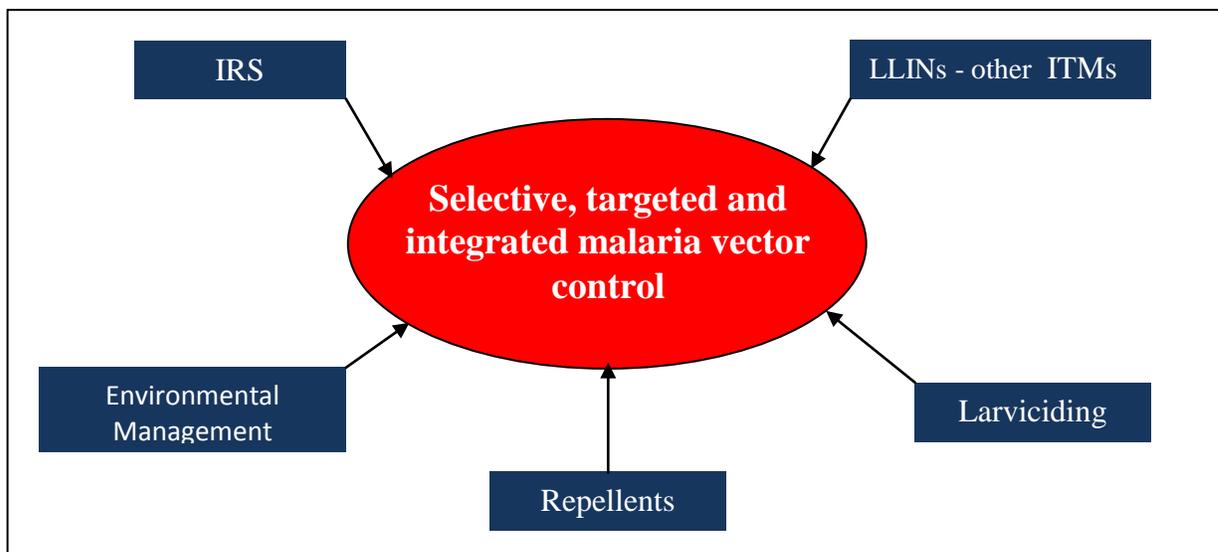
#### 4.5.6. Vector Control Services

The role of the vector control services will be to provide the overall strategic and technical guidance to provinces and districts, for planning, implementation, monitoring and evaluation of vector control activities.

##### a. Integrated Vector Management (IVM)

It is broadly defined as a process of evidence-based decision making procedures aimed at planning, implementing, monitoring and evaluating targeted, cost-effective and sustainable combinations of regulatory and operational vector control measures. The general objective of integrated vector control is the reduction of vector-borne diseases. The 5 core interventions of IVM are as shown in the diagram below:

Figure 6: Components of IVM interventions



Different vector control methods will be combined as guided by the expected additional value of each of them. This integration will ensure complementarity as well as delay the onset of development of insecticide resistance, at the same time efficiently reducing vector populations.

#### **b. Indoor Residual Spraying (IRS)**

IRS will be implemented in the areas of moderate to high transmission. IRS will also be used in other defined situations such as in institutions, in peri-urban areas and refugee camps in combination with the use of Long Lasting Insecticidal Nets (LLINs). Areas of economic importance such as tourist resorts, fishing camps, agricultural and mining communities will be given priority. The major focus will be to rapidly scale up implementation in the targeted areas maintaining high quality of spraying to cover at least 90% of the population at risk. This process will involve a broad partnership of players from other government ministries and departments, civic society, multilaterals, NGOs and the private sector. IRS mapping and geographical reconnaissance will be undertaken for the targeted areas for systematic and effective spraying.

#### **c. Long Lasting Insecticidal Nets (LLINs)**

Zimbabwe will aim for universal access to all people in moderate to high malaria transmission areas with each household getting at least three LLINs or one LLIN per 2 people.

Building on the successes of previous years and the emerging culture of net use in the population, various mechanisms for distribution as stipulated in the ITN Policy and guidelines regarding the sale and promotion of LLINs in a flexible fashion will be used such as:

- Free LLINs to household and other vulnerable populations
- Subsidized sales mainly through community structures
- Commercial sales through the private sector
- Mass LLINs distribution (EPI campaigns)
- Social marketing

Old crop of ITNs will be replaced with LLINs Once high coverage is reached the aim is to sustain this level , implying that nets which are lost or have reached the end of their useful life span are replaced.

