

**ORGANISATIONAL RESPONSES TO THE ENVIRONMENT:
A CASE OF THE MINISTRY OF HEALTH RESPONSES TO
RAMPANT CASES OF MALARIA IN KENYA**

BY

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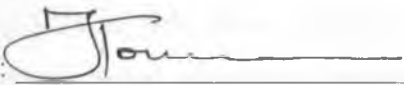
**A Management Research Project Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Business Administration
(MBA) of the University of Nairobi, School of Business.**

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DECLARATION

The project is my original work and it has not been presented for a degree in any other University.


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This Strategic Management project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

To my beloved mum Rispa Auma and my late beloved dad Joram Owino who jump started my life and showed me the importance of studying in order to achieve great heights.

To my beloved wife, Mercy and our children, TJ Thomas and KJ Kyrle for their inspiration, moral support and enduring my absence as I went through my MBA studies and more so as I struggle to complete this project work.

ACKNOWLEDGEMENTS

Many people have contributed to the successful completion of this project.

Special thanks go to my supervisor, Dr. Martin Ogutu for sparing time guide me delicately and patiently through out the preparation of this project. The selection of topic, inspiration and positive criticism helped me to comprehend the real meaning of strategic management.

To all the lecturers who taught me during my undergraduate and postgraduate course at the University of Nairobi. They have not only raised my social status but also instilled a great sense of professionalism. They have for sure shaped my future and I owe it to them all.

My sincere thanks to my manager and colleagues at Dafra Pharma limited. Special thanks to my Regional Director Paul Longmoor who offered me a management job for East Africa based on the completion of my course work and on the understanding that I would complete the project. Paul has been an inspiration in that he kept emphasizing to my colleagues and his seniors that the skills I have acquired at the MBA class would enable me propel the company forward through strategic positioning, financial and people management besides the technical know-how.

The input from my former director at GlaxoSmithKline, John Musunga cannot be overemphasized. The offer to reimburse my tuition fee on an ex-gratia basis was a great inspiration. My former colleagues who had finished or were just starting their MBA programme were a great inspiration to think about starting this course. These included John Musunga, Margaret Rarieya, Dickson Jawichre, James Naikuni, David Mungai,

Lilian Mbeki, Dr. Benard Aseto, Dr. Samson Muchelule, Dr. William Muraah, Dr. William Kiarie. Dr. William Marete among others.

Many thanks to my wife and our two children for inspiring me to complete this course and the motivation to start another. This ensured that the only way I could start another course would be to complete this one. They endured lonely weekends and evenings as I pursued my lectures, discussions and this project. My wife constantly contributed positively towards the project through technical input.

My sincere gratitude to my parents, brothers and sisters for there constant encouragement and patience throughout the course.

To all my friends and relatives who contributed in one way or another to the fulfillment of this work, you are all appreciated.

Glory be to God the Almighty for being forever faithful and true.

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ABBREVIATIONS

ACT	Artemisinin Combination Therapy
AIDS	Acquired Immune Deficiency Syndrome
CDS	Communicable Disease Services
DFID	Department for International Development
DOMC	Division of Malaria Control
GDP	Gross Domestic Product
GFATM	Global Fund initiatives on AIDS, Tuberculosis and Malaria
HIV	Human Immunodeficiency Virus
IEC	Information Education and Communication
IRS	Indoor Residual Spraying
ITNs	Insecticide Treated Nets
KEMSA	Kenya Medical Supplies Agency
LLINs	Long Lasting Insecticidal Nets
MBA	Master of Business Administration
MLG	Ministry of Local Government
MOH	Ministry of Health
M&E	Monitoring and Evaluation
NGOs	Non Governmental Organizations
NMS	National Malaria Strategy
RBM	Roll Back Malaria
SP	Sulfadoxine Pyrimethamine (Fansidar)
TOTs	Training of the Trainers
UK	United Kingdom
USAID	United States of America International Development
WHO	World Health Organization

ABSTRACT

The Kenya health care system can be divided conveniently into three official sub sectors namely public, voluntary (Non Governmental Organizations) and private. The public sector comprises the Ministry of Health (MoH), Ministry of Local Government (MLG), and health services of other ministries and parastatals. The Public sector is the major provider of health services with a control of 58% of all health facilities, 52% of all beds and 70% of all health personnel. The Ministry of Health is the third priority in terms of budgetary allocation after the Office of the president and Education. With a budgetary allocation of 33 billion Kenya shillings it endeavors to fulfill its mandate.

Malaria is a debilitating disease affecting millions of Kenyans each year and is the leading cause of death in Kenya. The toll it exacts must be viewed not only in terms of the physical, financial and emotional pain it inflicts on individual families (it kills 26,000 children per year in Kenya) but also by its macro-economic impact. The economy in general and the health sector in particular are heavily burdened by the cost of drugs and treatment. Malaria accounts for more than 8 million out-patient treatments at GoK health facilities each year. Malaria accounts for 30% of all outpatient attendance and 19% of all admissions to our health facilities and remains the leading cause of death and illness in Kenya.

The primary objective of this study is to determine responses of the Ministry of Health to the challenge of malaria in Kenya. The other objective of the study is to establish the effectiveness of the responses or interventions by the Ministry of Health towards the Malaria pandemic in Kenya. The study also highlights the challenges the MoH faced in tackling the malaria pandemic both previous and current challenges and the measures the ministry has instituted to counter these challenges.

In this study a number of senior officials of the Ministry of Health were interviewed and a tape recorder was also used to record information from in-depth interviews. The Ministry of Health has faced several challenges with diseases in general and more so with Malaria. Malaria is a debilitating disease affecting millions of Kenyans each year and is the leading cause of death in Kenya. The country's ecology provides ideal conditions for the malaria-carrying mosquito: especially in coastal and lake regions. Climatic conditions are conducive to outbreaks of epidemic intensity in other areas, such as intensively farmed highlands and semi-arid North-Eastern parts of the country. Capacity and resources for prevention and treatment are inadequate. Cumulatively, malaria represents a massive barrier to socio-economic development and poverty alleviation.

The responses by the Ministry of Health as highlighted in the study have immensely contributed to the reduction in the threat posed by malaria. It is therefore recommended that organizations must set up operational as well as strategic priorities in meeting their long term goal of fulfillment of stakeholder expectations. The study focused on the Division of Malaria Control and should be emulated by other divisions within the Ministry of Health to compare their strategic responses. A further study should be carried out to outline the impact of private sector influence in the implementation of Malaria control strategies by the Ministry of Health. I also recommend a study on the impact of the Malaria Control Strategies by the year 2010 by the Ministry of Health in Kenya in a bid to achieve the Abuja Declaration Targets of halving the number of Malaria cases.

CHAPTER 1: INTRODUCTION

1.1 Background

1.1.1 Organizational Responses to Environment

Environmental challenges refer mainly to external environment. These are factors beyond the control of the firm that influences its choice of direction and action, organizational structure, and internal processes. It consists of three interrelated subcategories namely; remote environment which refers to economic, social, political, technological, and ecological factors that originate beyond and usually irrespective of, any single firm's operating situation; Industry environment refers to general conditions for competition that influence all businesses that provide similar products and services. These include entry barriers, supplier and buyer power, competitive rivalry and substitute availability. Thirdly is the operating environment which refers to factors in the immediate competitive situation that affect a firm's success in acquiring needed resources such as labour, suppliers, customers, creditors and competitors (Pearce and Robinson 2007).

Environmental turbulence is a combined measure of change-ability and predictability of the firm's environment. Whereas change-ability is seen by the complexity and the relative novelty of the successive changes the firm encounters in the environment, predictability refers to the rapidity of change, which is the ratio of the speed with which challenges evolve in the environment to the speed with which the firm responds. Predictability is also seen in terms of the firm's vision, which assesses the adequacy and timeliness of information about the future (Ansoff and McDonnell, 1990). This explains why companies succeed in times of turbulence because they define their vision and mission well in advance.

All organizations operate in an open system. A system is a set of components that relate and interact within a boundary to the accomplishment of some objective. The system may

be closed or open. Whereas a closed system does not depend on the external environment for its survival, an open system depends on its external environment for survival from where it continuously consumes resources and releases resources back to the environment. The strategy of an organization is affected not only by environmental forces and resource availability, but also by the values and expectations of those who have power in and around the organization. Whether a company is expansionist or more concerned with consolidation, and where the boundaries are drawn for a company's activities, may say much about the values and attitudes of those who influence strategy – the stakeholders of the organization.

In overall, if a definition of a strategy is required, the most basic might be the long term, direction. However, the characteristics described above can provide the basis for a fuller definition: Strategy is the direction and scope of any organization over the long term which achieves advantage for the organization through its configuration of resources within a changing environment and to fulfill stakeholder expectations. Whereas strategic responses are ambiguous / uncertain, complex, organization-wide, fundamental and have long-term implications, operational responses are routinized, operationally specific and have short term implications. The scope of strategic management is greater than that of any one area of operational management. Strategic management is concerned with complexity arising out of ambiguous and non-routine situations with organization-wide rather than operation specific implications. This is a major challenge for managers who are used to managing on a day-to-day basis the resources they control.

The link between overall strategy and operational aspects of the organization is important for two reasons. First, if the operational aspects of the organization are not in line with the strategy, then, no matter how well considered the strategy is, it will not succeed. Second, it is at the operational level that real strategic advantage can be achieved. If change is to be successful it also has to link the strategic and the operational and everyday aspects of the organization. This emphasizes the importance not only of translating strategic change into detailed resource plans, critical success factors and key

tasks, and the way the organization is managed through control processes, but also how change is communicated through the everyday aspects of the organization.

Operational responses contribute to value and competitive advantage through market adaptability, winning against competition, adding value through enhanced performance or service, cutting costs of manufacturing, delivering human resource objective and provision of the link between manufacturing and marketing (Richard Lynch, 1997). Operational responses include raw materials sourcing and purchasing, production and manufacturing, distribution and logistics. Its role in strategic process is in delivering competitive advantage and coordinated support for products.

Operations management is concerned with those activities that enable an organization (not just one part of it) to transform a range of basic inputs (materials, energy, customer requirements, information, skills, finance etc) into outputs for the end customer (Steve Brown et al, 2000).

1.1.2 The Ministry of Health in Kenya

The Kenya health care system can be divided conveniently into three official sub sectors namely public, voluntary (Non Governmental Organisations) and private. The public sector comprises the Ministry of Health (MoH), Ministry of Local Government (MLG), and health services of other ministries and parastatals. The voluntary sub-sector consists of the mission health services and the health activities of what are popularly known as NGOs. The private sector includes the medical services provided directly by private health facilities and health professionals in private practices, also referred to as the private for profit sectors. There is also an unofficial sub sector comprising of institutions and providers over which the MOH has no control, i.e. traditional medicine consisting of herbalists, bone setter spiritual healers and other practitioners. The Public sector is the major provider of health services with a control of 58% of all health facilities, 52% of all beds and 70% of all health personnel (MOH, 2000). It is followed by the private sector

and then the voluntary sector. The structure of the health services delivery is hierarchical in nature. The dispensaries and health centers provide the bulk of health services and form the first level of contact with the community. The district hospitals form the next layer followed by the provincial hospitals. They both provide referral and outpatient services in addition to the requisite technical backstopping to facilities at the periphery. Kenyatta National Hospital and Moi Teaching and Referral Hospital are at the apex as key referral, research and teaching facilities. The Ministry Of Health is headed by the Permanent Secretary who is the accounting officer and the Chief Executive. Directly under is the Director of Medical Services that is in charge of all technical issues regarding health in the ministry. Administratively, the MOH is divided into three departments comprising various divisions which are responsible for the various functions of the Ministry. (MOH, 1998)

The ministry of health is the third priority in terms of budgetary allocation after the Office of the president and Education (GOK, 2006). With a budgetary allocation of Ksh. 33 billion it endeavors to fulfill its mandate (To formulate policies, set standards, provide health services, create an enabling environment and regulate provision of health service delivery). With a vision of an efficient and high quality health care system that is accessible, equitable and affordable for every Kenyan the ministry of health has declared to promote and participate in the provision of integrated and high quality promotive, preventive, curative and rehabilitative health care Services to all Kenyans as its mission (MOH,2000)

Malaria is a debilitating disease affecting millions of Kenyans each year and is the leading cause of death in Kenya. The toll it exacts must be viewed not only in terms of the physical, financial and emotional pain it inflicts on individual families (it kills 26,000 children per year in Kenya) but also by its macro-economic impact. The economy in general and the health sector in particular are heavily burdened by the cost of drugs and treatment. Malaria accounts for more than 8 million out-patient treatments at GoK health facilities each year. Hundreds of thousands more sufferers do not reach the formal health system.

Worldwide the fear of drug-resistant malaria could jeopardise Kenya's tourist industry, and thus threaten kshs 6.6 billion of annual foreign exchange earnings due to fear by tourist to come to Kenya. Kenya's ecology provides ideal conditions for the malaria-carrying mosquito; especially in coastal and lake regions. Climatic conditions are conducive to outbreaks of epidemic intensity in other areas, such as intensively farmed highlands and semi-arid North-Eastern parts of the country. Such outbreaks are increasingly frequent. Population growth and mobility, poverty, drug-resistance and depleted health systems create a wide and increasing range of malaria risks across Kenya, including epidemic infection that endangers entire population groups.

Capacity and resources for prevention and treatment are inadequate. Cumulatively, malaria represents a massive barrier to socio-economic development and poverty alleviation. Malaria accounts for 30% of all outpatient attendance and 19% of all admissions to our health facilities and remains the leading cause of death and illness in Kenya. An estimated 170 million working days are lost to the disease each year.

Kenya is, by nature, a prime victim of the malaria parasite. Our climate is conducive to the mosquito - a numerous, widespread, vector -and our demographics expose us to both endemic and epidemic transmission conditions.

Malaria is transmitted when a female Anopheles mosquito bites a person. Symptoms of the disease vary considerably in severity and include fever, headaches, aching joints, loss of appetite, and sometimes diarrhea, nausea and vomiting. Even relatively mild infections are physically debilitating to the victim, but can be readily treated with sulfa (SP) drugs such as Fansidar and Metakelfin. Delay in treatment can lead to much more severe illness, including convulsions, breathing difficulties, unconsciousness and severe anaemia. In the serious cases, unless the victim receives immediate hospital treatment, death can be rapid. It is estimated that there are more than 8.2 million malaria out-patient treated at GoK health facilities each year. The number of patients requiring in-patient care in GoK facilities for severe or complicated malaria is probably in excess of 22,000 each year.

1.2 The Research Problem

The ministry of health is the third priority in terms of budgetary allocation after the Office of the president and Education. With a budgetary allocation of 33 billion Kenya shillings it endeavors to fulfill its mandate (To formulate policies, set standards, provide health services, create an enabling environment and regulate provision of health service delivery). It is the only ministry charged with the responsibility of control and management of diseases to the general public. Therefore, the role it is playing in the health of the nation cannot be overemphasized.

In spite of the importance of MoH in the control and management of diseases, malaria cases has continued to be on the increase and is currently the single leading cause of death in Kenya especially in children below five years (Ministry of Health 2006). It is important to find out what the MoH is doing to respond to or cope with the challenge of the malaria pandemic which is threatening to wipe out a large percentage of Kenyans as well as its macro-economic impact. The economy in general and the health sector in particular are heavily burdened by the cost of drugs and treatment. Malaria accounts for more than eight million out-patient treatments at GoK health facilities each year.

Response studies have been done extensively, for example, Mwanthi (2003), Muraah (2003), Mungai (2004), Wamalwa (2002), Graham (1994), Weidenbaum (2001), Apungu (2003), Cheluget (2003), among others. These studies, however, have focused on different industries and to other phenomenon such as in the pharmaceutical industry responses to enactment of the Industrial Property Bill (e.g. Wamalwa, 2002), the challenge of HIV/AIDS pandemic (e.g. Muraah, 2003), liberalization (e.g. Mungai, 2004), in the dairy industry studies on responses due to macro environment (e.g. Cheluget, 2003). Malaria has also been studied extensively (e.g. Arya, 2000; Chanda et al. , 2006; Falade et al. , 2005; Lefevre et al. , 2001; Ogutu et al . , 2000; Salah et al . , 2006; Guterl et al. , 2002). Unfortunately, however, these studies have focused on pharmaceutical products and Non governmental organizations. Some studies have been done on the MoH but these have been with respect to ethics and corporate governance

(DOMC and the Malaria Consortium, UK, October 2000) as well as on poverty reduction (Government of Kenya, 2000) among others.

Therefore, as can be seen no study was found that have looked at how the MOH is responding to malaria pandemic in the country. This study seeks to bridge this gap by addressing how the MOH is responding to cases of rampant malaria in the country.

1.3 The Research Objective

This study has the following objectives:

- (i) To determine responses of the Ministry of Health to the challenge of malaria in Kenya.
- (ii) To establish the effectiveness of the responses or interventions by the Ministry of Health towards the Malaria pandemic in Kenya.

1.4 Importance of the Study

The study will be important to the government and the development partners in terms of budgetary and resource allocation in order to effectively control the disease due to the enormous resources required.

It will also be a learning experience not only to other divisions such as HIV/AIDS, Tuberculosis, Maternal child health etc in order to adopt similar strategies in fighting diseases but also to other ministries.

The study will also help other scholars in trying to establish such responses in the private health sectors as well as that of the government several years later to review the success of such responses.

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The ministry of health is the third priority in terms of budgetary allocation after the Office of the president and Education. With a budgetary allocation of 33 billion Kenya shillings it endeavors to fulfill its mandate (To formulate policies, set standards, provide health services, create an enabling environment and regulate provision of health service delivery). It is the only ministry charged with the responsibility of control and management of diseases to the general public. Therefore, the role it is playing in the health of the nation cannot be overemphasized.

In spite of the importance of MoH in the control and management of diseases, malaria cases has continued to be on the increase and is currently the single leading cause of death in Kenya especially in children below five years (Ministry of Health 2006). It is important to find out what the MoH is doing to respond to or cope with the challenge of the malaria pandemic which is threatening to wipe out a large percentage of Kenyans as well as its macro-economic impact. The economy in general and the health sector in particular are heavily burdened by the cost of drugs and treatment. Malaria accounts for more than eight million out-patient treatments at GoK health facilities each year.

Response studies have been done extensively, for example, Mwanthi (2003), Muraah (2003), Mungai (2004), Wamalwa (2002), Graham (1994), Weidenbaum (2001), Apungu (2003), Cheluget (2003), among others. These studies, however, have focused on different industries and to other phenomenon such as in the pharmaceutical industry responses to enactment of the Industrial Property Bill (e.g. Wamalwa, 2002), the challenge of HIV/AIDS pandemic (e.g. Muraah, 2003), liberalization (e.g. Mungai, 2004), in the dairy industry studies on responses due to macro environment (e.g. Cheluget, 2003). Malaria has also been studied extensively (e.g. Arya, 2000; Chanda et al. , 2006; Falade et al. , 2005; Lefevre et al. , 2001; Ogutu et al . , 2000; Salah et al . , 2006; Guterl et al. , 2002). Unfortunately, however, these studies have focused on pharmaceutical products and Non governmental organizations. Some studies have been done on the MoH but these have been with respect to ethics and corporate governance

(DOMC and the Malaria Consortium, UK, October 2000) as well as on poverty reduction (Government of Kenya, 2000) among others.

Therefore, as can be seen no study was found that have looked at how the MOH is responding to malaria pandemic in the country. This study seeks to bridge this gap by addressing how the MOH is responding to cases of rampant malaria in the country.

1.3 The Research Objective

This study has the following objectives:

- (i) To determine responses of the Ministry of Health to the challenge of malaria in Kenya.
- (ii) To establish the effectiveness of the responses or interventions by the Ministry of Health towards the Malaria pandemic in Kenya.

1.4 Importance of the Study

The study will be important to the government and the development partners in terms of budgetary and resource allocation in order to effectively control the disease due to the enormous resources required.

It will also be a learning experience not only to other divisions such as HIV/AIDS, Tuberculosis, Maternal child health etc in order to adopt similar strategies in fighting diseases but also to other ministries.

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CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature on the strategic and operational responses to environmental challenges that organizations encounter, highlighting the state of the art in the study of responses and gaps that hamper effective response to challenges that firms come across in their daily operations. Although the review focuses mainly on research concerned with the responses of organizations to the environmental challenges, the impact of environment on strategic choice also appraised.

2.2 The Concept of Strategy

The word strategy has been used since the 4th century. It stems for the Greek word "Strategos", which means the art of the general or commander in chief. In the 1950s and 60s when response to environmental discontinuities became important, the concept of strategy entered business vocabulary. Chandler (1962) and Ansoff (1965) observe that the literature on corporate strategy that emerged is vast and continues to grow at an astonishing rate.

Strategy is multidimensional concept and various authors have defined strategy in different ways. Strategy is the match between an organization's resources and skills and the environments opportunities and risks and the purposes it wishes to accomplish (Schendel and Hofer, 1979). It is meant to provide guidance and direction for the activities of the organization. The purpose of strategy is to provide directional cues to the organizations that permits it to achieve its objective while responding to the opportunities threats in the environment.