Specific efforts will be made in the following areas:

- Monitoring of LLINs leakages by introduction of a Malaria Services Card
- Monitoring the quality of LLINs including those being made by community groups.
- Correct use of LLINs will be emphasised through IEC and advocacy.
- A one off mass re-treatment campaign of the existing crop of conventional nets will be conducted using long-lasting insecticide kits approved by WHOPEs. These will also be availed for use by the community net making groups.
- The programme will also encourage the use of other approved insecticidal treated materials which are effective such as blankets, curtains, shirts.

#### **d. Larviciding and Environmental Management**

Larviciding will be conducted during winter when breeding sites are fewer and easier to identify and treat. Special emphasis will be on the use of bio-larvicides with focus on low epidemic prone areas ear-marked for malaria elimination. Local communities will be engaged to identify breeding sites and to treat them.

Environmental Management measures will be applied to complement larviciding. The mapping of perennial water bodies which may be potential breeding sites will be undertaken. Collaboration and support will be sought from other government ministries, local authorities NGOs, other partners, multilaterals and the communities. Use of participatory approaches will be adopted as one of the strategies of enhancing community participation and empowerment as this is a community based intervention.

#### **4.5.7 Quality Monitoring of Insecticides, Larvicides and Mosquito Nets**

The Malaria Control Programme together with its partners in the research community will continue to monitor the efficacy of the insecticides used and the vector susceptibility. Sixteen vector sentinel sites will be strategically established to carry out vector bionomics studies.

The quality of insecticides for public health use and mosquito nets will be regularly monitored by the National Institute of Health Research (NIHR), Government Analyst department and other accredited institutions in collaboration with relevant regulatory and enforcement agencies. The selection of LLINs and other Insecticidal Treated Materials (ITMs) for public sector procurement will be guided by WHOPEs recommendations. Relevant support will be given to NIHR and Government analyst to implement their mandates. Monitoring of soil and water pH will be done just before the spraying season in order to determine the effectiveness of the insecticides.

#### **4.5.8 Advocacy, Social Mobilisation and Behaviour Change Communication (BCC)**

The NMCP will be responsible for providing guidelines and coordinating the implementation of Advocacy, Social Mobilisation and Behaviour Change Communication activities. The National Malaria Communication Strategy will guide the implementation of all BCC activities to ensure uptake of all malaria prevention and control interventions. Participation of community leadership in making decisions about malaria prevention and control is fundamental. The information disseminated should be evidence based and should reflect perceptions, values and beliefs of the targeted groups. Coordination and collaboration of different partners and stakeholders at all levels is key in the attainment of targeted behavioral outcomes and for resource mobilisation.

#### **4.5.9 Monitoring and Evaluation**

In line with the 3 ones principle (one Coordinating Body, one National Strategic Plan and one Monitoring and Evaluation System), a national M & E plan will be developed. This will encompass effective M & E processes in all malaria activities. Major M & E activities will be

surveys (MIS), audits, Planning and Review Meetings, rapid assessments, support and supervisory visits to institutions and routine data collection. Information obtained will be used for evidence based decision making, program management and accountability.

#### **4.5.10 Programme management**

The NMCP will be responsible for the implementation of a national malaria strategy in Zimbabwe and provides leadership and coordination for partners to implement activities within the strategic plan's framework. To guide programme implementation, NMCP will develop policy documents to cover Insecticide Treated Nets (ITNs), case management, epidemic response and communications approaches. The surveillance, Monitoring and Evaluation and operational Research policy will be developed. Under the current strategy, malaria control programme will be strengthened through financial and human resource management, logistics support and procurement and supply management.

#### **4.5.11 Finance And Administration**

##### **a. Financial Management**

The management of financial resources is very important for the smooth running of the programme. This includes management of budgets and cash, analysis of activities being conducted to make sure that value for money is being obtained, putting in place robust financial control systems, carrying out external audits and having resource mobilisation mechanisms.

The GOZ still remains the major source of funding for malaria control programme activities. Advocacy and lobbying to the Ministry of Finance, the Parliamentary Portfolio Committee on Health, other government departments and the corporate world shall be done to ensure timely availing of resources.

##### **b. Health Economics (Cost benefit analysis)**

The NMCP shall evaluate all the malaria interventions to make sure that value for money is obtained. By using malaria stratification information, resources shall be used for interventions that are considered to be appropriate in those areas except where elimination is being considered. Expenditure baseline will be established to evaluate the resources allocation. The base line shall seek to establish the following:

- Quantification of the different malaria commodities
- Cost of treatment
- Cost of spraying
- Opportunistic costs
- Linkage with national health accounts/CSO

### **c. Accountability and transparency**

Internal audit for donor funded activities will be done on a bi-annual basis. This will strengthen the control systems of the programme and to make sure that any abnormalities are corrected on time. External audits for all donor sponsored activities shall be done within six months after the end of every financial year. The financial reports will also be shared among all malaria partners. Where possible a basket fund shall be created for donor funds to avoid duplication of activities. For government funded activities external audit will be done by the Auditor General.

An operating and procedures manual for the MOHCW Finance Department shall be developed. This will spell out how the financial transactions shall be conducted. Internal control systems will also be laid out in the document including mechanisms for accountability on GOZ funds

### **d. Finance Management Reports**

Financial management reports will be produced on a monthly basis at operational level. This will enable management to make decisions and make corrective measures on time. Quarterly reports shall be generated at district, provincial and national level. A tracking mechanism shall be put in place to monitor the use of funds and commodities.

### **e. Finance and Audit Committee**

A Finance and Audit Committee shall be established in the course of this strategic period. This shall be responsible for scrutinising budgets to make sure that all the financial activities are aligned to the implementation plan and mobilising resources for the programme.

### **f. Capacity building**

Capacity building in financial management shall be done on a routine basis to ensure that the ever changing International Accounting procedures are adhered to. This will also enhance the capacity for the finance department to deliver efficiently.

### **g. Administration**

Administration plays an interface role for all the programme activities and therefore the need to have a robust administration system. A Procedures manual that will be merged with the Financial Operation Procedures manual shall be developed specifically for the National Malaria Control Programme.

### **h. Transport**

The programme shall develop a transport policy that is aligned to the MOHCW policy, but that addresses issues peculiar to the NMCP operations as well. This will give guidance on how the transport and fuel shall be used and managed.

### **i. Procurement and supply management**

The procurement and supply management of commodities and drugs is key within the programme. Procurement of goods normally takes 70% of the budget for the NMCP and therefore there is need to properly manage it. The post for a logistician shall be established and the incumbent will be responsible for all logistical activities.

A procurement policy will be developed. Issues such as procedures for awarding contracts, quality assurance, forecasting and inventory management shall be emphasized in the policy document. Training on supply chain management shall be conducted to capacitate members of staff. A Logistics Management Information System (LMIS) shall be developed. The system shall be used to forecast, calculate minimum and maximum stocks per stock item and reorder levels. The programme will also capture distribution and consumption data.

#### **4.5.12 Surveillance, Monitoring And Evaluation**

A basis for a sound surveillance system exists but requires strengthening as it does not routinely capture community events. Over the past 5 years, the system has also been weakened due to breakdown and non repair of telecommunication equipment, attrition of human resources and inadequate public transport systems.

The gains realized through the National Health Information System (NHIS) will continue to be improved in terms of quality and timeliness. Surveys, audits and rapid assessments will be used to collect data which cannot be collected routinely through the NHIS. During the implementation of this strategic plan, the malaria data base will be established at district, provincial and national levels to collect malaria programme specific data.

Monitoring and evaluation is a key component to all aspects of the national malaria control program. Through the M and E program results (such as outputs, outcomes and impact) can be measured to provide a basis for accountability and evidence based decision making at both program and policy level. Additional resources for systems development and maintenance will be mobilized from other partners.

There are three established technical malaria subcommittees (Vector Control, Case Management, IEC) which meet quarterly to advise the NMCP in the respective thematic areas. The Surveillance, M and E and Operational Research as well as the Finance and Auditsubcommittee will be established to spearhead M&E activities as well as to mobilize financial resources respectively.