D'aveni (1994) takes the view that strategy is not only the creation of advantage but also the creative destruction of opponents' advantage. Porter (1996) states "The essence of strategy is choosing to perform activities differently than rivals do". He also outlined the basis of competitive advantage. It is based on the principle that organizations achieve competitive advantage by providing their customers with what they want, or need, better or more effectively than competitors and in ways that their competitors find difficult to imitate. Porter's (1980) analytic five-force approach to industry analysis made strategy more externally focused. It had a very strong influence in the 80s and remains quite influential today. Today though, emphasis has been placed on the need for speed and flexibility in order to respond to the increased pace of change and its effect on competition.

Mintzberg and Quinn (1991) perceive strategy as a pattern or a plan that intergrates organizations major goals major goals, policies and action sequences into a cohesive role. A well formulated strategy helps to marshall and allocates an organization, resources into a unique and viable posture upon its relative internal competencies and shortcomings, anticipated environmental changes and contingent moves by intelligent opponents. Pearce and Robinson (1997) define strategy as the company's 'game plan' which results in future oriented plans interacting with the competitive environment to achieve the company's objectives. This definition of strategy is important for this study because it reflects competitiveness in the environment and the game plan aspect, which organizations put into place to be able to compete effectively. Further they go ahead to define strategic management as the set of decisions and actions that result in the formulation and implementation of plans designed to achieve a company's objectives. Large corporate usually have three levels of strategy: Corporate level, business level or competitive strategy and functional level strategy.

Johnson and Scholes (1997, Pg 10) defines strategy as the direction and scope of an organization over the long term, which achieves advantage for the organization through its configuration of the resources within a changing environment, to meet the needs of markets and fulfill stakeholder expectations. Its main purpose is to enable the firm to gain

as efficiently as possible a sustainable edge over its competition. Corporate strategy therefore strives to alter a company's strength relative to that of its competitors in the most efficient way.

A consequence of the characteristics of strategic decisions is that they are therefore complex in nature. This is especially so in organizations is that they are therefore complex in nature. This is especially so in organizations with wide geographic scope like multinational firms or wide ranges of products or services. Strategic decisions may involve a high degree of uncertainty because they involve taking decisions on views of the future, which it is impossible for managers to be sure about. Strategic decisions may also require major change in the organization and may particularly be difficult to implement if the organization has been used to operating in ways, perhaps developed over the years, which are not in line with future strategy.

This is to say that strategy is not an abstraction. It indeed requires conscious effort to achieve it. In other words strategy does not just happen, it is caused. Therefore one can say strategy defines an organization in terms of its future, nature and direction (Johnson and Scholes, 1999) thus corporate strategy would then be seen to be concerned with the purpose and scope of and organization as a whole. Today strategy development and planning utilizes several tools which may include but are not limited to environmental scanning or competitive intelligence, scenario planning and forecasting, capital planning and budgeting, portfolio analysis, road mapping (plan new product development) and stakeholder analysis and engagement (Mintzberg and Quinn, 1991). Strategic management provides a framework within which such proactive actions are undertaken. In a nutshell therefore, strategy helps managers think about the future while still carrying out present operations (Aosa, 1997), respond to external changes on a timely basis and build the much needed internal capacity going forward.

2.3 Organizations and their Environment

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Environmental challenges refer mainly to external environment. These are factors beyond the control of the firm that influences its choice of direction and action, organizational structure, and internal processes. It consists of three interrelated subcategories namely; remote environment which refers to economic, social, political, technological, and ecological factors that originate beyond and usually irrespective of, any single firm's operating situation; Industry environment refers to general conditions for competition that influence all businesses that provide similar products and services. These include entry barriers, supplier and buyer power, competitive rivalry and substitute availability. Thirdly is the operating environment which refers to factors in the immediate competitive situation that affect a firm's success in acquiring needed resources such as labour, suppliers, customers, creditor and competitors (Pearce and Robinson 2007).

Environmental turbulence is a combined measure of change-ability and predictability of the firm's environment. Whereas change-ability is seen by the complexity and the relative novelty of the successive changes the firm encounters in the environment, predictability refers to the rapidity of change, which is the ratio of the speed with which challenges evolve in the environment to the speed with which the firm responds. Predictability is also seen in terms of the firm's vision, which assesses the adequacy and timeliness of information about the future (Ansoff and McDonnell, 1990). This explains why companies succeed in times of turbulence because they define their vision and mission well in advance.

Most organizations operate in an open system. A system is a set of components that relate and interact within a boundary to the accomplishment of some objective. The system may be closed or open. Whereas a closed system does not depend on the external environment for its survival, an open system depends on its external environment for survival from where it continuously consumes resources and releases resources back to the environment. The strategy of an organization is affected not only by environmental forces and resource availability, but also by the values and expectations of those who have

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power in and around the organization. Whether a company is expansionist or more concerned with consolidation, and where the boundaries are drawn for a company's activities, may say much about the values and attitudes of those who influence strategy – the stakeholders of the organization.

According to Ansoff (1990), strategy is the framework that links an organizations' capability to its environment as demonstrated in the model below.

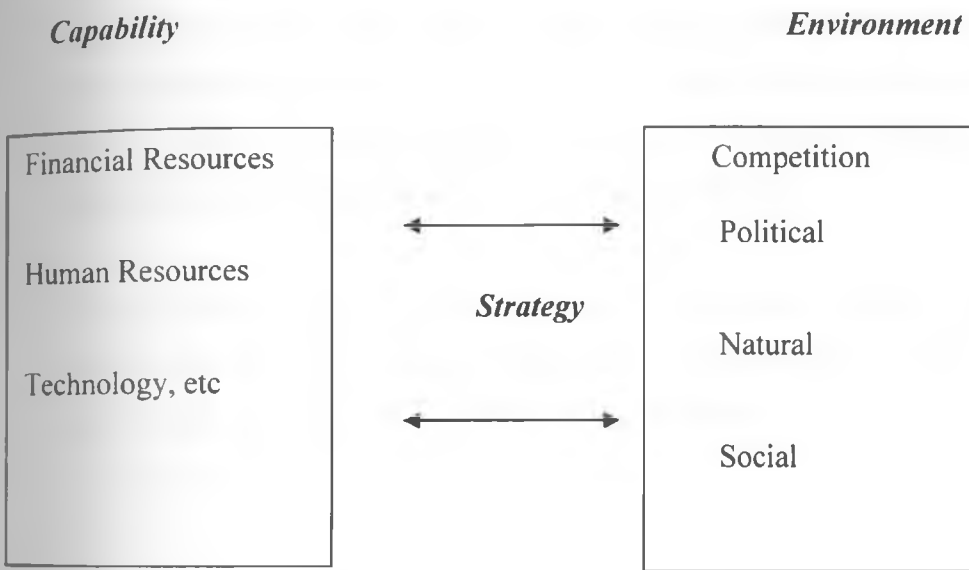


Figure 1. Strategy Capability-Environmental Link

Source: Ansoff and McDonnell 1990, p. 139

2.4 Organizational Responses

Most organizations operate within a system which is defined as a set of components that relate and interact within a boundary to the accomplishment of some objective. The system may be closed or open. Whereas a closed system does not depend on the external environment for its survival, an organization's survival in an open system depends on how it responds to the changes in the external environment. There are two types of

responses a company can adopt: Strategic and Operational responses to environmental challenges. Operational responses include raw materials sourcing and purchasing, production and manufacturing, distribution and logistics. Its role in strategic process is in delivering competitive advantage and coordinated support for products. The link between overall strategy and operational aspects of the organization is important for two reasons. First, if the operational aspects of the organization are not in line with the strategy, then, no matter how well considered the strategy is, it will not succeed. Second, it is at the operational level that real strategic advantage can be achieved. If change is to be successful it also has to link the strategic and the operational and everyday aspects of the organization. On the other hand, according to Porter (1980), strategic responses reflect a firm's competitive position in the industry and a fast changing environment may force the firm to change its position and this may be achieved through cost leadership, differentiating products and/or services or focused strategy.

Whereas strategic responses are ambiguous / uncertain, complex, organization-wide, fundamental and have long-term implications, operational responses are routinized, operationally specific and have short term implications.

2.4.1 Strategic Response

According to Grant (2000) survival and success for an organization occurs when an organization creates and maintains a match between its strategy and environment and also between its internal capability and the strategy. Strategic response requires organizations to change their strategy to match the environment and also to transform or redesign their internal capability to match this strategy. This in turn means that organizations need to harness both its tangible and intangible assets to maintain a strategic fit between its strategy and environment. If this fit is not realized then a strategic gap exists. Also if its internal capabilities are not matched with the strategy then a capability gap arises. Mwanthi (2003) showed that it is important for organizations to remain relevant to their consumers and that sustaining shareholder/stakeholder value is of prime importance.

This can only be achieved by setting strategic priorities that will ensure that it meets its long-term objectives. The study revealed that three main business principles should be maintained when setting out strategic priorities. These are the principles of mutual benefit, responsibility and good corporate conduct.

Strategic planning is therefore key for every manager due to the high degree of competition and unpredictability prevailing in many industries. Environmental scanning is paramount and both managers and employees must be involved in the planning process in order to achieve holistic implementation. Mwaura (2001) recommends that it is important for firms to develop methods of collecting competitor intelligence by undertaking serious market analysis to be able to formulate appropriate and effective strategies. Furthermore, strategic plans should be flexible and should involve the whole organization. He therefore recommends that managers must have futuristic orientation in their thinking and actions. This can enable them to anticipate possible environmental changes and develop a proactive stance in response.

Ansoff and McDonnell (1990) noted that strategic responses involve changes in firm's strategic behaviours to ensure success in the transforming future environment. The choice of the response depends on the speed with which a particular threat or opportunity develops in the environment. One of the fundamental issues in developing an operations strategy is which activities should be performed internally and which should be left to others such as suppliers, customers or partners (Hayes et al, 1996). According to Porter (1980), strategic responses reflect a firm's competitive position in the industry and a fast changing environment may force the firm to change its position. He asserts that a competitive position may be created around cost leadership, differentiating products and/or services or focused strategy. Firms may sometimes pursue more than one approach as its primary target. Pearce and Robinson (1997) observe that a long term or grand strategy must be based on a core idea about how a firm can best compete in the market place. The popular term of this core idea is generic strategy.

2.4.2 Operational Responses

This link between overall strategy and operational aspects of the organization is important for two other reasons. First, if the operational aspects of the organization are not in line with the strategy, then, no matter how well considered the strategy is, it will not succeed. Second, it is at the operational level that real strategic advantage can be achieved. The strategy of an organization is affected not only by environmental forces and resource availability, but also by the values and expectations of those who have power in and around the organization. Whether a company is expansionist or more concerned with consolidation, and where the boundaries are drawn for a company's activities, may say much about the values and attitudes of those who influence strategy – the stakeholders of the organization (Gerry Johnson and Kevan Scholes, 2002).

In overall, if a definition of a strategy is required, the most basic might be the long term, direction. However, the characteristics described below can provide the basis for a fuller definition: Strategy is the direction and scope of any organization over the long term which achieves advantage for the organization through its configuration of resources within a changing environment and to fulfill stakeholder expectations. There are a number of consequences of these characteristics: Strategic decisions are likely to be complex in nature. It will be emphasized that this complexity is a defining feature of strategy and strategic decisions (Porter, 1998). This is especially so in organizations with wide geographical scope, such as multinational firms, or wide ranges of products or services. Strategic decisions may also have to be made in situations of uncertainty; they may involve taking decisions with views of the future about which it is impossible for managers to be sure. Strategic decisions are also likely to demand an integrated approach to managing the organization (Pearce and Robinson, 1991). Unlike functional problems, there is no one area of expertise, or one perspective, that can define or resolve the problems. Managers, therefore, have to cross-functional and operational boundaries to deal with; strategic problems and come to agreements with other managers who, inevitably, have different interests and perhaps different priorities.

They may also have to manage and perhaps change relationships and networks outside the organization, for example with suppliers, distributors and customers. Strategic decisions will very often involve change in organizations which may prove difficult because of the heritage of resources and because of culture. These cultural issues are heightened following mergers as two very different cultures need to be brought closer together or at least learn how to tolerate each other (Ansoff, 1984).

Operational Strategies are concerned with how the component parts of an organization deliver effectively the corporate and business level strategies in terms of resources, processes and people.

<u>Strategic Management</u>	<u>Operational Management</u>
Ambiguous / uncertain	Routinized
Complex	
Organization-wide	Operationally specific
Fundamental	
Long-term implications	Short term implications

Figure 2: Characteristic of strategic management and operational management

Source: Gerry Johnson and Kevan Scholes 2002, p. 15

The scope of strategic management is greater than that of any one area of operational management. Strategic management is concerned with complexity arising out of ambiguous and non-routine situations with organization-wide rather than operation specific implications (Hayes et al 1996). This is a major challenge for managers who are used to managing on a day-to-day basis the resources they control. Strategic management includes understanding the strategic position of an organization, strategic choices for the future and turning strategy into action. The strategic position is concerned with the impact on strategy of the external environment, internal resources and competences, and

the expectations and influence of stakeholders. Managing strategic change must therefore address the powerful influence of the paradigm and the cultural web on the strategy being followed by the organization (Johnson and Scholes, 2002).

If change is to be successful it also has to link the strategic and the operational and everyday aspects of the organization. This emphasizes the importance not only of translating strategic change into detailed resource plans, critical success factors and key tasks, and the way the organization is managed through control processes, but also how change is communicated through the everyday aspects of the organization. The approach taken to manage strategic change will also need to be context dependent. It will not be the same for all situations in all types of organization. Managers need to consider how to balance the different approaches over; managers need to be able to help create the sort of organizational context which will facilitate change (Ansoff and McDonnell, 1990).

Operations management is concerned with those activities that enable an organization (not just one part of it) to transform a range of basic inputs (materials, energy, customer requirements, information, skills, finance etc) into outputs for the end customer (Steve Brown et al 2000). According to Richard Lynch (1997), operations contribution to value and competitive advantage through market adaptability, winning against competition, adding value through enhanced performance or service, cutting costs of manufacturing, delivering human resource objective and provision of the link between manufacturing and marketing. Operational responses include raw materials sourcing and purchasing, production and manufacturing, distribution and logistics. Its role in strategic process is in delivering competitive advantage and coordinated support for products.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the various steps that were used to execute the study in a bid to satisfy the study objectives. It details the research design that were adopted and methods used for data collection and data analysis.

3.2 Research Design

This was a case study of the Ministry of Health in Kenya. It focused primarily on the Division of Malaria Control (DOMC). It is the only ministry charged with the responsibility of control and management of diseases to the general public. Therefore, the role it is playing in the health of the nation cannot be overemphasized relative to the NGOs and the Private health providers. Many studies have utilized sector-wide surveys to derive their evidence on various environmental aspects affecting the health sector. This study was specifically meant to outline the strategic and operational responses of one particular division of the Ministry of health charged with the responsibility of reducing the burden of Malaria and other related diseases in the Republic of Kenya. The role of a case study in this particular instance is as outlined below:

- i. Whereas a survey may not bring out the in-depth analysis of a phenomenon, a case study, allows for in-depth exploration of issues in a phenomenon. The magnitude of malaria cannot be understated and therefore requires a detailed analysis of one major player in the health sector rather than a shallow interview of all the players in the health sector.
- ii. A case study is cost effective. Whereas pharmaceutical companies make drugs, mosquito nets, laboratory reagents to combat the scourge through the various approaches such as treatment, prevention and laboratory testing, among others,

other NGOs do advocacy work to create awareness. The sector wide survey would not only be expensive but also very shallow.

- iii. The choice of a case study in this particular research cannot be overemphasized as it is easier to coordinate than the sector wide survey.

3.3 Data Collection

The study relied on both primary and secondary data. Secondary data were regarding different aspects of the Malaria challenge. Firstly, statistics on death rate due to malaria and/or its complications before the malaria interventions taken by the Ministry of Health were obtained from the district and provincial hospitals mortuary division. Secondly data on the average repeat visits to the hospitals due to the Malaria will be obtained from the outpatient records. Thirdly, the data on bed occupancy or malaria admissions were obtained from the In-patient records in the malaria prone districts. Fourthly data on malaria outbreaks before and after the interventions were obtained from the Malaria Surveillance Centre.

Primary data were data relating to the Ministry profile, environmental challenges, operational and strategic responses as well as evaluation of the effectiveness of these responses. The means of data collection were that of semi-structured questionnaire as shown in appendix i. It was obtained by interviewing senior members of the Ministry of Health management team as follows:

- i. The Permanent Secretary provided the Ministry profile being the Chief Executive Officer. This enabled us understand the mission, vision and the structure of the MOH in order to achieve its mandate.
- ii. The Finance Manager together with the Human Resources Manager provided information relating to the resource mobilization and allocation to adequately address the challenge of malaria pandemic.

- iii. Technical issues relating to the disease and responses was provided by the Director of Medical Services being the technical advisor to the ministry together with the Head, Division of Malaria Control within the Ministry of Health.
- iv. The head of Health Promotion Division also provided information on the challenges, responses and effectiveness of the communication strategies that have been adopted to fight the scourge. This brought out the challenges and the effectiveness of such methods adopted by the ministry.
- v. The Minister for Health was also interviewed to give an overall view on the political challenges within the ministry that affects the fight against the disease.
- vi. The Provincial and the District Medical Officers of Health are directly involved in the implementation of the malaria intervention policies. They outlined the challenges of implementation as well as the effectiveness of such interventions. A representative of one of the malaria prone districts and provinces was also interviewed.

A tape recorder was used to record information from in-depth interviews. Secondary data was obtained from the Ministry of Health's Communications and Public Relations division as well as the periodic newsletters and magazines published by the Division of Malaria Control. Additional secondary data was obtained from studies done by other stakeholders in the healthcare sector especially the Pharmaceutical companies as well as Development partners and other NGOs. The local daily newspapers as well as the Ministry of Health, website also formed an integral part of the secondary data.

3.4 Data Analysis

The mode of data analysis was content analysis given the qualitative nature of data obtained and the fact that the primary objective of the study was restrictive to the nature of information required. Content analysis was also deemed to be an unobtrusive means of analyzing interactions and its case of reference and interpretation by the beneficiaries of this study. Further content analysis has been used with success to analyse written, audio or video data from secondary data studies. It also allowed for in-depth exploration of issues most suited for generating rather than testing hypothesis. It is also suitable for analyzing in-depth information regarding issues of the study. However, statistical analysis was also used to enable determine the effectiveness of the responses in tackling the malaria pandemic in Kenya.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter documents the findings of the major strategic and operational responses by the Ministry of Health to the current environmental challenges posed by the escalating cases of Malaria in Kenya.

4.2 Organizational Profile

4.2.1 Historical Background

In 1948, the Ministry of Health was created from the Ministry of Local Government where it existed as a department by the British Colonial Government. The same year the Division of Nursing was functionally established. When Medical school was established in the 1970's, its focus was on curative services rather than preventive medicine. Resources allocation shifted to curative medicine in favour of the exotic Internal Medicine. Ad hoc scattered health initiatives, firefighting characterized primary healthcare which targets prevention. Donors concentrated on preventive while Government of Kenya concentrated on curative medicine. The presence of many players did not lead to tangible outcome despite massive resource set aside by donors and the Government of Kenya. In 1994, Kenya Health Sector Reform Secretariat was established with a core mandate to define policy directions for next 15 years, which is 2010. This was a major milestone for the GOK in provision of Healthcare to all. In 1999 the first National Health Sector Strategic plan with a need to shift from curative to preventive medicine and give policy direction. The theme was investing in Health as the government can only invest on healthy people not in sick people. Therefore, preventing people from becoming ill was the central value on investment in long run for sustainable economic development. Within the strategic plan that operationalises the policy, the MOH identified priority areas to be addressed during the plan period and grouped them into

three: High, Medium and Low priority. In the High priority areas identified were maternal health, child health, Malaria, HIV/AIDS. The MOH identified Malaria as a leading priority tracking from situation analysis & economic losses as a result of Malaria. The first National Malaria strategy focused on diseases once more posing challenge of resources which moved to higher priority areas neglecting others, duplication of duties, verticalizations of approaches and wars around divisions & departments among others. Health indicators continued to go down despite massive resources and many donors and players, there was minimal synergy.

Response to Malaria challenges despite the Policy direction already in the National Malaria Strategies worsened mainly due to incoordination, intraministerial, intersectional bottlenecks. Monitoring and Evaluation was not inbuilt in the strategic plan leading to lack of planning, targets and measurements of results through health indicators. Response to challenges beyond Malaria in terms of decision making remained an impediment due to lack of empowerment of people on the ground without bureaucracy at the top.

Definition of the reform agenda for the sector was paramount in responding to health problems mainly Malaria. This led to redefinition of structure whose main mandate is to oversee implementation. This resulted in the formation of the Reform Secretariat with definition of essential packages towards the high priorities to respond to reform agenda. Coordination, strengthening partnerships with private sector and donors was key to its success and to respond to the Abuja Declaration by the African Heads of States to reduce the Malaria Diseases death and illness by 50% by the year 2010.

A new strategy was adopted to cover the period 1999 – 2004 as a National Health Sector Strategic Plan which considers:

- I. One sector plan (Not ministry of Health only)
- II. One coordinating mechanism
- III. One monitoring & Evaluation framework

These constituted the three principles of Paris declaration which resulted in increased funding but low effectiveness, reduced Donor Aid effectiveness. In this one sector plan, every body adheres to & everybody plans resulting in a Sector wide Approach which defines what we need to offer on basis of what is giving challenges but has seen the danger of defining along disease lines (people built walls against them systems crosscutting issues such as Procurement, Measurement & Evaluation, Human Resources. Performance indicators & must be linked to the output in the strategic plan or else the division or department is deployed to the district in a move to enhance decentralization. Direct financing at district level will also enhance financial freedom.

4.2.2 Strategic Intent, Mandate, Mission and Vision

The Kenyan health care system can be divided conveniently into three official sub sectors namely public, voluntary (Non Governmental Organizations) and private. The public sector comprises the Ministry of Health (MOH), Ministry of Local Government (MLG), and health services of other ministries and parastatals. The voluntary sub-sector consists of the mission health services and the health activities of what are popularly known as NGOs. The private sector includes the medical services provided directly by private health facilities and health professionals in private practices, also referred to as the private for profit sectors. There is also an unofficial sub sector comprising of institutions and providers over which the MOH has no control, i.e. traditional medicine consisting of herbalists, bone setter spiritual healers and other practitioners. The Public sector is the major provider of health services with a control of 58% of all health facilities, 52% of all beds and 70% of all health personnel. It is followed by the private sector and then the voluntary sector. The structure of the health services delivery is hierarchical in nature. The dispensaries and health centers provide the bulk of health services and form the first level of contact with the community. The district hospital form the next layer followed by the provincial hospitals. They both provide referral and outpatient services in addition to the requisite technical backstopping to facilities at the periphery. Kenyatta National Hospital and Moi Teaching and Referral Hospital are at the apex as key referral, research and teaching facilities.

The Ministry Of Health is headed by the Permanent Secretary who is the Accounting Officer and the Chief Executive. Directly under is the Director of Medical service that is in charge of all technical issues regarding health in the ministry. Administratively, the MOH is divided into three departments comprising various divisions which are responsible for the various functions of the Ministry. One such critical division is the Division of Malaria Control (DOMC) under the Preventive and Promotive Health Department.

The ministry of health is the third priority in terms of budgetary allocation after the Office of the president and Education. With a budgetary allocation of 33 billion it endeavors to fulfill its mandate (To formulate policies, set standards, provide health services, create an enabling environment and regulate provision of health service delivery). With a vision to provide an efficient and high quality health care system that is accessible, equitable and affordable for every Kenyan, the mission of the Ministry of Health is to promote & participate in the provision of integrated & high quality promotive, preventive, curative and rehabilitative health care services to all Kenyans.

4.3 Environmental Challenges and their Impact on the MOH

4.3.1 Political and Legal Challenges

Resource allocation criteria and application is highly political. Whoever is in power tries to allocate resources to certain regions regardless of their disease prevalence. There is need for consensus because malaria is a disease of the poor and poor infrastructure is associated with politically marginalized areas while those favoured politically have better infrastructure. Parallel political systems such as Constituency development fund have become more powerful than the District Health Management Board. This has led to duplication rather than complimentary impact. The MOH has lost money for infrastructure development to Constituency Development Fund which it used to control but now the MOH has totally no control over it yet it is expected to benefit directly from

it. The MOH has to now plead with the committees to direct funds to the uncompleted dispensaries and this affect service.

The change of the first line treatment for malaria from the sulfa-based drugs to the new Artemether-Lumefantrine was highly political characterized by a lot of lobbying against the wishes of most professional bodies such as the Pharmaceutical Society of Kenya, the Kenya Paediatric Association with claims that it lacked a paediatric formulation and was too expensive and one of its components is not well understood. They also claimed that this drug could not be used in pregnant women, whom together with children are the most vulnerable to malaria. Despite this outright rejection by the medical fraternity, the MOH under pressure from WHO and other Development Partners picked the drug amidst protests.

According to the WHO, the first line antimalarial needs to be accessible to majority of the sufferers at onset of fever. However a legal bottleneck seems to strangle this effort. The selected first line antimalarial is classified under Part one of the Poisons act as prescription only medicine and this means that it cannot be sold over the counter, nor in shops. It can also not be announced over the print and electronic media by name. This hampers its availability to the people who need it most in the rural and poor areas where chemists are not available. This bottleneck requires that the law be changed to allow access of this product which comes not only with the challenge of side effects of the drug but also the complicated dose regimen. The change of legislation also requires political goodwill and intense lobbying with the parliamentarians.

4.3.2 Economic Challenges

Financial issues present a critical problem which constrains the ability of the Ministry of Health to legislate for and ensure the delivery of adequate levels of quality health care in Kenya. The Ministry of Health is seriously under funded. Per capita expenditures on health were US\$9.50 in 1980/81 but since then have dropped to about US\$4.50 in 1991/92 and due to the devaluation of Kenya shilling in early 1993, are unlikely to rise

above US\$3.50 per capita by 1996/97. This is despite a rise in local currency expenditures from K£50 million in 1979/80. Furthermore the share of general Government recurrent expenditures allocated to the Ministry of Health has declined from 9.26% of Government total for 1979/80 to 8.51% in 1991/92, and fell further to 7.61% in 1996/97. In addition, health centers and dispensaries belonging to the Ministry of Local Government were taken over by the Ministry of Health in 1970 without any increase in its recurrent budget. Finally, the cost of caring for AIDS patients was equivalent to the entire 1993/94 recurrent budget of the Ministry of Health by the year 2000 as anticipated.

The Kenyan economy has generally undergone mixed experiences since independence. The growth in Gross Domestic Product (GDP) averaged 6.5 per cent over the period 1964 to 1970; however, the first oil crisis of 1972 brought an abrupt halt to this level of achievement. Consequently the growth rate decelerated to be below 4 per cent for much of the early 1970s until the unexpected coffee boom of 1976 and 1977 when growth rate in GDP averaged 8.2 per cent. The situation worsened when the price of crude petroleum doubled from US\$ 13 per barrel in 1978 to US\$ 27 in 1979, generally pushing up the inflation rate, and the cost of imported input and raw materials resulting in the slow down of economic growth. For much of the early 1980s the rate of growth rate fell below 1 per cent in 1984. This was largely attributed to the severe drought of that year. Favourable weather conditions coupled with Government budgetary discipline and improved management enabled Kenya to achieve significant 4.8 per cent and 5.5 per cent growth rates in 1985 and 1986 respectively. Since 1990, however, the rate of growth in GDP has continued to slide below 4 per cent and fell dramatically to a mere 0.4 per cent in 1992, the lowest since 1991 could slow down GDP growth since 1991 could be explained in terms of the actual decline in real output and value added in agriculture, due to below average amount of rainfall, sluggish growth in aggregate private domestic demand and foreign exchange shortages leading to reduced imports of intermediate inputs of the suspension of donor aid. The Government has taken remedial measures to reverse this trend. One other general observation is that, as would be expected of a modernizing economy, the contribution of the traditional non monetary sectors of the economy have steadily declined from 24.7 per cent in 1964 compared to 5.4 per cent in

1992. Similarly, the contribution of the agricultural sector has steadily declined from over 45 per cent of GDP in 1963 to about 28 per cent in 1992. What this implies is that the contribution to GDP from manufacturing and government services has steadily expanded.

The rate of inflation in Kenya is currently measured by the Nairobi Consumer Price Index which is a weighed average index for each of the three income groups in a calendar year. During the first decade or so of independence, Kenya enjoyed a single digit inflation rate, mainly due to the effects of the prices control system and good economic performance. However, after the first oil shock of 1973, the inflation rate rose to 17.0 per cent in 1974 and subsequently to 19.1 per cent in 1975. Apart from the years 1973, 1979, 1984, 1986 and 1987 the rate of inflation has ranged between 10 to 20 per cent per year with the exception of 1982 and 1992 when the inflation rates were 21.54 and 27.50 respectively, the latter being the highest inflation rate ever recorded since independence. While it is true that the inflation rate has been determined by domestic policies and price control regimes, it has also been determined by the state of the international economic recession in the early eighties and the second oil crisis in 1980, compounded by a rapid increase in money supply, the introduction of price decontrol of some consumer items and the devaluation of the Kenyan Shilling under the continued implementation of the Structural Adjustment Programme and the 1991 freeze of donor aid to Kenya.

The overall performance of the economy has had both a direct and an indirect adverse effect upon the health sector and the health status of the Kenya population. The macroeconomic policy for growth and sustainability described in the seventh development plan will help to alleviate the undesirable effects of poverty, which constrain the ability of the Ministry of Health to ameliorate the burden of disease. Therefore, within this general macroeconomic framework, the Ministry of Health present policies designed to improve the health status of the Kenyan people.

Sector wide economic profile reveals that almost 50% of the healthcare budget is from out of pocket and private sector. Expenditure on health care considering the sector in its

entirety, shows that in Financial Year 1983/84, of a total of almost KSh.2.9 billion spent on health care nationwide, 42.09% was spent on health care provided at Ministry of Health institutions, with a combined Government total of 50.13%. Over the counter expenditures on drugs and pharmaceuticals accounted for a further 23.6%, and private health institutions accounted for almost KSh.265 million of 9.21% of the total. Expenditures on the services of private medical practitioners totaled KSh.216 million (7.51%) and Ministry of Local Government and Mission Facilities each accounted for slightly less than 6% of the total. It is therefore clear that the private sector, particularly privately owned pharmacies, is making a considerable contribution to the provision of health care in Kenya, and are benefiting from their activities. Sources of finance when one examines the sources of financial flows to the health, one immediately recognizes the important role that Government plays in promoting good health. Of all health care expenditures in Financial Year 1983/84, 41.97% were financed by the Ministry of Health, with an additional 5.31% coming from the Ministry of Local Government. However, the contribution of individuals to their own good health is not to be underestimated, since a further 40.880% of the total was derived from their out of pocket expenditures. Mandatory health insurance mediated through the National Hospital Insurance Fund provided less than 4% of the total in 1983/84 and combined donor input provided less than 3%.

When one examines the share of general Government recurrent expenditures allocated to the Ministry of Health, it is evident from that this too has been reducing steadily. In 1979/80 Ministry of Health recurrent expenditures accounted for 9.26% of the Government total for that year. From 1986/87 onwards, this percentage has dropped and by 1991/92 was only 8.51% of total Government expenditure. This is expected to fall by almost one percentage point to 7.61% by 1996/97. Internal allocations of Ministry of Health recurrent budgets continue to favour curative care in hospital. Since 1979/80, the percentage of MOH recurrent expenditure attributable to the provision of curative services has remained at approximately 70% of the total, although within hospitals a greater share of their expenditure has been on preventive services carried out in outpatient clinics. Increase to the direct funding of primary and preventive health care

from 15% in 1979/80 to 21% in 1991/92 has occurred at the expense of expenditure on administration and training.

Through funds provided both by WHO and the UK DFID, WHO has supported country efforts towards scaling up effective interventions towards malaria to the total of approximately \$2,500,000 in 2006. In addition significant technical support has been given to support the treatment policy change process, epidemic preparedness and response plans, communication strategy development and implementation, and support to the mass distribution of LLITNs in the form of logistics planning WHO also provides a procurement facility for Artemether & Lumefantrine at a reduced cost, to developing countries, with high malaria burden. Kenya's first line treatment drug, for uncomplicated malaria is ACT and has benefited from this facility.

WHO support to scaling up malaria control interventions in Kenya in 2006 was as outlined below:

Activity	USD – approx
• access to prompt and effective treatment	1,085,700
• access to preventive measures including IINS and IRS	930,000
• Interventions to control malaria in pregnancy	27,500
• M&E	19,100
• Communication / IEC	456,450
TOTAL	2,518,750

Figure 3: Sources of Malaria Activity Funding 2006

Source: Malaria Control Notice Board Newsletter, October-December 2006, p. 6

4.3.3 Social, Religious and Cultural Issues

With the support from the Global Funds for AIDS, Tuberculosis and Malaria (GFATM), the Ministry of Health distributed 3.4 million nets in 2006 to children under five years. Half of these nets were distributed to Western Kenya during the integrated measles campaign of July 2006. The remaining nets went to children under five years in parts of Coast, Rift Valley Eastern and Central provinces during a stand-alone mass net distribution campaign in September 2006. The distribution exercise was very successful and most nets reached the target population. Immediately after the September distribution, there were alarming reports by the media claiming that some of the nets given to residents of Kilifi district were 'talking' to their users. It was further reported that the peoples were so scared of the new nets that they had started returning them to the health facilities and to the chief's centres. When contacted, health facilities and to the chief's centres. When contacted, health managers in the district confirmed that some people were returning the nets. As a reaction to this, officers from the Division of Malaria Control and a social scientist from Kenya Medical Research Institute (KEMRI) went to Kilifi district to investigate. Kenya NGO Alliance Against Malaria (KeNAAM) organised the trip with assistance from Vesterguard Frandsen. The objective of the mission was to determine possible causes of the rumours in view of solving the problem. Interesting results were obtained as outlined below.

The team first got feedback from the office of the Medical Office of Health before going to gather information in various divisions. They started with the division where the rumour had originated. Data were gathered through focus group discussions and key informant interviews. The first key informant interview was held with the District Disease Surveillance Coordinators. The officer gave the chronology of events. He said that the rumour was started by a lady known as Grace Katana from Karimboni village, Chasimba location, Chonyi division of Kilifi district. The provincial and district health administrators immediately held a public meeting where participants were requested to freely give their views concerning the nets. During this meeting one lady complained that her children could not sleep well using the nets. The children were reported to be making funny noises but the

children were reported to be making funny noises but the children were able to sleep well once she lit a lamp. The next day, this lady exchanged her net with that of her sister-in-law whose net had shown no problems. When she slept in the net given by her sister-in-law, she dreamt of a very big cow coming towards her with intention of knocking her down. One lady said that the net asked her why she had tied it onto a dirty place and also the net wanted to know how many children she had.

After lots of deliberations, the chief's meeting ended with the assurance that the nets were safe to use. After this those who had returned the nets accepted them back. The other key informant who was interviewed was the assistant chief of Uyombo in Matsangoni. He said that his people had complained that when the nets were used for the first day, the children developed "homa". Children were also noted to hallucinate at night. Some children had dreamt of seeing pictures similar to those on packages of the nets. The assistant chief had received up to 100 nets returned to his office due to the rumours. These nets were however taken by other users. In his public meeting the assistant chief said that he had informed his people to air the nets for 24 hours before using them for the first time.

A focus group discussion was held in Chonyi division, the origin of the 'talking' rumour. The participants were members of the board of management of Chasimba health centre. One member said that the nets were not new in the district. They had been having a continuous supply of subsidized nets marketed by the population Service International (PSI) at 50 shillings. He however said that free nets were not received well as free things are likely to have problems. One member said that probably some of the members of the community returning the nets were either ignorant or lacked faith. Most of those who returned the nets had been noted to be women of low literacy level. The colour of the free nets was white. Most communities associated ghosts to white linen. Others thought that sleeping under white mosquitoes nets was equivalent to sleeping in a coffin considering the colour and shape of the net (rectangular) and the fact that coffins were usually drape in white linen. One member said that the rumour was that the nets were requesting a sacrifice of their first and last-born children since the nets were helping their children.

One member said that following the discussions by their leaders, most people were now accepting the nets although it was not possible to ascertain that they were using them.

A male dominated focus group discussion was held in Matsangoni village. Here the men were categorically against the white colour of the nets since the lamps used in the house madder the nets dirty. They gave a sad story where a poorly hang net fell on a baby who suffocated and died. They were of the opinion that the strings to hang the nets should also be supplied although the conical nets were more preferred. One member suggested that the target group should be extended to men too. A female focus group discussion was held with thirteen mothers who had brought their children to Matsangoni dispensary. Information was sought as to how they came to know about the distribution of the nets. Radio, school children, dispensaries and assistance chiefs were mentioned as the sources of information.

It was also found out that information about usage of the nets was inadequately given, for example only one mother reported that she was told to expose her net for 24 hours before using it. She only got this information after asking the health care worker whether she could use it immediately. The other 12 mothers did not get this information. The mothers also mentioned that they preferred blue or green colour nets as opposed to white nets. White color was associated with death and coffins. White also reflected a lot of light, scaring children going to sleep. Also gathered was the information that the mothers did not like white as it attracted dust and appeared dirty as compared to the blue or green nets. It was also found out that this group of mothers were comfortable with square nets as they were more spacious in terms of width but however complained that the height should be increased in order for them to sit down inside comfortably when breastfeeding and attending their young ones.

It was discussed that proper use of insecticide treated nets has been shown to drastically reduce the incidence of malaria. Incidents like those in Kilifi are bound to reduce the use of the nets and reverse the gains so far made. From the survey, it was clear that there were salient issues at hand. First and foremost, the nets were given in mass without proper social mobilization if not well mobilized; the community was likely to be

suspicious of free commodities. It was found out from all participants that the use of the nets on the first day was associated with some problems with the children. This could have been due to the insecticide. People ought to have been taught to open the net for at least 24 hours before using it. The colour of the net was also contested. People in the community were said to be using white nets on coffins of deceased members. Also ghosts were associated with white linen. So it was important for the colour to be green or blue as suggested by many people. The housing structure of the district favored conical nets because it was hard to get a place to fix four corners. The strings for hanging the nets ought to have been supplied.

The following recommendations were made to allay any fears:

1. Shape: Most study participants preferred conical nets since they required only one point for tying as opposed to the rectangular ones that needed many.
2. Colour: Nearly all, 99% members preferred green or blue colours.
3. Height: The height needed to be increased to enable young mothers sit up comfortably and breastfeed their children.
4. Free nets: It can be said that the issue of free nets is unclear. Though majority of those involved in the discussion seemed to want free nets, others may not have come out loudly to say that they would rather get the nets at a fee. For example when they say that "cha bure cha ua" meaning free things kill and also members of the Board Of Governors, Chasimba Health Centre mentioned that the PSI nets, which were sold at a fee, were good because they could get some money to sustain or run the clinic.
5. Social mobilization: this is a very important aspect of any intervention and must always be well addressed. It is always important to spend a lot of time and money creating awareness when dealing with people from different cultural and religious beliefs and who have little or no education. Different channels of awareness creation ought to have been used; chiefs' barazas, school children, health personnel, opinion leaders, various groups and radios in order to target all members.

The message conveyed should always be very similar and no questions should be left unanswered. A demonstration of how to use the nets should have been done at every distribution point. It is also very important to use experts in this area as more often than not people assume that everyone knows how to tie a bed net and how to use it. All community members need to get the information i.e. not only women but also men who are the fathers of the children.

4.3.4 Supplier and Stakeholder Challenges

Since the attainment of independence in 1963, the Government has given high priority to the improvement of the health status of Kenyans. It recognizes that good health is a prerequisite to socioeconomic development, and its commitment to the provision of health services is evident from the phenomenal growth of the local currency health budget and the expansion of the network government health facilities across the country. In a number of Government policy documents and in successive National Development Plans, it is set forth that the provision of health services should meet the basic needs of the population, be geared to providing health services within easy reach of Kenyans and place emphasis upon preventive, promotive and rehabilitative services without ignoring curative services. Achievements successes and failures has characterized the policies that the Government has pursued over the years which had a direct impact in improving the health status of Kenyans. Despite a decline in economic performance, cumulative gains have been made in the health sector as evidenced by the improvement in basic health indicators.

The crude death rate dropped from 20 per 1000 in 1993 and the crude birth rate from 50 per 1000 to 46 per 1000 over the same period. Likewise, both infant mortality and life expectancy, basic indicators of health status, improved dramatically. It is however important to note that although the above national health indicators looked impressive, there are significant geographic disparities which need to be addressed in order to achieve

some equity. Three recent policy initiatives have met with considerable success. These were:

Cost sharing amended in 1989 to introduce consultation fees in Government health facilities, and modified in 1992 to convert user charges from a consultation fee to a treatment fee. This program has increased the level of resources available at the local level for improving the functions of the health system. Three quarters of the revenues are used at the collecting facility, and one quarter are set aside for district level expenditure on primary health care. District Health Management Boards Created by legal notice in 1992, these Boards provide local oversight of the cost sharing program.

Civil Service Health Manpower Reform: Civil service reform in general seeks to trim the size of the civil service, and as part of this reform program, in 1993 the Ministry of Health began implementation of a voluntary early retirement scheme for those in lower job groups. However, not all policies formulated over the period were translated into actions or realized their desired outcomes. The decline in resource availability and to some extent the mismanagement of resources limited the implementation of policy and expected benefits were not fully realized. The Government is no longer able to provide unlimited free care, as budgetary allocations are insufficient to meet rising costs. Furthermore, in 1965 the late President Kenyatta abolished fee collection in health facilities, and in 1970, the Ministry of Health took over the health centres and dispensaries run by local authorities without a corresponding transfer of budget from local authorities to the Ministry of Health. Likewise, the growth in fixed capital and facilities was not matched by the growth of recurrent budget allocations. This has resulted in both chronic and sometimes acute shortages of essential and critical inputs for health care delivery. Investment made through donor and community financing have greatly expanded the network of health facilities. However, there has not been proper coordination to ensure that future requirements for the correct balance of recurrent inputs are catered for and are sustained after the commissioning of new facilities.