The program will use quality data towards standardization of programmatic, outcome and impact indicators for uniform implementation. The details of indicators will be spelt out in the M and E framework that will be a critical aspect of the M and E plan. Training of health workers on M and E management systems will be a continuous activity to cover all health workers in the system. The M & E framework is shown on **table 2**.

**Table 2: Malaria M&E Framework (Adopted from the RBM framework)**

<b>Item</b>	<b>Indicators</b>	<b>Sources</b>	<b>Responsibility</b>	<b>Frequency</b>
<b>Goal</b>				
To reduce the incidence from 9.4 percent (94/1000) in 2008 to 4.5 percent (45/1000) by 2013 and case fatality rate from 4.5 percent in 2008 to 2.5 percent by 2013.	Incidence of clinical malaria cases (estimated and/or reported)	Routine surveillance	NMCP/NIHR	Monthly
	Parasite prevalence rate	Survey	NMCP/NIHR	2-3years
	Hospital malaria case fatality rate	Routine surveillance	NHIU/NMCP	Quarterly
	Malaria cases (unconfirmed and confirmed)	Routine surveillance	NHIU/NMCP	Monthly
	Confirmed malaria cases	Routine surveillance	NHIU/NMCP	Monthly
	Slide/RDT positivity rate	Routine surveillance	NHIU/NMCP	Monthly
	Malaria deaths	Routine surveillance	NHIU/NMCP	Quarterly
<b>Objectives</b>				
<b>Objective 1:</b> To achieve universal access to malaria prevention and personal protection.	% of households in targeted malaria areas protected by IRS outcome	Activity reports	NMCP	Monthly
	% of households with at least three ITNs in targeted areas	Activity/ survey	NMCP	Quarterly/ 2-3years
	% of U5 children (and other target groups) with malaria/fever receiving appropriate treatment within 24 hours (community/health facility)	Survey	NMCP	Annually
	% of population protected by ITNs and IRS	Activity reports	NMCP	Weekly/Monthly
	Proportion of pregnant women receiving IPTp2	Activity reports		Quarterly
<b>Objective 2:</b> To improve diagnosis and treatment of uncomplicated and severe malaria.	Proportion of suspected malaria cases tested	T5 return	NHIU/NMCP	Monthly
	Proportion of facilities reporting no stock outs of malaria commodities for one week within the past three months	Activity reports	NMCP	Quarterly
	Proportion of malaria cases correctly managed at health facilities	Audit/assessment reports	NMCP	Annually

<b>Objective 3:</b> To improve detection and timely control of malaria epidemics	Proportion of epidemics effectively managed	Activity reports	NMCP	Quarterly
	Proportion of health facilities with functional communication systems (radios, telephones, email )	Activity reports	NMCP	Quarterly
<b>Objective 4:</b> To strengthen community and other stakeholder participation to maximize achievement of universal access to malaria control interventions	Proportion of stakeholders participating in malaria control activities	Activity reports	NMCP	Quarterly
<b>Objective 5:</b> To improve coordination, management and monitoring for achieving universal access to malaria control interventions.	Proportion of vacant posts	Staff returns	HR/NMCP	Quarterly
	Percentage gap in financing of malaria control program	Financial reports	MOH/NMCP	Quarterly
<b>Interventions/Activities</b>				
<b>Objective 1 Main Activity 1</b> Scaling up effective vector control interventions (IRS and ITNs) to 90% of the population	Population in targeted areas covered by IRS	Activity reports	NMCP	Quarterly
	Number of ITNs distributed	Activity reports/INT returns	NMCP	Weekly/Monthly
	Number of Spray operators trained	Activity reports	NMCP	Monthly
<b>Objective 1 Main Activity 2</b> Provision of intermittent preventive therapy (at least IPT2) to at least 85% of pregnant women attending antenatal care in all medium to high transmission areas of Zimbabwe	Number of health workers trained in IPTp	Activity reports	NMCP	Quarterly
	Number of health workers trained in malaria case management	Activity reports	NMCP	Quarterly
	Number of pregnant women receiving IPTp2	Activity reports	NMCP	Quarterly
<b>Objective 2 Main Activity 1</b> Provision of malaria treatment within 24 hours of onset of fever to 85% of cases	Number of community health workers trained in malaria case management	Activity reports	NMCP	Quarterly
	Number of health facilities with stock outs of ACTs and RDTs for one week in the past three months	Activity reports	NMCP	Quarterly
	Number of ACT treatments administered	ACTs/RDT return	NMCP	Quarterly
<b>Objective 2 Main Activity 2</b> Confirmation and correct treatment of all malaria cases.	Number of RDTs used	ACTs/RDT return		Quarterly
	Number of laboratory scientist/ microscopists refreshed	Activity reports	NMCP	Quarterly