Employee challenges have been an impediment in the success of the MOH to deliver its promise. The Ministry of Health has surplus of staff in lower cadres and deficits in the numbers professional staff. The distribution of professional staff does not reflect real needs, and there is a concentration of key personnel in urban areas and in-patient services. This is compounded by increases in the numbers of staff leaving public service to engage in private practice. Furthermore, although not legally entitled to do so, many are engaging in part-time private practice while in the employment of the Government, often to the detriment of the patients who come for medical attention in Government health institutions. Furthermore, the mushrooming of unregistered clinics run by staff not licensed under the existing laws has threatened the general public.

4.3.5 Technological and Infrastructural Issues

Kenya's health infrastructure has grown rapidly since independence, and currently there are well over 3,200 health care institutions nationwide. With approximately 1,100 MOH dispensaries, 400 health centers built an impressive, pyramidal health referral system, often with considerable support from harambee efforts. Despite these major gains population growth outstrips the capacity of the Ministry of Health to cater for the demand for the services, and currently over 70% of the recurrent budget is devoted to the payment of staff salaries and benefits to the detriment of expenditures on other essential items, particularly medicines. This lack of resources has meant that a number of facilities have been constructed but have never been opened, and has caused the referral system to fail, resulting in unnecessary congestion of hospitals by patients who should be treated at lower cost in health centers and dispensaries. Plans for the expansion of coverage of public health services must take into account the availability and utilization of Private, NGO and Mission Sector facilities and must also guarantee improvements to the efficiency of public resource allocation and utilization. The current advanced equipments and methods for testing malarial parasites as well as other technological advances in genotyping in the field of Research have imposed a major impediment in the war against malaria.

4.3.6 Challenges posed by Malaria

Malaria is a debilitating disease affecting millions of Kenyans each year and is the leading cause of death in Kenya. The toll it exacts must be viewed not only in terms of the physical, financial and emotional pain it inflicts on individual families (it kills 26,000 children per year in Kenya) but also by its macro-economic impact.

The economy in general and the health sector in particular are heavily burdened by the cost of drugs and treatment. Malaria accounts for more than 8 million out-patient treatments at GoK health facilities each year. Hundreds of thousands more sufferers do not reach the formal health system.

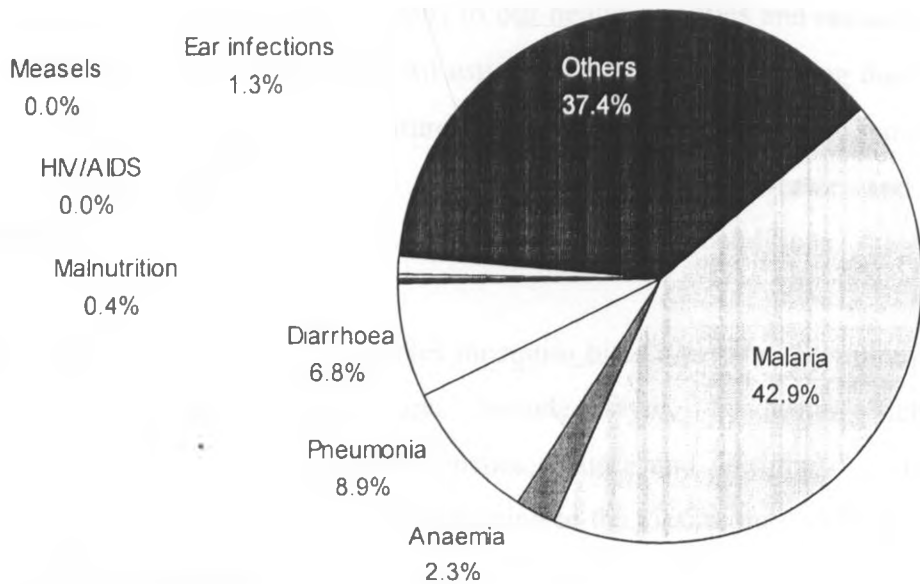


Figure 4: Top Ten Diagnosed diseases in Children under five years old in Out Patient Department (2004)

Source: MOH Facts and Figures, 2004, p. 11

Worldwide the fear of drug-resistant malaria could jeopardise Kenya's tourist industry, and thus threaten kshs 6.6 billion of annual foreign exchange earnings due to fear by tourist to come to Kenya. Kenya's ecology provides ideal conditions for the malaria-carrying mosquito; especially in coastal and lake regions. Climatic conditions are conducive to outbreaks of epidemic intensity in other areas, such as intensively farmed highlands and semi-arid North-Eastern parts of the country. Such outbreaks are increasingly frequent.

Population growth and mobility, poverty, drug-resistance and depleted health systems create a wide and increasing range of malaria risks across Kenya, including epidemic infection that endangers entire population groups. Capacity and resources for prevention and treatment are inadequate. Cumulatively, malaria represents a massive barrier to socio-economic development and poverty alleviation. Malaria accounts for 30% of all outpatient attendance and 19% of all admissions to our health facilities and remains the leading cause of death and illness in Kenya. An estimated 170 million working days are lost to the disease each year. Kenya is, by nature, a prime victim of the malaria parasite. Our climate is conducive to the mosquito - a numerous, widespread, vector -and our demographics expose us to both endemic and epidemic transmission conditions.

Malaria is transmitted when a female Anopheles mosquito bites a person. Symptoms of the disease vary considerably in severity and include fever, headaches, aching joints, loss of appetite, and sometimes diarrhea, nausea and vomiting. Even relatively mild infections are physically debilitating to the victim, but can be readily treated with sulfa (SP) drugs such as Fansidar and Metakelfin. Delay in treatment can lead to much more severe illness, including convulsions, breathing difficulties, unconsciousness and severe anaemia. In the serious cases, unless the victim receives immediate hospital treatment, death can be rapid.

It is estimated that there are more than 8.2 million malaria out-patient treated at GOK health facilities each year. The number of patients requiring in-patient care in GOK facilities for severe or complicated malaria is probably in excess of 22,000 each year and

over 10,000 children below five years die every year representing 37% of all the deaths of the under fives every year and still accounts for the highest death rate in Kenya. In the year 2005, the death toll rose to 34,000 children under five years of age.

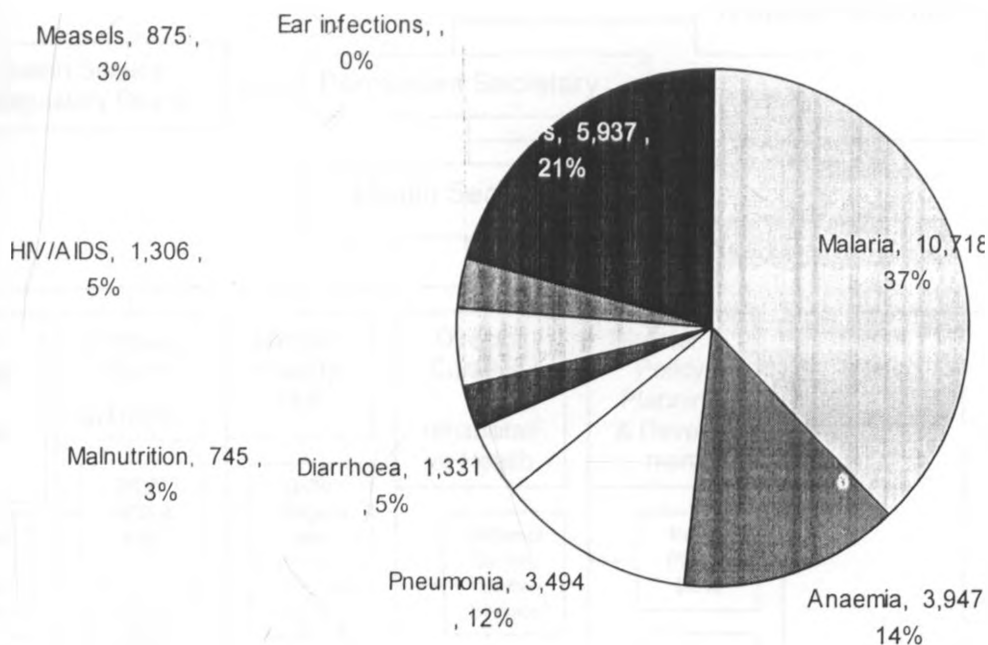


Figure 5: Causes of deaths in health facilities in Children under five years old (2004)

Source: MOH Facts and Figures, 2004, p. 12

4.4 Strategic Responses of the Ministry of Health

4.4.1 Decentralization and change of structure

The MOH organogram revised in context of decentralization with specific roles and responsibilities for each level defined with the strengthening of boards & committees for districts, provincial hospitals and health centers as well as district stakeholders' forum. This was all aimed at thinning down the headquarter while deploying staff to the

grassroot level where the disease burden is concentrated and at the same time empowering those staff at the lower level minimizing beurocracy.

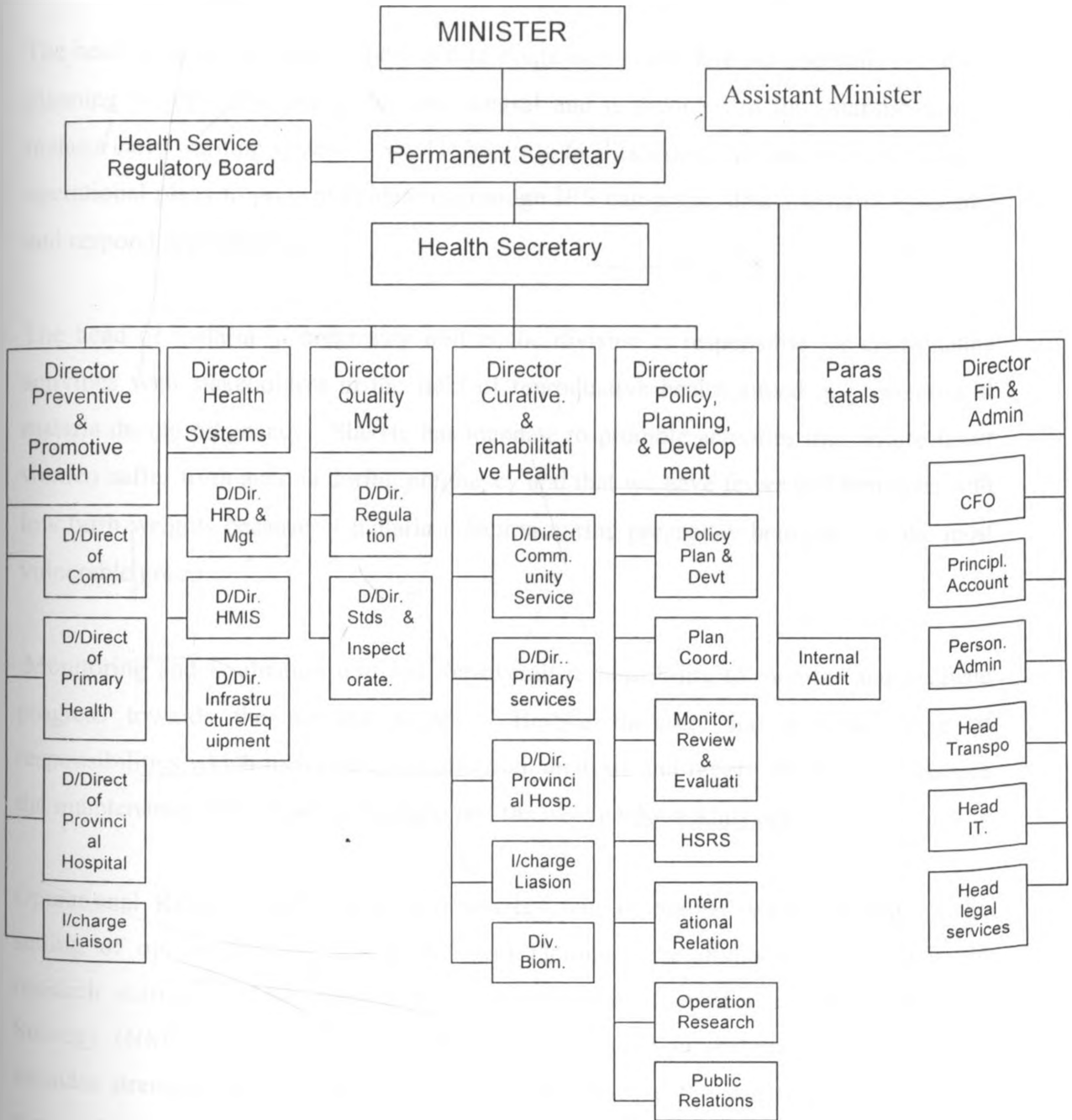


Figure 6: Proposed Ministry of Health Internal Structure

Source: Unpublished MOH Health Sector Reform Secretariat Newsletter, 2007, p. 6

The Division of Malaria Control was not spared in the decentralization process. Earlier the division had seven functional units headed by a manager as outlined below to coincide with the critical strategic issues to be addressed in the war against malaria:

The head of epidemic preparedness and response unit at the division undertakes strategic planning for epidemic prevention and control and is involved in the establishment of malaria early warning systems. She/He hopes to facilitate district teams to better develop operational plans to prevent epidemics through IRS campaign, detect malaria epidemics and respond appropriately.

The head of malaria in pregnancy unit at the division is responsible for coordinating activities with stakeholders in the field of reproductive health aimed at prevention of malaria during pregnancy. She/He has mandate to promote activities that ensure fewer women suffer from anemia during pregnancy and that we have fewer children born with low birth weights because of malaria infection during pregnancy being one of the most vulnerable group.

Monitoring and Evaluation unit has the overall responsibility to monitor and evaluate progress towards the national targets. He/She therefore has a wide range of responsibilities which included data collection, analysis and report writing and oversees the maintenance of the malaria database and the website www.kmis.org.

Operational Research and Laboratory Services unit is charged with advising on the setting of operational research agenda and facilitates the division to participate in research activities which contribute to the implementation of the National Malaria Strategy (NMS) and collaborate with partners involved in malaria research. It also includes strengthening laboratory services and in particular the quality assurance of the parasitological diagnosis of malaria.

Malaria case management unit has the overall responsibility to coordinate the formulation and implementation of malaria treatment policy issues. It covers drug policy and

management issues, pharmacovigilance, drug quality testing and therapeutic efficacy testing. The unit is spearheading the implementation of the new malaria treatment policy of using Artemisinin Based Combination Therapy (ACTs) and hopes to see every Kenyan receive prompt and appropriate malaria treatment at all levels. The other unit is Advocacy and IEC which is responsible for all issues to do with information, education and communication (IEC). He is charged with the development, distribution and dissemination of IEC materials in liaison with the IEC technical working group. In collaboration with the division of health promotion, it is currently coordinating the malaria communication campaign for rolling out the new treatment policy in the implementation of the malaria communication strategy especially to reach all communities at risk of malaria infection.

Malaria Vector Control unit is responsible for coordinating the formulation of malaria vector control policies and oversee the implementation of activities which mitigate malaria transmission. This docket calls for close coordination of activities with the many partners and communities involved in malaria control including the mass distribution of long lasting insecticide treated nets to children less than five years of age in 46 high burden malaria districts. He hopes to coordinate the formulation of integrated vector management policy and oversee its implementation.

DOMC structure had to be changed to respond to the decentralization strategy. Some units have been merged and others deployed to the ground at the district level to enhance effectiveness. Whereas it has been a linear structure with all the seven unit heads reporting to the head of the division directly, the structure was revised as shown below to enhance responsiveness to the surrounding environmental changes:

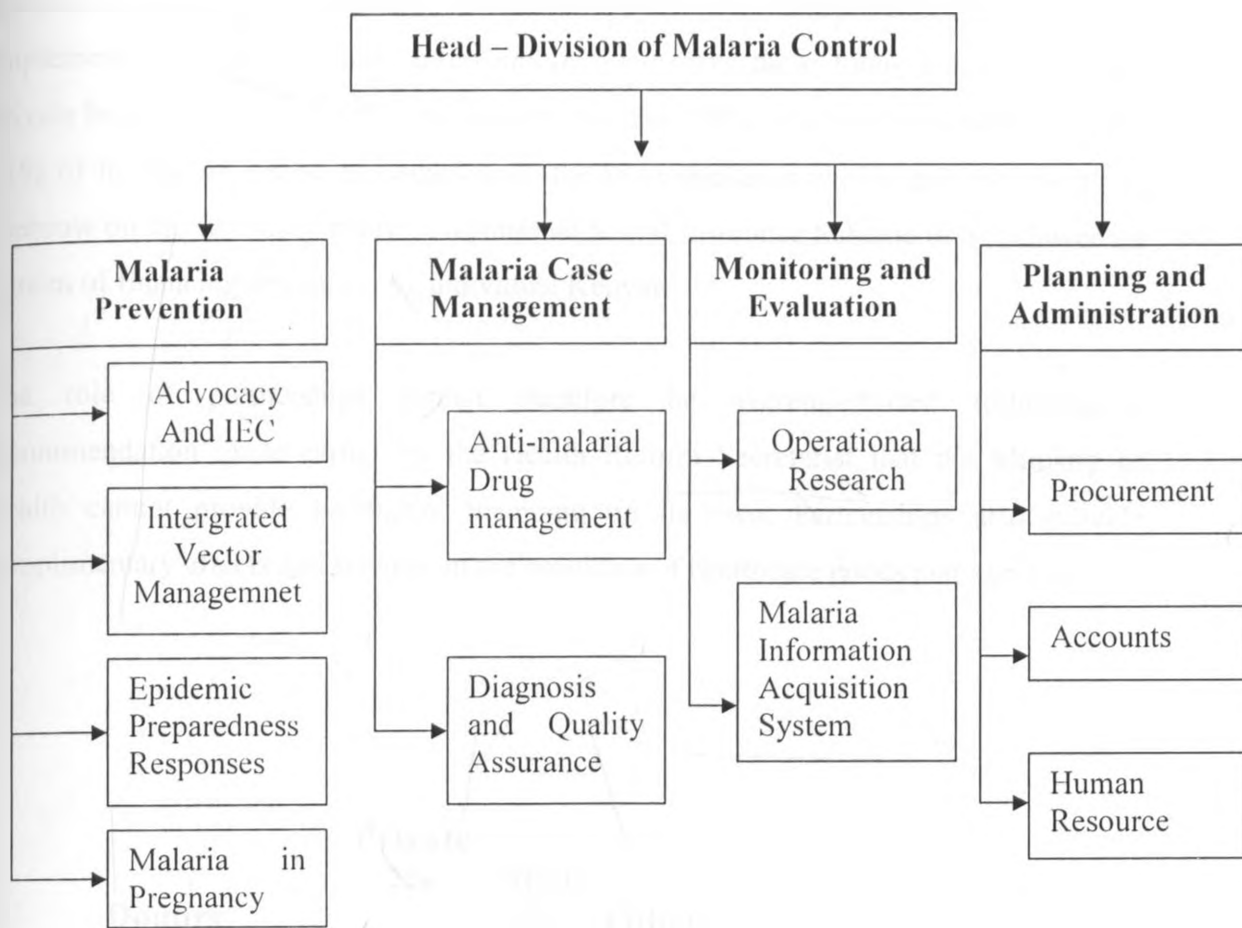


Figure 7: Proposed DOMC Internal Structure

Source: Unpublished DOMC Malaria Control Newsletter, 2007, p. 9

4.4.2 Resource Mobilization

The Ministry of Health's competitive advantage over its competitors is the ability to provide majority of skilled and non-skilled manpower as well as the ability to mobilize massive financing capability compared to any other healthcare provider in Kenya. Whereas the GOK invested Ksh 100 Million in 2006, GFATM invested 4 billion shillings, DFID invested 1.4 billion shillings, and USAID donated Ksh 400 million while Presidents Bush malaria initiative and UNICEF contributed 1.4 billion and 140 million

towards management of Malaria, HIV/AIDS and TB. This contributed immensely to the implementation of the malaria interventions. However these funds together with the private health sector funds still contribute to less than 50% of healthcare financing. Upto 51% of healthcare financing comes from the individual households thereby raising an eyebrow on the fiscibility study of a National Social Insurance Scheme to help lower the burden of financing healthcare by individual Kenyans.

The role of partnerships cannot therefore be overemphasized following a recommendation made earlier by the Health Reform Secretariat that the Ministry of Health cannot provide healthcare financing on its own. Partnerships also provide complimentary effects and synergy in the provision of healthcare goods and services.

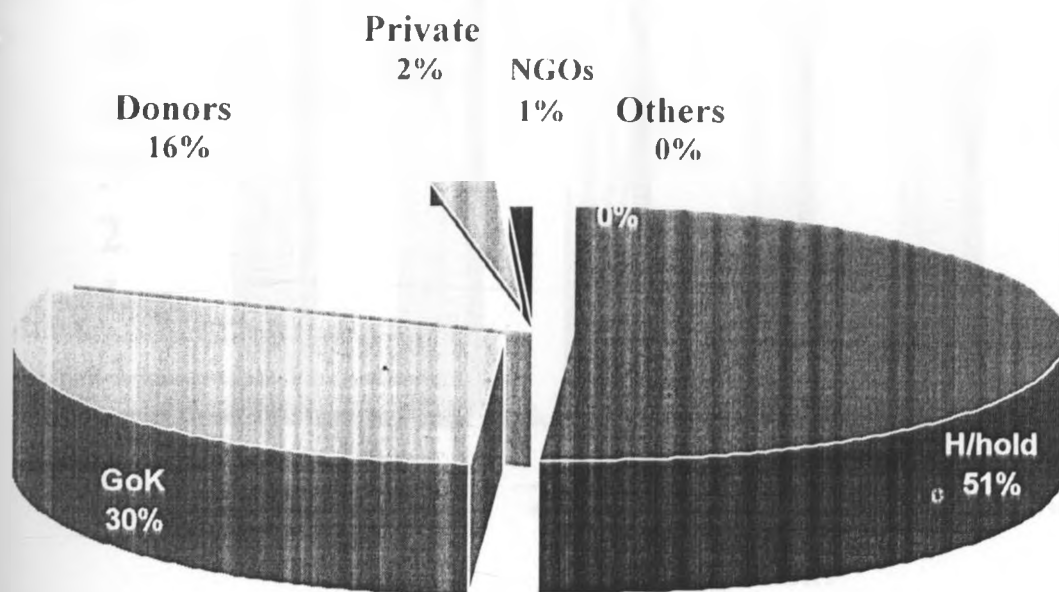


Figure 8: Sources of funds for health financing

Source: MOH Facts and Figures, 2006, p. 14

The percentage of the Government of Kenya funding towards Healthcare compared to the total Government expenditure has been worsening over the years resulting to the neglect of the Ministry of Health, hence the health sector. However, the situation improved drastically in the financial year 2006/2007 in response to the worsening Healthcare. This has led to marked improvement in the financial position of the ministry to enable it meet its operating as well as long term strategic objectives

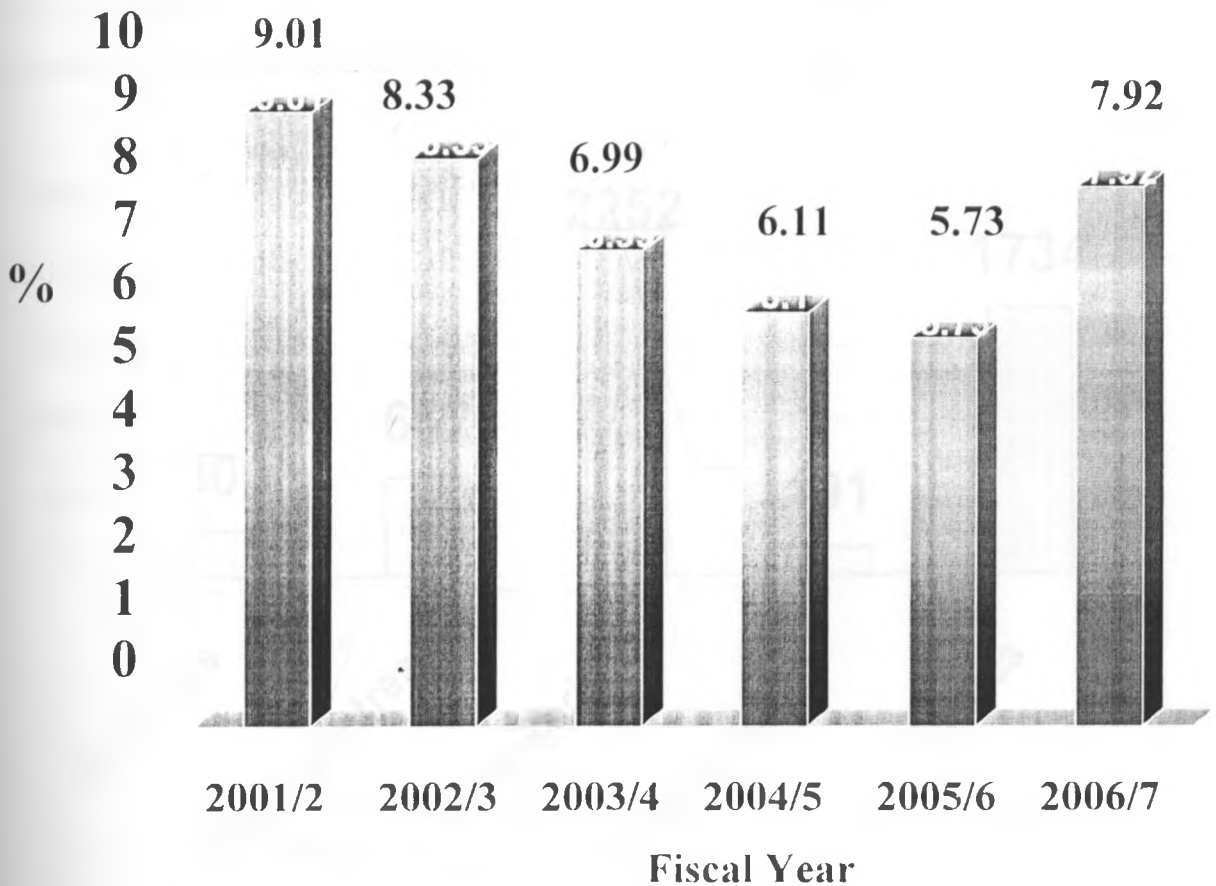


Figure 9: MOH Recurrent Expenditure as a Percentage of the Total Government Expenditure.

Source: MOH Facts and Figures, 2006, p. 12

The Public sector is the major provider of health services with a control of 58% of all health facilities, 52% of all beds and 70% of all health personnel. It is followed by the private sector and then the voluntary sector. The structure of the health services delivery is hierarchical in nature. The dispensaries and health centers provide the bulk of health services and form the first level of contact with the community. The district hospitals form the next layer followed by the provincial hospitals. They both provide referral and outpatient services in addition to the requisite technical backstopping to facilities at the periphery. Kenyatta National Hospital and Moi Teaching and Referral Hospital are at the apex as key referral, research and teaching facilities. With a wealth of resources the MOH has a competitive edge over its competitors and explains why it should be in a better position to manage disaster as well as curtail diseases such as malaria.

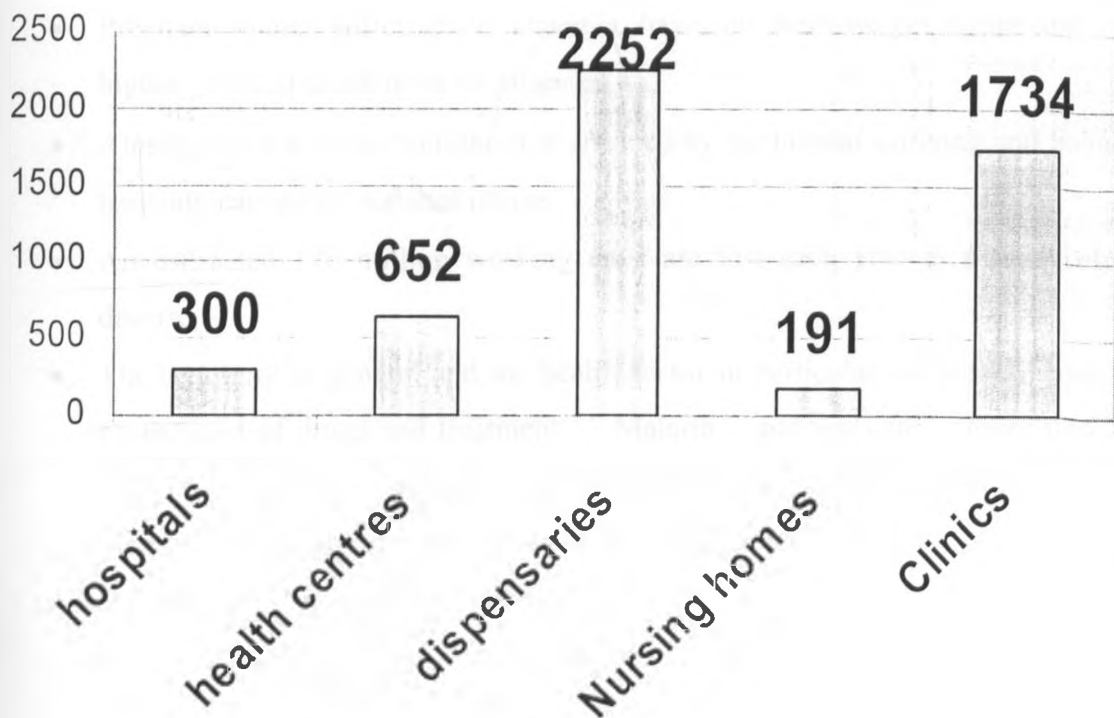


Figure 10: Health facilities in Kenya

Source: MOH Facts and Figures, 2006, p. 16

4.5 Operational Responses of the Ministry of Health

The National Malaria Strategy is the instrument of government's determination, and the springboard to partnership action due to the burden the disease has on the economy as well as human suffering:

- Some 20 million Kenyans - more than half the entire population - are regularly affected by the most deadly malaria parasite: Plasmodium falciparum.
- The cumulative human suffering and economic damage caused by malaria is immense. Children and pregnant women are most at risk.
- Each year, an estimated 34,000 children die from the direct consequences of malaria infection.
- Pregnant women suffer severe anaemia, have low birth-weight babies and run a higher risk of death from the disease.
- Almost every Kenyan household is afflicted by the human suffering and financial hardship caused by malarial illness.
- An estimated 170 million working days are lost each year as a result of the disease.
- The economy in general and the health sector in particular are heavily burdened by the cost of drugs and treatment. Malaria accounts for more than 8 million out-patient treatments at GOK health facilities each year. Hundreds of thousands more sufferers do not reach the formal health system.
- Worldwide fear of drug-resistant malaria could jeopardise Kenya's tourist industry, and thus threaten shs6.6 billion of annual foreign exchange earnings
- Kenya's ecology provides ideal conditions for the malaria-carrying mosquito, especially in coastal and lake regions.
- Climatic conditions are conducive to outbreaks of epidemic intensity in other areas, such as intensively farmed highlands and semi-arid North-Eastern parts of the country. Such outbreaks are increasingly frequent.

- Population growth and mobility, poverty, drug-resistance and depleted health systems create a wide and increasing range of malaria risks across Kenya, including epidemic infection that endangers entire population groups.
- Capacity and resources for prevention and treatment are inadequate.

Cumulatively, malaria represents a massive barrier to socio-economic development and poverty alleviation. Malaria, a blood parasite, is transmitted when a female *Anopheles* mosquito bites a person. Symptoms of the disease vary considerably in severity and include fever, headaches, aching joints, loss of appetite, and sometimes diarrhoea, nausea and vomiting. Even relatively mild infections are physically debilitating to the victim, but can be readily treated with sulfadoxine-pyrimethamine (SP) drugs. Delay in treatment can lead to much more severe illness, including convulsions, breathing difficulties, unconsciousness and severe anaemia. In these serious cases, unless the victim receives immediate hospital treatment, death can be rapid. Efforts to control the disease have hitherto been sporadic, piecemeal and, despite some successes, have not effectively reduced or even decelerated overall disease rates. Indeed, both illness rates and epidemic outbreaks are on the increase. Recently, however, some preventative measures and treatments have achieved positive control results and there are strong, evidence-based indicators that considerable opportunity exists to reverse the national trend if adequate resources can be mobilized and applied in a co-ordinated manner. International commitment to "Roll Back Malaria" is a critical moment for Kenya to seize that window of opportunity, and the National Malaria Strategy is an action plan to do so.

- An Institutional framework that will:
 - Ensure co-ordinated, multi-lateral, national response that harnesses RBM and reflects Kenya's policies on health sector reform and poverty alleviation
- Four strategic approaches that will:
 - Guarantee all people access to quick and effective treatment, to significantly reduce illness and death from malaria.

- Provide malaria prevention measures and treatment to pregnant women
 - Ensure use of insecticide-treated nets by at-risk communities, to significantly reduce rates of disease risk and transmission.
 - Improve epidemic preparedness and response.
- Two vital cross-cutting strategies on:
 - Information, education and communication, to better arm the public with preventive and treatment knowledge.
 - Monitoring, Evaluation and Research, to constantly up-date and up-grade control strategies.
 - Mobilization of resources to achieve the proposed targets to reduce the level of malaria infection and consequent death in Kenya by 39% by the year 2006, and to sustain that improved level of control to 2010 and reduce the Malaria death and disease burden by 50% by the year 2010.

The Abuja Declaration of April 2000 at the African Heads of State Summit on ““Roll Back Malaria recognized” the disease and economic burden that malaria places on hundreds of millions of Africans and the barrier it constitutes to development and alleviation of poverty.” The President committed the Government of Kenya to an intensive effort in support of the Abuja Declaration.

In 1992, the Ministry of Health began to develop a National Malaria Plan of Action (1992-1997). This was closely followed by the launch of this plan in 1994, and the Malaria Control Unit (MCU) was set up, under the Division of Vector Borne Diseases, to be the operational arm of the National Malaria Control Programme (NMCP). In 1994, the MOH set up a Health Sector Policy Framework and in 1998 the Roll Back Malaria (RBM) movement was started by WHO. In the same year, the MOH Situation Analysis revealed fragmentation and duplication of effort in malaria control and research and highlighted the need for effective dialogue and clear responsibilities for the different

partners within and outside the Ministry. To embrace RBM, Kenya needed to galvanise donor support; set consensus-built, evidence-based policies; put greater emphasis on wide, stakeholder co-ordination; clearly define roles and responsibilities for each player and finally formulate a National Malaria Strategy to achieve these objectives.

In 1999, the MOH published its Health Sector Strategic Plan (HSSP) for the five years to 2004, defining malaria as the highest priority for prevention and treatment and the following year formally reviewed the institutional framework and human resources required to take forward the proposed NMS, and identified three reasons for establishing a new Institutional Framework for malaria control:

- problems with setting up the proposed staffing and appropriate structures at provincial and district levels had undermined the 1992 plan
- Over the ten years (2001-2010) of the NMS, public sector reform will change the management of health activities, flow of resources and distribution of staff. Traditionally vertical programmes such as malaria control will need to change radically. The Division of Malaria Control (DOMC) will no longer direct, fund and provide staff for activities in districts. Districts will take on this role themselves, turning to higher levels for specialised advice and quality control.
- Internal restructuring within the Ministry has created a DOMC and its terms of reference are evolving to a strategic role.

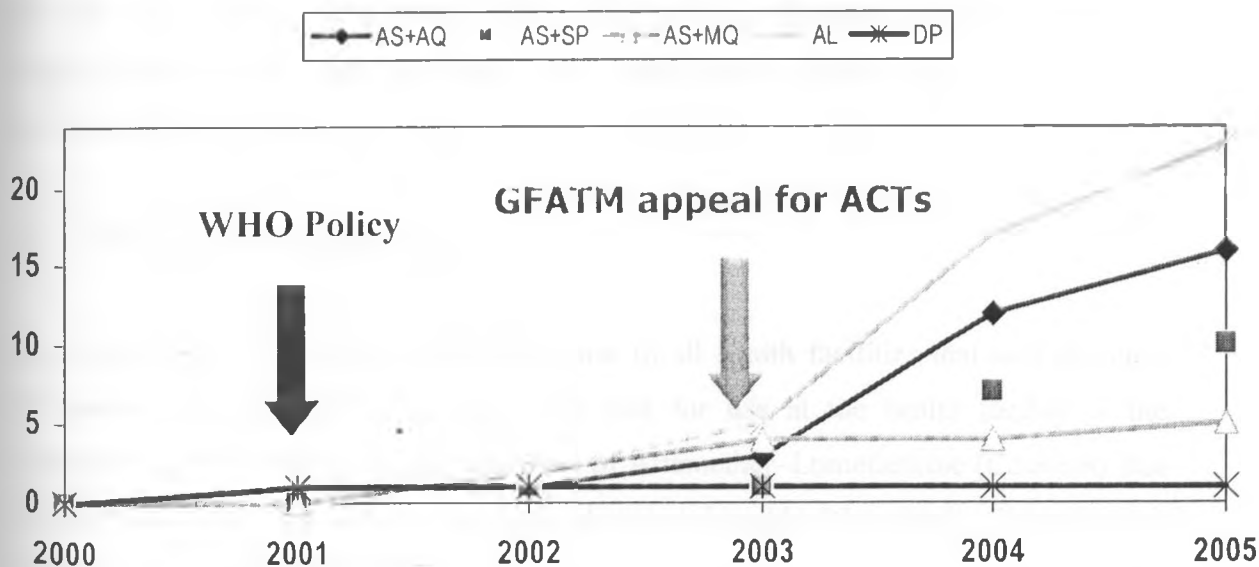
The institutional framework for malaria control must be appropriate throughout the ten years of the NMS, and the NMCP will ensure the necessary flexibility to accommodate change. A critical mass of people is needed at the central and provincial levels to build capacity for decentralising malaria control and integrating it with other services. That same critical mass will provide specialised advice and quality control once the capacity is built. The Kenya Health Policy Framework of 1994 and the Health Sector Strategic Plan (HSSP) 1999-2004 provide the overall institutional context within which the National Malaria Control Programme was to operate as outlined below:

4.5.1 Clinical management: providing effective, prompt treatment

Access to treatment is a cornerstone of any public health programme. In the absence of any 100% effective preventative intervention (whether a vaccine or vector control), the management of clinical malaria is the most vital and cost-effective action, globally, to reduce the malaria burden. Kenya's health services involve a broad range of partners. The GOK has direct responsibility for more than 125 hospitals, 550 health centres and 1,500 dispensaries across Kenya. In addition, approximately 40% of all health institutions are supported by the Mission and NGO sectors. The expansion of the Primary Health Care system in Kenya during the 1980s has created an extensive cadre of community-health care workers (CHWs) supported by GOK and its NGOs and Mission partners. The informal private sector has proliferated since its liberalization during the late 1980s. For malaria there is a wealth of evidence that most Kenyans self-medicate, using shop-bought anti-pyretics and anti-malarials. Traditional healers are also widely used. New policies related to malaria management must therefore reflect the myriad treatment options and the varied service providers. Despite limited information, it can be stated with some confidence that in excess of 30% of new attendances at GOK health facilities are diagnosed and treated as malaria. Malaria thus ranks as the most frequently diagnosed condition among out-patients, in-patients and deaths in most districts. It is estimated that there are more than 8.2 million malaria out-patient diagnoses in GOK health facilities each year. The number of patients requiring in-patient care in GOK facilities for severe/complicated malaria is probably in excess of 22,000 each year.

The situation has worsened. The number of admissions to hospital with severe/complicated malaria has been increasing since the late 1980s. The most recent Demographic & Health Survey findings also suggest mortality in childhood has risen during this period. These rises coincide with the emergence of Chloroquine resistance, first detected in Kenya in 1978 and which escalated during the 1980s. Despite mounting evidence of failure, Chloroquine remained the treatment of choice for uncomplicated malaria infections until revised guidelines were launched in 1998 to support the use of pyrimethamine/sulphadoxine or pyrimethamine/sulphalene (SP) as the first line drug of

choice. Implementation of this policy change to all levels of the client and provider communities had been difficult and remained a priority task of the MOH. In addition, it is accepted that significant resistance to SP would emerge within the next 5-10 years; monitoring and a search for affordable alternatives remained top priorities. Studies showed that resistance had risen to 30% with certain areas of the malaria prone districts recording as high as 70% by the year 2003. This prompted a change of treatment policy to Artemether-Lumefantrine as the first line treatment in 2004 and on 25th September 2006, the new malaria treatment policy was officially launched by His Excellency Hon. Mwai Kibaki to give the fight against malaria the weight it deserves. The new policy aims to counter the high levels of malaria parasite resistance to commonly used antimalarial drug, Fansidar and amodiaquine. Kenya was not alone in the selection of this first line treatment as shown in the WHO report for adoption of first line treatment in Africa.



Key:

AQ=amodiaquine; AL=artemether/lumefantrine; AS=artesunate;

DP=dihydroartemisinin/piperazine; MQ=mefloquine; SP=sulfadoxine/pyrimethamine

Figure 11: Adoption of Different Acts as 1st-Line Treatment for Malaria

Source: WHO Publication, 2005, p. 19

The implementation of the new policy is the responsibility of the Ministry of Health through the DOMC has put in place an operational plan to guide the implementation process. The main activities of which are outlined below:

4.5.2 Training of health workers

To support implementation of the new policy, DOMC has conducted training in malaria case management for first line health workers. A total of 9000 health workers were targeted. Trainings took a cascade approach with national training of trainers (TOTs) and provincial TOTs who have supported training of service providers across the country. The training manuals for case management were developed by a team of technical experts under the wing of the case management technical sub group. The national training of trainers also included the development of supervisory checklists and job aids for use in the roll out of the new treatment policy. The training of health workers is currently ongoing throughout the public and the DOMC is optimistic that the target of 9000 trained health workers will be met.