<b>Objective 2 Main Activity 3</b> Strengthening pharmacovigilance system at all levels	Number of health facilities reporting on ADR	Activity reports	NMCP	Quarterly
	Number of health care workers trained in pharmacovigilance	Activity reports	NMCP	Quarterly
<b>Objective 3 Main Activity 1</b> Detecting and effectively managing at least 95% of malaria epidemics within two weeks of onset	No. of districts with malaria EPR kits	Activity reports	NMCP	Quarterly
	Number of staff trained in IDSR	Activity reports	NMCP	Quarterly
	No. of districts with epidemic audits done	Activity reports	NMCP	Quarterly
	Number of health facilities submitting weekly surveillance reports timely	Weekly reports	NMCP	Weekly
	No. of health facilities with functional communication systems	Activity reports	NMCP	Quarterly
<b>Objective 3 Main Activity 2</b> Increasing malaria free zones in Zimbabwe.	Number of districts with EPR plans	Activity reports	NMCP	Quarterly
<b>Objective 4 Main Activity 1</b> Increasing community participation and competence on correct malaria prevention and control measure to 85%	Number of people reached by BCC activities	Activity reports	NMCP	Quarterly
	Number of community health workers trained in malaria case management	Activity reports	NMCP	Quarterly
<b>Objective 4 Main Activity 2</b> Strengthening the participation of other stakeholders in malaria	No. of Ward Health Teams Trained	Activity reports	NMCP	Quarterly
<b>Objective 5 Main Activity 1</b> Strengthening malaria surveillance, monitoring, evaluation and operational research	Number of case management audits conducted	Activity reports	NMCP	Quarterly
	Number of malaria mortality audits conducted	Activity reports	NMCP	Quarterly
	Number of vector bionomics studies carried out	Activity reports	NMCP	Quarterly
	Number of entomological staff trained	Activity reports	NMCP	Quarterly
	Number of drug efficacy studies	Activity reports	NMCP	Quarterly
	Number of functional sentinel sites	Activity reports	NMCP	Quarterly
<b>Objective 5 Main Activity 2</b> Strengthening planning, partnership building and coordination	Number of review and planning meetings held	Activity reports	NMCP	Quarterly
<b>Objective 5 Main Activity 3</b> Provision of malaria evidence	Number of operational researches conducted	Activity/research reports	NMCP	Quarterly

based information for decision making through operational research				
<b>Objective 5 Main Activity 4</b> Strengthening the management of malaria control programming through adequate financial and human resource management, logistics support and procurement and supply management.	Number of health facilities with stock outs of ACTs and RDTs for one week in the past three months	Activity reports	NMCP	Quarterly
	Number of staff trained	Activity reports	NMCP	Quarterly
	Number of post filled	Staff returns	HR/NMCP	Quarterly

It is envisaged that the improved M&E systems will facilitate quality documentation of progress on the achievement of the desired program objectives and targets subsequently reaching the RBM targets by 2010 and the MDG by 2015

**Appendix 1: Budget Summary for the 5 year Strategic Period**

<b>Service Delivery Area</b>	<b>Cost (USD)</b>	<b>Comments/Assumptions</b>
Vector control	40 000 000	-IRS -LLINs -Larviciding
Case Management	15 000 000	Case Management trainings for HW and Community based workers EPR RDT & Anti-malarials
Behaviour Change Communication	7 000 000	Mass Media Community outreach Commemorations Promotional & educational materials Malaria magazine
Programme management & Administration	15 000 000	Salaries Vehicle procurement and maintenance Office equipment & stationery procurements
M & E	7 000 000	Conferences Support & supervisory visits Drug efficacy monitoring Audits Operational research
<b>Grand Total</b>	<b>84 000 000</b>	