4.5.3 Drug supply management

Inventory control tools were designed for use in all health facilities that will dispense Artemether–Lumefantrine (Coartem). The tool for use at the health facility is the dispenser's book in which every single dose of Artemether–Lumefantrine (Coartem) that is dispensed is recorded with summaries produced at the end of the month. This provides a system to track expiries, stock-outs, monthly consumption and stock on hand. The health facility summaries are sent to the district pharmacist who compiles the information and uses the summary as a working document to redirect stocks from over stocked to under stocked health facilities. The summaries will inform the 'pull system' of drug supply. The information is forwarded to KEMSA and DOMC for further analysis. This is the first time the DOMC will be instituting such a measure to track anti-malarials. This is an interim measure as health information systems in the country are strengthened. Health worker involved in the management of patients with malaria have also undergone drug

management trainings. At least one health worker per facility in malaria epidemic districts have been trained.

4.5.4 Quality assurance programme

A national survey has been undertaken as a joint venture between WHO, DOMC and other stakeholders. the office of the chief pharmacist and Pharmacy and Poisons Board. The objectives are to ascertain the quality of anti-malarials from both private and public health facilities and outlets. The purpose of survey was to establish baseline data on the current availability, registration status and quality of anti-malarials in the public, mission and private health sectors in Kenya before the introduction of the new treatment policy change. The quality testing of the samples is to be done at the National Quality Control Laboratory and at a WHO pre-qualified laboratory in South Africa. Currently, the batches are being sorted out by Pharmacy and Poisons Board and DOMC and will be forwarded to the National Quality Control Laboratory for quality testing in the next month. This was the first of which the DOMC will be carrying out quarterly surveys to ascertain the quality of antimalarials in use by the general public.

4.5.5 Challenges/outcomes

Currently there are some challenges that are being faced in line with the introduction of the new treatment policies:

1. Consensus building among stakeholders who have raised a number of issues on the viability of the new treatment policy. In an effort to build consensus there was a stakeholders meeting held at Kenya Commercial Bank management centre prior to the training of national trainers. Invitees included medical practitioners from the public and private sectors, partners in malaria control and professional bodies.
2. Stock control as outlined above measures has been put in place to manage the drug supply chain. Ensuring the flow accurate information remains a challenge. A concerted effort between the drug regulatory authorities and

Kenya Medical Supplies Agency is called for to ensure and monitor effective management of the supply chain.

3. Human Resources have been identified as a constraint by health workers on the ground during the Training of the Trainer sessions both at National and Provincial levels. Some health facilities are currently understaffed especially the peripheral health facilities with some having only one worker. This has partially been addressed through the hiring of health staff under the GFATM where a total of 500 health workers have been hired and posted to rural health facilities in Districts with a high burden of Malaria.

Despite these challenges the number of patients receiving the first line treatment drastically increased as shown below.

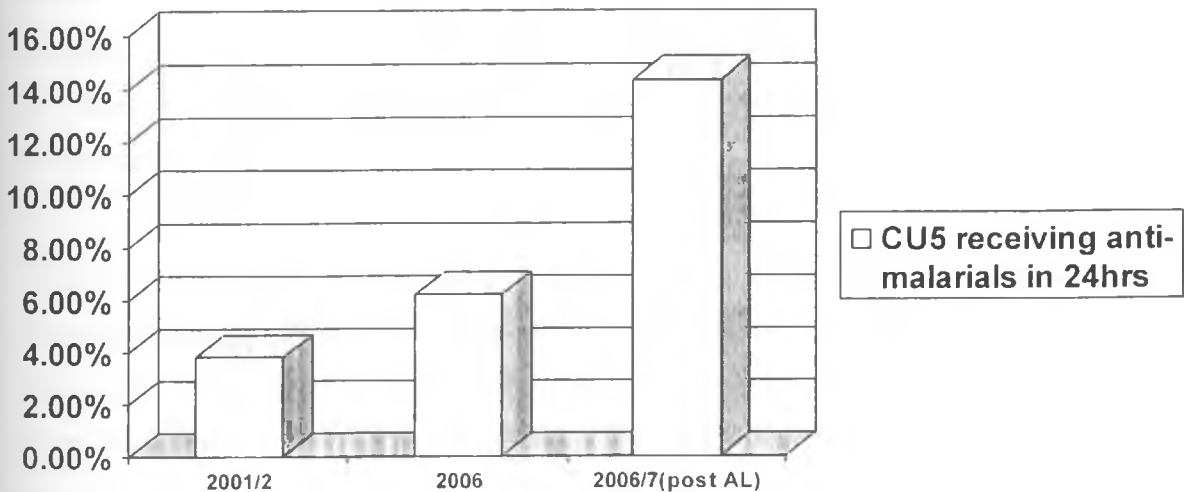


Figure 12: Children under Five Years Receiving Antimalarials in 24Hrs

Source: Malaria Control Notice Board Newsletter, April-June 2007, p. 9

The proportion of Children less than five years of age receiving antimalarials within 24 hours of onset of fever has increased from 3.8% in 2001/2 to 14.3% in 2006.

4.5.6 Management of malaria and anaemia in pregnancy

Malaria is a major cause of anaemia in pregnant women in Kenya and increases the risks of severe morbidity and maternal death. Malaria infection during pregnancy poses a risk to the unborn child and, for surviving births, leads to a decreased birth weight. Approximately 1.5 million women become pregnant each year in Kenya, the majority in areas of moderate-to-intense malaria transmission. Malaria causes severe anaemia in more than 6,000 primi-gravid (first-time pregnancy) women from these areas alone, and some 4,000 infants, born at low weight because their mothers had malaria during pregnancy, may die. Studies at Kisumu and Kilifi have demonstrated significant reductions in the incidence of anaemia among pregnant women following the administration of two Intermittent Presumptive Treatment (IPT) courses of SP in the second and third trimesters of pregnancy. In addition there is strong evidence to suggest that the incidence of low-birth weight babies was reduced following IPT with SP. Research evidence from areas of the world where malaria transmission is less intense (similar to the Kenyan highlands) suggests that women of all parities are severely affected by malaria infection.

Recent evidence from studies at Siaya district confirms findings from The Gambia that Insecticide-Treated Nets (ITN) may confer some protection against malaria infection among pregnant women. Evidence from other areas in Africa is less conclusive, but areas of epidemic risk in South East Asia have shown significant protection against anaemia and low-birth-weight through the use of ITN by pregnant women.

The GOK has ensured that all pregnant women living in the malaria areas have access to two free SP treatment doses (25 mg/kg/dose), one in the second trimester of pregnancy (between 16 and 27 weeks gestation), one in the third trimester (between 28 and 36 weeks gestation) or other prophylactic drug regimen which may evolve as well as effective community-based communication to encourage prompt treatment for fever. Effective case-management of anaemia and malaria during pregnancy has been

promoted at all levels of the antenatal health service as part of the renewed efforts to strengthen the Safe Motherhood Initiative.

4.5.7 Vector Control using insecticide-treated nets and other methods

The use of mosquito nets (bed nets) treated with pyrethroid insecticides has been shown to give effective protection against malaria in a wide variety of settings across Africa. Studies have shown on average, a 17% reduction in all-cause childhood mortality associated with ITN use. A large study in Kenya demonstrated that over 40% of severe, life-threatening malaria events in childhood could be prevented through the use of ITN, and all-cause childhood mortality could be reduced by 33%. There are no national usage figures, but research studies in various parts of Kenya suggest the use of nets by children or pregnant women is often as low as 5-10%. Very few of these nets are treated with insecticide and availability of net treatment services is often limited to NGO project areas. There is, however, an active private sector in net production and there are an estimated one million or more nets in current use in Kenya. There are some 20 million Kenyans at constant risk of malaria. Covering this population will require not less than 10 million treated nets, and maintaining this level of coverage will require about 2 million new nets and at least 10 million insecticide treatments per year.

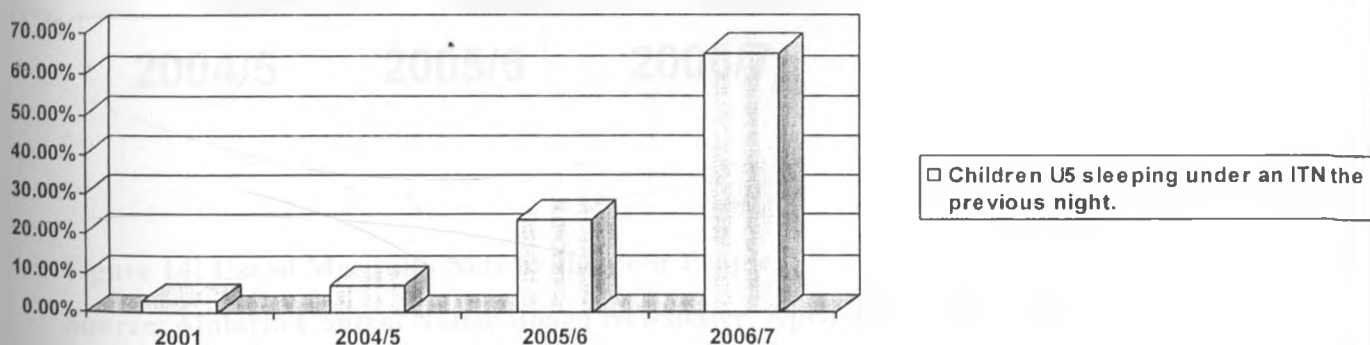


Figure 13: Children under Five Years Sleeping under ITN

Source: Malaria Control Notice Board Newsletter, April-June 2007, p. 11

In the Sentinel sites the proportion of children under five sleeping under an ITN has increased from 3.1% in 2001 to 65.3% in 2006/7.

Survey data shows that ITN use has not only improved over the years in children under five years of age who are the most vulnerable but also among the most poor who are most affected by the scourge.

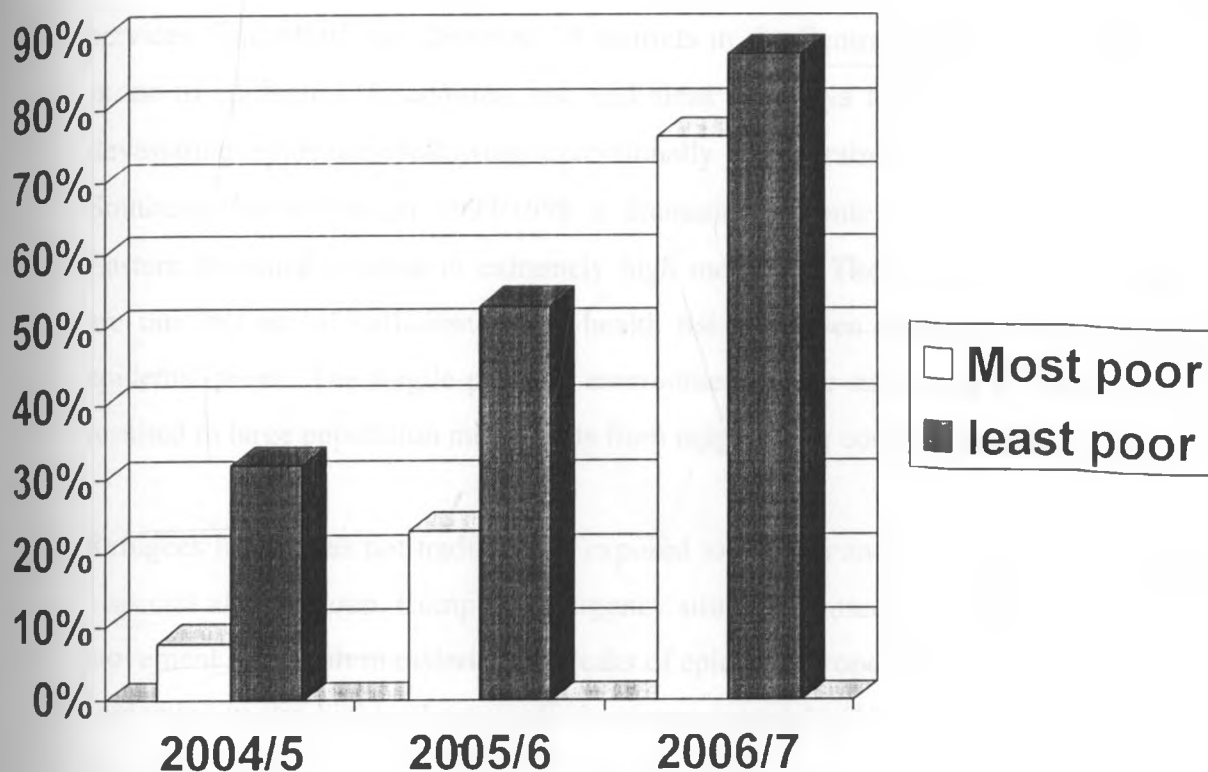


Figure 14: Use of Mosquito Nets by the Poor People

Source: Malaria Control Notice Board Newsletter, April-June 2007, p. 12

4.5.8 Epidemic preparedness and response

Between 1918 and the early 1950s, epidemic malaria was the scourge of the economically important Kenyan highlands. Between the 1950s and late 1980s the highlands enjoyed a period free from major malaria epidemics. Since the late 1980s malaria epidemics have returned to the highlands with increasing frequency, causing considerable public health impact and political concern. At present malaria is a risk in these communities every year, some seasonal rises overwhelm the capacity of the health services. The MOH has classified 14 districts in the Central and Western Highlands as prone to epidemics. In addition, the arid areas of Kenya have experienced severe and devastating epidemics following exceptionally heavy rainfall caused by the El Nino Southern Oscillation. In 1997/1998 a dramatic epidemic following floods in North Eastern Province resulted in extremely high mortality. These rainfall-driven epidemics are rare but are of sufficient public health risk for seven districts³ to be classified as epidemic-prone. The fragile political environment in the sub-region in recent years has resulted in large population movements from neighboring countries to Kenya.

Refugees from areas not traditionally exposed to malaria and/or malnourished constitute a special at-risk group. Complex-emergency situations posed by conflict and population movement can result in malaria out-breaks of epidemic proportions. Frequent exposure to epidemics in the highland areas affects approximately 25% of Kenya's population and infrequent exposure to epidemics in the arid areas affects 4%. Epidemics or complex-emergency situations require responses that would not otherwise be recommended nationwide. These include the use of novel anti-malarial drugs or drug combinations and indoor-residual house spraying (IRS). During the mid-1950s, successful control of malaria transmission was maintained through the use of Dieldrin house-spraying in Nandi district. More recently, two studies in the highland districts of Nandi and Kisii have demonstrated that IRS can significantly reduce the malaria-case burden of health facilities and reduce the prevalence of malaria infection to below 3%.

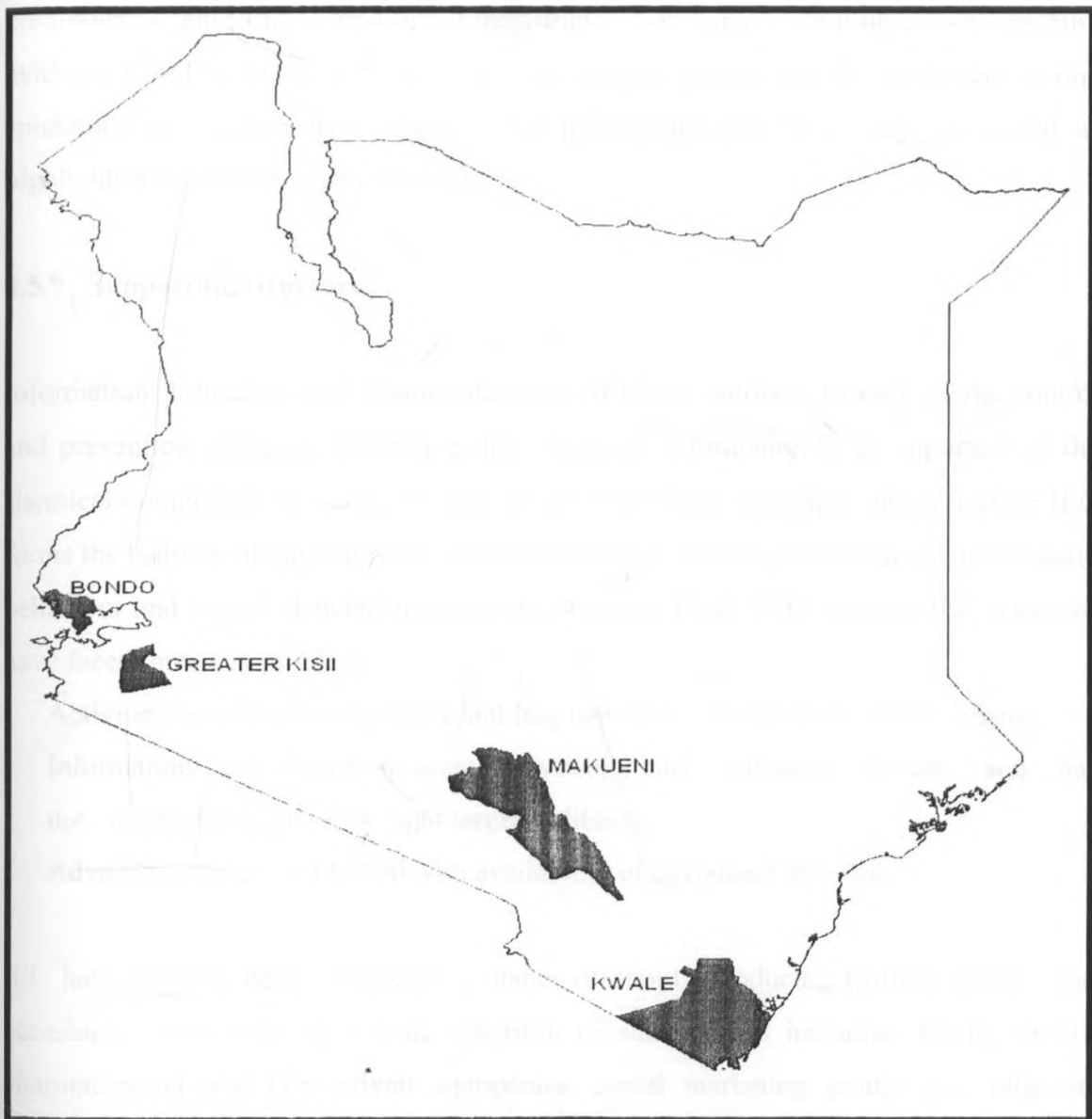


Figure 15: Sentinel Districts - Longitudinal Surveillance in Different Malaria Ecological Zones.

Source: The National Malaria Treatment Guidelines 2006, p. 5

When epidemics do occur they are widely covered by the media putting pressure on the Government to take action. NGOs and Emergency Relief Organizations have responded

promptly to GOK requests for assistance. The NMS has adequately strengthened the credibility of epidemic definitions, forecasting, and early warning as well as built evidence-based policies to cope with the unique public health conditions during epidemics and reduce their impact. This intervention has been very successful as highlighted in the subsequent sub-topics.

4.5.9 Supporting structures

Information, Education and Communications (IEC) are intrinsic to each of the control and prevention strategies outlined earlier. Targeted information is as important as the chemical component of a drug or insecticide. The NMS recognises that effective IEC forms the bedrock of any efforts to effectively change service-provider skills, community behaviour and overall demand for effective services. Until 2003, malaria IEC activities have faced three key problems:

- Activities have been too sporadic and fragmented to secure behavioural change.
- Information has often been scarce, physically and culturally distant, and has not reached enough of the right target audiences.
- Advice has not always tallied with availability of advocated services.

IEC has generally been considered a matter of simply producing leaflets, posters and occasional radio spots by a wide spectrum of stakeholders including MOH, NGOs, pharmaceutical and ITN private companies, social marketing groups and religious organizations. The Ministry of Health's over-arching National Health Communications Strategy has now recognised the need for a greater co-ordination of better quality and more diverse approaches to achieve behavioural change nationally.

A content analysis of coverage of malaria by the two national newspapers with the highest combined circulation in Kenya (*Daily Nation* and *Standard*) undertaken between May 2004 and June 2005, shows that the largest coverage of malaria issues occurred during the Africa Malaria Day. Findings of the content analysis show that coverage has been sporadic during the year, with the exception of designated malaria days. The reporting is often linked to events and lacks depth and analysis. However, a review of

electronic media schedules published in the national media show that there are close to 15 news features and discussion programmes on health and related areas that have the potential of accommodating issues on malaria.

4.5.10 Monitoring, Evaluation and Research

Monitoring and Evaluation has hitherto been based on reactive study of piecemeal data from desperate sources, and has rarely been an integral function of programme objectives or structure. The Health Sector Reform (HSR) lays emphasis on a co-ordinated and Sector Wide Approach (SWAP) to health intervention packages. Similarly, Monitoring and Evaluation (M&E) is now recognized as a key component of any health intervention package. Accordingly, the DOMC will have the responsibility to monitor the NMS's success toward its stated targets, work in collaboration with national partners to identify ways to measure its intended goal achievement, and actively solicit and advocate research to refine strategic approaches.

4.6 The Effectiveness of the Ministry of Health Responses

The strategic and operational responses adopted by the MOH and by extension the DOMC impactful changes in the trend of malaria in this country. The key malaria intervention approaches which include Vector control using Insecticide Treated Nets (ITNs), Management of malaria and anemia during Pregnancy, Clinical management of malaria and Malaria epidemic preparedness and response has seen the government of Kenya through the Ministry of health has given out a total of 8.4 million nets between October 2005 and December 2006 of which 5,092,327 were distributed through the clinics at a subsidized cost of Kshs.50 and 3,388,137 during the mass distribution campaign given free to under fives. Impact of distribution of nets on the number children less than five years of age revealed that the number of children sleeping under nets increased by 87.2% although still, nearly 33% of children under five years are still not sleeping under nets. The campaign more than tripled the ownership of bed nets in Kenya

(16% to 49% of all nets owned). With the challenges such as the need to be distribute four million nets per year; need to begin IEC campaign, emphasizing importance of hanging and sleeping under ITN every night, especially children under five years and pregnant women; nets need to be retreated regularly meaning a re-treatment campaign planned; identification of those who are not covered while keeping those who are covered, covered through replacement of nets that have reached the end of their life, success has been realized.

Case Management has been the most dramatic. The treatment policy changed from SP to Artemisinin Combination Therapy (ACT) in 2004. The new drug AL is available in MOH/GOK health facilities for free and a recent health facility survey showed that over 85% of dispensaries and health centers had AL available on the day of the survey. For hospitals (both Mission and GOK) it was 100% availability.

The malaria communication Strategy was launched last year in September by the President of the Republic of Kenya resulted in the proportion of women aged 15-45 yrs who knew of the new treatment policy after it was 3 months of implementation to be 33.0%. The proportion of women aged 15-45 who knew that malaria can be a problem in pregnancy was 93.2% in 2006. Indoor Residual Spraying guidelines were completed in 2006 with equipment and capacity has been increased over the years to conduct IRS. The ministry of health is in the process of developing an Integrated Vector Management which will include environmental manipulation besides the chemicals used. It will also cater for other vectors. The IRS campaign was launched on 25th April 2007 on Africa Malaria Day.

4.6.1 Impact of Malaria Intervention

One of the impacts of the malaria interventions is the reduction in admissions due to malaria despite conducive environments for malaria transmission especially after high rainfall as seen in the slide depicting admissions in Kericho district and rainfall patterns.

The trend shows drastic reduction in malaria outbreaks in this district that has over the years been prone to malaria outbreaks after the long rains.

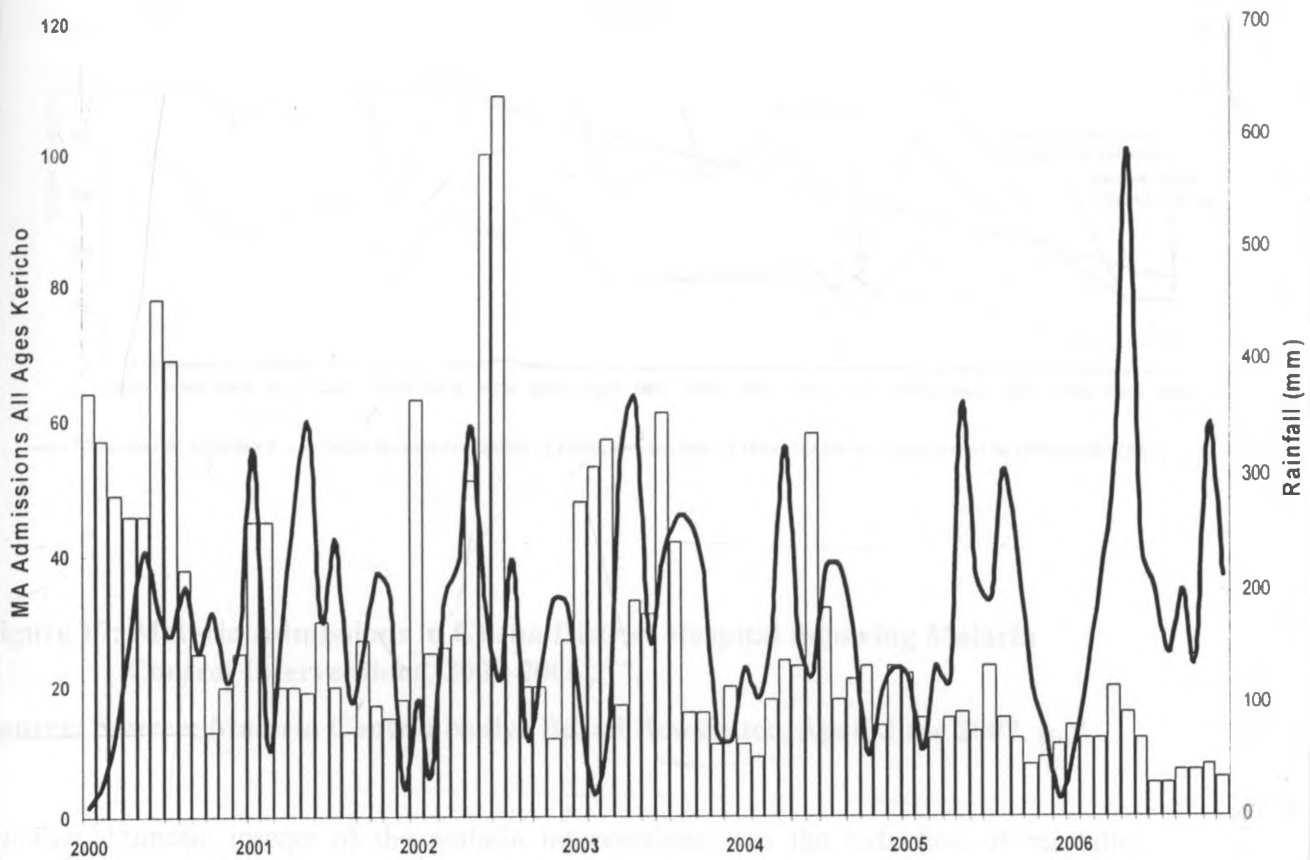


Figure 16: Reduction in Admission at the Kericho District Hospital following the Long Rains

Source: Malaria Control Notice Board Newsletter, January-March 2007, p. 8

All interventions in concert have an impact. There have been fewer admissions due to malaria reported over the years as shown by the graph showing the trend of Malaria admissions in Gucha district (2005-2006) as shown below.

Malaria Admissions in Gucha District Hospital (HMIS) & Malaria control activities, 2005 - 2006

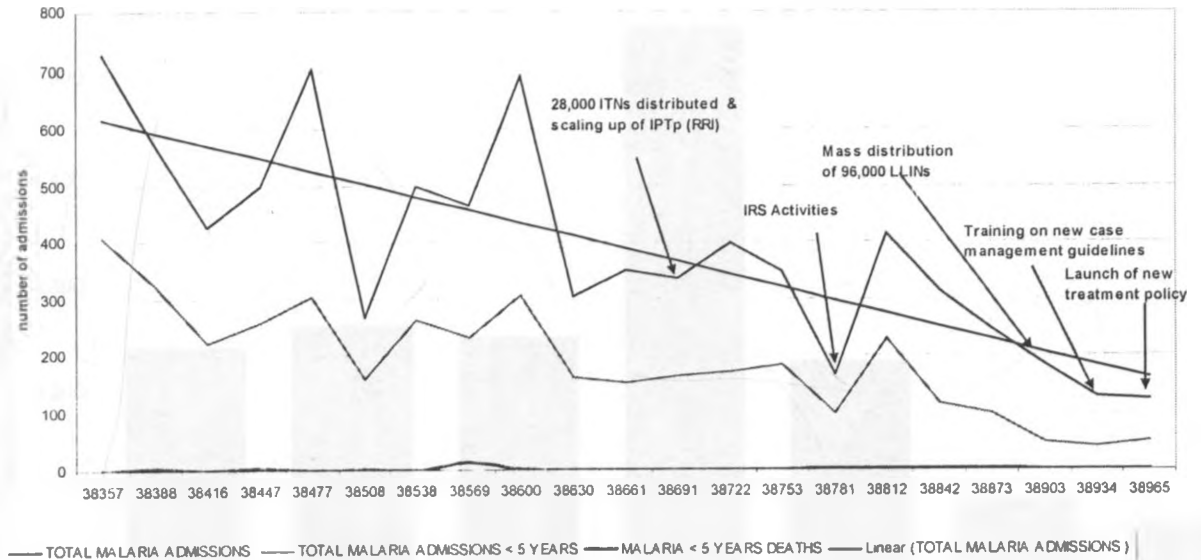


Figure 17: Malaria Admissions in Gucha District Hospital following Malaria Control Interventions, 2005-2006.

Source: Source: Malaria Control Notice Board Newsletter, April-June 2007, p. 9

Another dramatic impact of the malaria interventions was the reduction of mortality among paediatric deaths as shown in the bar graph depicting paediatric mortality in Kisii District Hospital.

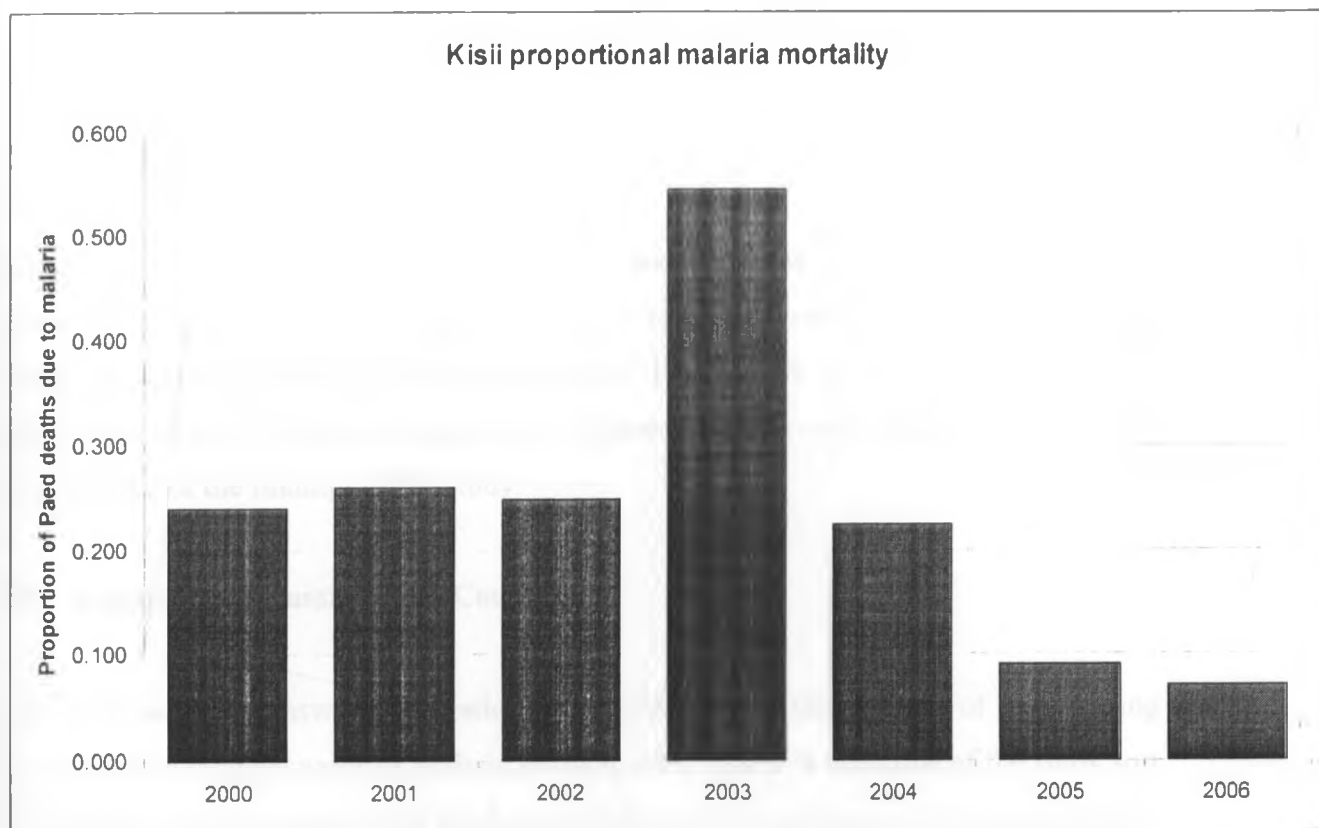


Figure 18: Proportionate Mortality in Kisii District

Source: Source: Malaria Control Notice Board Newsletter, April-June 2007, p. 10

4.6.2 Major Success Factors

It has been conclusive that there had been inequitable allocation of resources for health resulting to escalation of Malaria in the past. Partnership strengthening is critical to address most of the health sector challenges. Conducive political environment is essential for implementing and deepening of the reform agenda outlined in the strategy. Government committed to shifting health budget from Curative to preventive health services has contributed immensely to the control of malaria.

CHAPTER FIVE: CONCLUSIONS

5.1 Introduction

This chapter discusses the findings of the study and interprets the results in line with the research objectives and the research problem. The salient conclusions arising from the study are detailed and recommendations given. Finally, the limitations that the study faced and areas of further research are discussed ending with policy and practical implications of the findings of the study.

5.2 Summary, Discussions and Conclusions

The study set out to answer the question, what responses are the Ministry of Health using to combat the rampant cases of Malaria in the Kenya? The first objective of the study sort to determine the responses of the Ministry of Health to the challenge of malaria in Kenya. However the Ministry of Health tried to address key issues relating to the macro environment, social, political, legal, technological and operating environment. The environment is constantly changing and it is important that firms have an open minded or flexible attitude so as to be able to deal with the challenges that the environment will bring from time to time. The Ministry of Health has been no exception. It faced the various environmental challenges that are not unique but cut across many organizations. The main challenges it faced include Political and legal challenges. The Government legislation and poor regulation as well as self-regulation, socio-economic issues, religious and cultural impact, supplier and stakeholder incordination, technological and infrastructural issues and challenges posed by malaria itself. Some of the strategic and operational responses by the Ministry of Health to address these challenges are outlined below:

One of the major observations was the ability of the Ministry of Health to adopt both strategic and operational responses. The strategic response relating to downsizing as a structural adjustment compares well with other studies. Farrell and Mavondo (2005) in

their study of manufacturing organizations in Australia found that downsizing that drives redesign (reducing workforce size) has a negative effect on business performance while redesign that drives downsizing (restructuring the organization, redesigning task) had a positive effect on business performance. Mungai (2004) in his study of the strategic responses of GlaxoSmithKline Limited following liberalization of the pharmaceutical industry in Kenya revealed that structural adjustments with task redesigning led to improved business performance despite the severe challenges that came with the liberalization of the pharmaceutical industry.

The ability to prioritise on the major diseases contributing the most to human suffering such as Malaria, HIV/AIDS and Tuberculosis meant that they remained focused on their core objective. Even as the global economy affected the local economics, it was imperative for the MOH maintain a focus on the need to ensure that the health indicators such as admissions in hospitals, outpatient treatments and outbreaks due to malaria remain low. An appeal was made by the African governments for the rich Western countries to support the poor African countries and development partners yielded to the pressure of the suffering due to the top three killer diseases in the Sub-Saharan Africa. Despite the conditionality, amidst concern over sustainability of the donor funding, the health indicators continued to deteriorate mainly due to incoordination. The Ministry of Health has continued to fine-tune its strategy by introducing radical changes in its structure to ensure that the massive staff that was brought to the headquarters to help manage the massive funds go back to the divisional, district and provincial levels where the disease is causing havoc. This has been achieved through the merging of divisions whose roles do not concur with the ministry's overall objectives. The introduction of stringent Measurement and Evaluation system has ensured that the results of the interventions are quantifiable and measurable for corrective action. Other strategies that added to the success on the war against malaria was the strengthening of the DOMC transforming it from a mere programmed in the Division of Vector Control to a full division with a structure. This has helped operationalise the strategic priorities in conformity with scholars Steve Brown et al (2000) who postulate that operational responses go alongside the strategic ones.

The following conclusion may be made regarding responses of the Ministry of Health to the rampant cases of Malaria. The combination of both strategic and operational interventions is important for any success. However caution should be taken as the sustainability of the huge financial requirement for implementation is questionable.

The second objective of the study sort to establish the effectiveness of the responses or interventions by the Ministry of Health towards the Malaria pandemic in Kenya. We examined the MOH before and after the interventions which revealed very interesting results. The health indicators for malaria such as mortality, morbidity, hospital visits, and admissions as well as the malaria outbreaks were drastically reduced in the sentinel sites. This once again correlates with other earlier studies by Muraah (2003) on the effectiveness of the strategic responses of the pharmaceutical firms to the challenges of the HIV/AIDS pandemic in Kenya. It also concurs with the study by Mungai (2004) on the effectiveness of the strategies adopted by GlaxoSmithKline following the liberalization of the pharmaceutical industry in Kenya.

The following conclusion may be made regarding effectiveness of strategic and operational responses. The results clearly show that there is a direct correlation between the strategic responses and performance indicators. It also reveals that no single strategy can be used in isolation. The concerted effects of multiple strategies result in success when used in a coordinated manner. Although the results show a positive correlation, care should be taken when interpreting them as there could be other control variables that affect performance that need to be controlled for. The success could be short lived as the malarial parasite easily develops resistance to the available drugs just like the mosquitoes easily develop resistance to the available insecticides. Therefore the sustainability of the strategic and operational responses is paramount for sustained results.

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The following conclusion may be made regarding effectiveness of strategic and operational responses. The results clearly show that there is a direct correlation between the strategic responses and performance indicators. It also reveals that no single strategy can be used in isolation. The concerted effects of multiple strategies result in success when used in a coordinated manner. Although the results show a positive correlation, care should be taken when interpreting them as there could be other control variables that affect performance that need to be controlled for. The success could be short lived as the malarial parasite easily develops resistance to the available drugs just like the mosquitoes easily develop resistance to the available insecticides. Therefore the sustainability of the strategic and operational responses is paramount for sustained results.

5.3 Limitations of the Study

Several limitations were encountered during this study. Even though the Ministry of Health is a public entity and data is readily available on request, it was not easy to get the most recent developments in terms of Monitoring and Evaluation because the systems have not been fully set and there is inadequate trained staff. The malaria data available from the sentinel sites from the head office does not incorporate the challenges on the ground regarding the limitations of the study method used and the problems encountered, but only give the results. Due to insufficient time available for this study, I was not able to interview the staff on the ground. The outcome of the effectiveness of the Ministry of Health interventions could suffer a major bias since it is done by the ministry itself (self generated).

Another limitation was the unavailability of data dating back to 1948 when the MOH was created by the British colonial government. Before then it was a mere department within the Ministry of Local Government, a leading provider of Healthcare to staff and residents of the local authorities. This has ever since led to constant conflict of interest and competition with the staff deployed by the MOH to reinforce those of the local authorities. The two bodies providing healthcare existed individual for a good part of the study period and the emphacies on malaria before then could not be ascertained including the trends to ascertain any other underlying factors. Before the year 2002, the MOH used to have two ministers, one in charge of prevention and another in charge of curative aspects of health. This was not the case during the study period when the two had been merged to be under one minister but two assistant ministers each heading one of the two divisions.

It was also not possible to interview every person who had relevance in this study in terms of planning and implementation of strategy, because a number of those employed including the head of DOMC and head of department during the study period had been transferred and retired respectively. They were at the centre of the development of the strategies. I therefore had to contend with interviewing the current management who

helped piece together relevant data through a structured questionnaire and from the historical data filed at the central library at the MOH headquarters. The year 2006 witnessed loss of the implementers of the strategies in a tragic road accident in the line of duty in which four members of staff of the DOMC passed away and they would have been a core part of this study.

The timing and the duration of this study posed a major limitation. In the month of July where the major part of the study was conducted marked the beginning of the government's financial year, allocations and planning by all departments and divisions amidst tight deadlines. It marks the transition period for the government ministries. This led to information being disbursed in a hurry and several rescheduling of appointments together with interruptions from colleagues during the the interviews often resulting to distortion of information. The malaria website under construction was last updated in 2002 and this posed a limitation in terms of the latest official published developments in the public domain. The rest still remain internal documents. Lack of computerised data before the 1960s also meant that data could only be on paper and such data on malaria responses could not be availed.

5.4 Recommendations for Further Research

This study was an in-depth case study on a single division in the Ministry of Health which is part of the health sector outlining the main environmental challenges it faced as a result of the escalating malaria pandemic in the country leading to massive economic loss, human suffering and death. It went further to reveal the responses both strategic and operational, that the DOMC has undertaken to counter the scourge and eventually the effectiveness of these responses. Further studies can be carried out on the same period and on all other divisions of the MOH, as well as other providers of healthcare such as the local authorities, NGOs and private hospitals so that there operational and strategic responses can be compared. Another area that can form a basis of interesting and informative study may be the assessment of the impact of perceived reduced incidences

of malaria and provision of free malaria treatments on the pharmaceutical companies that only depend on the manufacture of antimalarials such as Dafra Pharma Limited for their business. Issues of diversification into other disease areas and structural adjustments will definitely take centre stage. There could also be intensive government lobbying to purchase their drugs since the private business will nearly collapse. The impact of the malaria interventions by the year 2010 would also form a basis of further comparative study.

5.4 Recommendations for Policy and Practice

Finally, the study has important implication for managerial practice. Firstly we recognize that an organization responds in various ways to the changes in its environment. Secondly these responses should yield good performance. In essence therefore, it is imperative that the ministry of Health, and other learning organizations, set strategic priorities that ensure they engage in activities that meet their long term objectives of maximizing their stakeholders expectations, activities that enable them to remain relevant to local needs and so conduct their operations effectively and efficiently while adhering to their laid down legislations. These principles will guide firms, regardless of their nature of business, to demonstrate responsible corporate conduct across all aspects of their operations. Strategic and operational responses are therefore inevitable in present business circumstances. However, the degree of its success is contingent on how well it is aligned to the overall strategic direction of the organization.

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APPENDICES

Appendix I: Interview Guide

TOPIC: ORGANISATIONAL RESPONSES TO THE ENVIRONMENT: A CASE OF THE MINISTRY OF HEALTH RESPONSES TO RAMPANT CASES OF MALARIA IN KENYA

SECTION A: THE MINISTRY PROFILE:

I. When was the Ministry of Health created in Kenya?

II. Which Divisions are there at the Ministry of Health?

III. When was the Division of Malaria Control (DOMC) created within MOH?

a) Which are the key sections at the DOMC?

b) For each of the key sections indicate key responsibilities.

c) What is the number of staffing each section?

d) What is the average budget for each section?

I. What proportion of healthcare is provided by the MOH, NGOs and Private healthcare providers? What is the proportionate budget for each?

II. How do you define your mandate?

III. How many people are currently employed by the MOH, Kenya?

IV. How many employees are currently at the DOMC of the MOH?

V. What are the key factors/issues in the war against malaria?

VI. What is the strategic intent or positioning that the MOH intends to achieve in the republic of Kenya?

VII. How has your ministry performance been in achieving this strategic intent?

SECTION B: ENVIRONMENT INFORMATION

I. What were the challenges faced by the MOH following the escalating cases of Malaria in Kenya based on the classification below:

a) Economic challenges

b) Political/ legal challenges

c) Social challenges

d) Technological challenges

e) Supplier challenges

f) Religious and Cultural challenges

g) Competitor challenges from other organizations and Institutions engaged in activities similar to MOH or DOMC.

h) Stakeholder challenges.

STAKEHOLDERS

KEY CHALLENGES

Development Partners	i) ii)
Other government ministries	i) ii)
Employees	i) ii)
Distributors of healthcare products/services	i) ii)
Government hospitals	i) ii)
Private and NGO health facilities	i) ii)
Suppliers	i) ii)
Patients	i) ii)
Medical Professional Organisations	i) ii)

i) Kindly rank the above listed stakeholders in order of importance between 1 & 9, 1 being the most significant and 9 being the least significant to the Ministry of Health.

C) RESPONSE AND INTERVENTION INFORMATION

I) What strategies have been employed in managing the challenges raised by stakeholder's above as well as other challenges mentioned above.

II) i) Have you found it necessary to create or merge some divisions to address the challenges above?

ii) Has it been necessary to expand your budget and staff?

iii) Has there been some linkages (or is there need for) with the stakeholders?

iv) Comment on your main strength over your competitors.

v) Comment on the Resource requirement and mobilization by the DOMC and by extension the MOH with regards to Finance, Human Resource and equipment.

vi) What is your long term objective? What is your time frame?

vii) In summary what responses would you clearly set up or have set up or will set up to combat the escalating cases of Malaria in Kenya that match these challenges?

III) i) Comment on production or importation of cheaper products. How has this affected pricing?

ii) What are your major forms/mode of communication to your key stakeholders (the public)

iii) How are the operations of DOMC financed?

iv) Comment about Research and Development by DOMC as far as malaria is concerned.

v) Comment on the system of Human Resource recruitment and training adopted by the MOH's DOMC.

vi) What form of distribution system is adopted by the MOH both for goods (drugs and mosquito nets) and services?

SECTION D: EVALUATION

i) How successful have these responses been in combating the escalating cases of Malaria in Kenya? Please explain in each of the responses above in Section C by assessing the malaria situation before and after the interventions.

ii) What do you anticipate will be your greatest challenges with Malaria, Going forward?

iii) What plans are there to manage these challenges?

Appendix II: Letter of Introduction

Dr. Tom Mboya Owino,
P.O. Box 72030, 00200,
Nairobi.

The Ministry of Health

P.O. Box 78076

Nairobi

Dear Sir,

RE: INTERVIEW FOR MANAGEMENT RESEARCH PAPER

I am a post graduate student currently studying for an MBA at the faculty of Commerce, University of Nairobi. I am currently conducting a management research project in partial fulfillment of the requirements for the Masters in Business Administration degree.

The Ministry of Health, Republic of Kenya is the main focus for this study. The choice is based on the professional image in tackling the rampant Malaria cases in the country and the fact that Malaria remains the leading cause of mortality and morbidity and the ministry of health is the single largest provider and regulator of healthcare in Kenya. I kindly request your assistance by availing your time for a short interview which will be based on the interview guide herein enclosed.

The information you will give me will be treated with utmost confidentiality and will be used solely for this research. A copy of the final report will be made available for the ministry's resource centre.

Your assistance will be highly appreciated.

Thank you,

Yours faithfully,

Dr. Tom Mboya Owino

Appendix III: The Ministry of Health Development Partners

NAME OF AGENCY	ADDRESS POST OFFICE BOX	TOWN	TELEPHONE NUMBER
Sida/Embassy of Sweden	30600	NAIROBI	4234000
WHO (Country Rep. Office)	45335	NAIROBI	2717902
UNICEF KENYA	44145	NAIROBI	6221093
European Commission	45119	NAIROBI	2713020
SCAC/Embassy of France	41784	NAIROBI	316363
Development Corporation Office-Italian Embassy	30107	NAIROBI	319198
United Nations Development Programme	30218	NAIROBI	7624445
Centers for Disease Control and Prevention (CDC)	606	NAIROBI	2713009
DFID Kenya British High Commission	30465	NAIROBI	2717609
UNAIDS	30218	NAIROBI	7624389
German Development Corporation	41607	NAIROBI	2721187
Embassy of Denmark (Danida)	40412	NAIROBI	4451460
JICA Kenya Office	50572	NAIROBI	2724121
UNFPA (United Nations Populations Fund)	30218	NAIROBI	7624424
World Bank	30577	NAIROBI	3226451
Belgium Technical Corporation (BTC)	63479	NAIROBI	3767488
Canadian International Development Agency	19676	NAIROBI	2730657
USAID/KENYA		NAIROBI	862400
AMREF	30125	NAIROBI	

Appendix IV: The Ministry of Health Hospitals

HOSPITAL	ADDRESS POST OFFICE BOX	TOWN	TELEPHONE NUMBER
Rift Valley Provincial Hospital		Nakuru	037-41129
District Hospitals			
Uasin Gishu	5666	Eldoret	031-62711
Baringo	21	Kabarnet	0328-21350
Nandi	5	Kapsabet	0326-2081
Samburu		Laikipia	0368-2623
Kericho	11	Kericho	036-31145
Laikipia	66	Laikipia	0176-22828
Trans Mara	98	Trans Mara	0306-22175
Marakwet	115	Kapsowar	0328-61571
Kajiado	31	Kajiado	0301-21285
Narok	11	Narok	0305-22300
Trans Nzoia	5665	Eldoret	0325-31900
Turkana	18	Lodwar	0393-21073
Nakuru	1214	Nakuru	037-42874
Bomet	393	Bomet	0360-22294
West Pokot	63	Kapenguria	0324-2242
Keiyo	332	Iten	0324-2014
Bureti	114	Litein	0360-54263
Koibatek	102	Eldama Ravine	0362-52332
Central Provincial Hospital			
District Hospitals			
Nyeri	27	Nyeri	0171-4293
Kirinyaga	24	Kirinyaga	0163-21564
Kiambu	39	Kiambu	0154-22191
Muranga	69	Muranga	0156-22525
Thika	227	Thika	0151-21778
Maragua	72	Muranga	0156-42024
Meru South	8	Chuka	0166-30028
Meru Central			0164-20458
Meru North			0167-21255
Coast Provincial Hospital			
District Hospitals			
Mombasa			011-43506
Kwale			0127-4094
Taita Taveta			0148-2041
Tana River			0124-2213
Kilifi			0125-22777
Lamu			0121-33012
Malindi			0123-33061
Nyanza Provincial Hospital			

District Hospitals			
Kisumu	486	Kisumu	035-22391
Migori	202	Suna	0387-20458
Kuria	25	Kehancha	0387-52840
Nyamira	3	Nyamira	0381-44215
Homa Bay	52	Homa Bay	0385-22004
Kisii	244	Siaya	0334-21552
Gucha	92	Kisii	0381-20473
Suba			
Nyando			0385-21057
Rachuonyo			0384-31201
Bondo	236	Bondo	
Western Provincial Hospital			
District Hospitals			
Kakamega			2000/20281
Vihiga			51552
Mbale RHTC			51259
Busia			0336-22136
Bungoma			0337-20346
Lugari			0323-53388
Mt. Elgon			0338-21472
Teso			0337-54411
Butere/Mumias			0333-20199
Port Victoria H.			0336-63434
Alupe L. Hospital			0336-22267
Webuye Sub-District			0337-41066
Kimilili Sub-District			0338-21027
North Eastern Provincial Hospital			
District Hospitals			
Garissa			0131-3570
Wajir			
Mandera			0192-2327
Ijara			0124-2057
Eastern Provincial Hospital			
District Hospitals			
Machakos			0145-20594
Embu H.			0161-20159
Embu D.			0161-30424
Tharaka Nithi			
Makweni			0144-33176
Mwingi			0142-22551
Isiolo			0165-2052
Marsabit			0183-2006
Kitui			0141-22665
Moyale			0185-2022

Appendix V: NGOs Providing Healthcare in Kenya

Organisation	Physical Address	Postal Address
Abantu for Development	Vanga Road, Off Gitanga Road	2389-00200
Action Aid Kenya	AAACC Big, Waiyaki way	42418-00100
Adventist Development and Relief Agency	ADRA kenya house, Javabu road, Hurlingham	76273-00100
AfriAfya	Amref KCO Building, along Wilson Airport, off Langata Road	27576-00506
Aga Khan Foundation	ICEA building, Kenyatta Avenue	40898-00100
Aga Khan Health Services	3rd Parklands avenue	41523-00200
Amini Management (EA) Ltd	4th Floor, Centro House, Westlands	
APHIA Nyanza	ABC Place, Waiyaki Way	10414-00100
Association for Physically Disabled of Kenya	APDK Hse, Waiyaki Way	46747-00100
Care - Kenya	Muchai road off Ngong road	43864-00100
Christian Childrens Fund	Waiyaki Way, Westlands	14038-00800
Christian Health Association of Kenya(CHAK)	Musa Gitau Road off Waiyaki Way	30690-00100
Clinton HIV/AIDS Initiative	Spur Complex, Rose Avenue off Lenana road.	2011-00100
Constella Futures	Muchai Drive, off NgongRoad	75367
Coperazione Italiana	Italian Embassy, International house 9th floor Mama Ngina street	30107-00100
Cordaid(catholic organisation for relief and devt Aid)	David Oseili road, Westlands, New Rehema House	40278-00100
Doctors of The World	West Pokot	1035
Engender Health	ABC Place, Waiyaki Way	57964-00200
Family Planning Association of Kenya	Mbagathi/Langata road	30581-00100
Family Health International	Chancery Building ,2nd floor, Valley Road	38835-00623
Family Health Options of Kenya	Mbagathi/Langata road Junction	30581-00100
Family Support Institute (FASI)	Wendy Court(Hse no.1) David Osieli Road	30913-00100
Food for the Hungry	Life Ministry Center, 3rd floor, Jabavu Road	14978-00800
Futures Group	The Chancery building, 3rd floor, Valley Road	3170-00100
German Technical Cooperation (GTZ)	NHIF Building 3rd Floor	41607-00100
Global Child Hope	Chester House, International Press Centre, Koinange Street	8877-00200

Goal Ireland Kenya	Nyangumi Rd,	66242-00800
Great Lakes University of Kisumu	Kisumu	2224-40100
Handicap International	Africa Re Centre,3rd floor, Hospital Road, Upper Hill	76375-00508
Health Action International	Bush house opposite Poland Embassy, Kambane lane	66054-00800
Help Age Kenya	Golf Course Phase1, hse no 60	34339-00100
Homeless Children International	Yaya Centre	76262-00508
I Choose Life - Africa	Ufungamano house, 3rd floor, Mamlaka/State house road	5166-00100
International Committee of Red Cross	Dennis prit road, opposite Caltex	73226-00200
International Development Research Center(IDRC)	Liason House 2nd floor, State house avenue	62084-00200
International Medical Corps	Kirichwa Road off Argwings Khodek Road	67513-00200
Internews	Moi Avenue, Nairobi	7219-00200
IntraHealth International	Unga House, 7th floor, Muthithi Road, Westlands	66726-00800
JHPIEGO - APHIA Eastern	4th floor, block E, Peponi Plaza	58247-00200
KECOFATUMA		
Kenya AIDS NGOs Consortium	Chaka Rd, off Argwings Kodhek Rd.	69866-00400
Kenya Association for Welfares of Epileptics	Wood avenue court, 2nd floor	60790-00200
Kenya Association of Professional Counsellors	Engyo plaza-Kamunde road	55472-00200
Kenya Catholic Secretariat	Waumini house, Westlands	13475
Kenya Freedom from Hunger Council	Freedom hunger house,off Ring road, Westlands	
Kenya Human Rights Commission	Valley Arcade, Gitanga Road	41079-00100
Kenya Medical Association	K.M.A House, Chyulu Road	48502-00100
Kenya NGO Alliance Against Malaria(KeNAAM)	Amref KCO Building,along Wilson Airport, off Langata Road	30125-00100
Kenya NGOs Consortium	off Arwings Kodhek road, Hurlingam	
Liverpool VCT	off Arwings Kodhek road, Hurlingam	19835-00202
Maendeleo ya Wanawake	Maendelo house 4th floor, Monrovia Street	44412
Map International	No.209,3rd Ngong Avenue off Bishops Road	21663-00505
Marie Stopes International	Kilimani	593228-00200
Medicines Sans Frontiers - Belgium	Kileleshwa, Dik Dik Gardens, Off Mandera rd	38897-00623

Merlin International	Amboseli Gardens, Lavington	3350-00200
Mildmay International	Mega plaza 3rd floor block C, Kisumu	3202-40100
Northern Health Development Forum		858-00100
Oxfam GB	Shelter Afrique House, Mamlaka rd	40680-00100
Participatory Methodologies Forum Of Kenya	Jabavu Road, P.C.E.A, Jitegemea Flats No.D3	2645-00202
Pathfinder International	International House, Mama Ngina Street, Nairobi	48147-00100
Pharmaciens Sans Frontiers	Amboseli Gardens, Lavington	10379-
Phsicians For Social Responsibility		21253-00505
Planned Parenthood Federation of America(PPFA)		53538-00200
Population Council	General Accident House, Ralphe Bunche road	17643-00500
Population Services International	ABC Place, Waiyaki Way	22591-00400
Poverty Eradication Network	AACC Compound, Waiyaki Way, Westlands	4932-00200
Programme for Appropriate Technology in Health(PATH)	ACS plaza, 4th floor, Lenana Road	76634-00508
Provide International	Landmark House, Outering Road	62961-00200
Samaritans Purse	Gem Lane, off Mander Road, Kileleshwa	76143-00508
Sight Savers International	Off Langata Rd, Next to Moi Education Centre	34690-00100
SUPKEM	Islamia House, 3rd floor Njugu Lane	45163-00100
Wem Intergrated Health Services (WEMIHS)	Thika	
Women Fighting AIDS in Kenya	Ngong Rd, Next to Nairobi Pentecostal Church	35168
World Concern International	Lerton court, 1st floor, Lenana Road	61333-00200
World Friends Kenya		39433-00623
World Neighbours	Old Waumini House, Westlands	14728-00800
World Relief	Karen / dagoretti Road	3-00502
World Vision	Karen road, off Ngong Road	50816-00200

Appendix VI: Local NGOs Dealing with Malaria in Kenya

LOCAL NGOs DEALING WITH MALARIA			CURRENT FOCUS			
NAME OF ORGANIZATION & SPECIALITY	CONTACT PERSON & CONTACT DETAILS	CASE MANAGEMENT	MALARIA IN PREGNANCY	MALARIA PREVENTION		
CFW Shops (SHEF) Sustainable Health Care Foundation	Dr. Christopher Wanyoike chris@cfwshops.org Tel: 2724881/2724757 Fax: 2734909	Training of CHWs/nurses, provision of treatment and drugs	Training of CHWs	ITN provision		
World Vision Kenya	Dr. Teresa Omwoyo National Health and Nutrition Coordinator			Malaria Prevention		
African Medical & Research Foundation (AMREF Kenya)	Hezron Ngugi (Zonal Coordinator Western)					
Kenya Red Cross Society (KRCS) – Disease Prevention & Control	Margaret Mungai Health Program Officer Mungai.Margaret@Kenyaredcross.org	Community education on fever management at home.	Distribution of ITNs.	ITNs/LLINs distribution/		
Aid Africa Concern (AAC)	Edna W. Kamau Chief Executive Officer					
Afriafrica Harnessing ICT for community health	Caroline Nyamai Kisia Director		Through health education	Through health education		
Plan Kenya	David Owuor Health Coordinator david.owuor@plan-international.org					
International Centre for Insect Physiology & Ecology (ICIPE)	Dr. John I. Githure Head, Human Health Division Cell. 0722-712646	Pilot collaborative studies with KEMRI on the use of botanicals		Development of mosquito repellents		

	FP.O. Box 30772-00100	(Artemisia and Neem)				
Aga Khan Foundation, Tanzania.	Asifa Nurani Regional Health Programme Officer Amyn Lakhani	asifa.Nurani@akdn.org Tel. 248296/223951/2 P.O. Box 40898-00100				
World Neighbors	Ruth Okowa wneibors@wneastafrica .					
Reto Mara Development Organization	David Ole Konchella Executive Director					
Life Care & Support Centre-Kenya	Matiko Chacha (CEO & Project-coordinator)					
Food for the Hungry						
KeNAAM (Kenya NGOs Alliance Against Malaria)	Gerald Mwangi Walterfang CEO	Coordinating secretariat				
Global Child Hope	Hassan Osman P.O. Box 8877-00200 Nairobi					
Kisii Network for Ecological Agriculture & Development (KNEAD)	Mr. Rianga CEO P.O. Box 2532					
Family Support Institute Prof. Shanyisa Khasiani	admin@fasi.or.ke Tel. 4440005					
KONAM Kenya Peter O. Aringo Executive Director	Telfax 043-535-2337 Mobile. +254 734 632409 and +254 723 894133	Active malaria parasite transmission		Community education		

Appendix VII: International NGOs Dealing with Malaria in Kenya

INTERNATIONAL NGOs			CURRENT FOCUS			
NAME OF ORGANIZATION AND SPECIALITY	CONTACT PERSON & CONTACT DETAILS	CASE MANAGEMENT	MALARIA IN PREGNANCY	MALARIA PREVENTION		
International Medical Corp (IMC) Villa Gracia Terrace Close, off Rhapta rd. (next to IOM), Westlands	Peter Mc Odida Country Rep Omondi@imcafrica.org Cell. 0733-614302 Cell. 0733-779049	Community/house hold IMCI, early case detection, upgrade of diagnostic capacity, Suba district.	Capacity building training, community mobilization – Suba district.	ITN Distribution, Promotion and net re-treatment – Suba District		
Academy for Educational Development (AED)	Nancy Nachbar, AED Regional rep nnachbar@aed.org Cell. 0733-446881 Tel. 4456136 Fax. 4452636 Liza Kimbo lkimbo@aed.org Cell. 0722-989298 P.O. Box 14500- 00800 .	Yes	Yes	Yes		
JHPIEGO	Dr. Pamela Lyman Technical Director, ESA lvnamp@jhpego.net			Orientation/ training in 19 districts in 1083 facilities in collaboration with DOMC		

Population Services International (PSI)	Manya Andrews ITN Technical Advisor			Social marketing of ITNs. Distribution of nets		
International Rescue Committee (IRC)	Jenny Fletcher Country Director Kenya	- See MOH guidelines on Malaria treatment	- Provision of SP to all pregnant mother	-Indoor residual spraying (IRS)		
IFRC & IRCS International Federation of Red Cross & Red Crescent Societies	Sylvia Khamati Anekha 'sylvia.khamati@ifrc.org'	IHC Programme s-Somalia	MCH/OPD clinics in Somalia	Rwanda, Uganda-South Western ,Sudan, Tanzania		
PSI – Social Marketing	Dana Tilson dtilson@psikenya.org			ITNs		
Health Action International (HAI) Africa	Christa Cepuch christa@haiafrica.org					
Merlin (Medical relief, lasting healthcare)	Gabrielle Appleford Regional Director Regional.country.manager@merlin-eastafrika.org	Community Education on fever management at home.	Distribution of ITNs Sensitization for IPT usage	ITNS/LLINs distribution retreating and malaria prevention advocacy		