Republic of Zambia
MINISTRY OF HEALTH

NATIONAL HEALTH STRATEGIC PLAN 2011-2015

"Towards attainment of health related Millennium Development Goals and Other National Health Priorities in a clean, caring and Competent environment"

CONTENTS

FOREWORD

Since 1992, the Zambian Government has been implementing significant health sector reforms, aimed at strengthening health service delivery in order to improve the health status of Zambians. The reforms have yielded significant results in form of strengthened health systems, improved access to health care and improved health outcomes as reported in the 2007 Zambia Demographic Health Survey. However, these achievements are yet to put Zambia on course to achieve the Millennium Development Goals (MDGs) by 2015. The country has remained under significant pressure to further reduce the disease burden and improve the health status of Zambians. This plan is therefore an attempt to significantly impact on service delivery and accelerate the attainment of the MDGs and other national priorities.

This National Health Strategic Plan (NHSP) 2011-2015 is the fifth in the series of the strategic plans implemented under these reforms. The plan presents a major departure from the past strategic plans, in that the plan is organised around the World Health organisation (WHO) health system building blocks rather than disease or target group programs. Key programs like roll back malaria, maternal and child health remain important but these are never delivered in a vacuum and hence the need to strengthen the entire health system. A further departure from previous plans is that while it is recognised that all health care interventions are important and should continue to receive the necessary levels of support, prioritisation of interventions is of critical importance as the resources and capabilities available are significantly constrained. The focus of the plan is, therefore, high impact interventions which is also the reason the Marginal Budgeting for Bottlenecks was used as the costing methodology for the plan.

The Ministry of Health (MoH) is committed to reorganise and manage the sector in an efficient, effective and prudent manner that would significantly improve health service delivery. It is my considered view that, with appropriate levels of commitment and support from the Government, Cooperating Partners, health workers and other key stakeholders, this Plan would significantly improve the health status of Zambians and significantly contribute to national development. I therefore, urge all the people involved in the implementation of this plan to fully dedicate themselves to this important national assignment. My Ministry will remain committed to ensuring the successful implementation of this plan.

Honourable Dr. Joseph Kasonde, MP
Minister of Health

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This strategic plan has been developed through a participative and consultative process involving significant contributions and support from various individuals and institutions. I therefore wish to extend my sincere appreciation to all those that contributed to the process of developing this plan. While it is recognised that a large number of individuals and institutions contributed to this process, I wish to pay special tribute to the consultants, members of the editorial team, members of the technical review team and members of the technical working groups for their significant inputs and commitment to this process.

On behalf of the Ministry of Health, I also wish to acknowledge the financial and technical support rendered to us by our Cooperating Partners. Without the direction and valuable support of our Cooperating Partners, we could not have managed to successfully complete this plan.

Finally, I wish to thank all the members of staff of the Ministry of Health, Provincial Medical Officers, and District Medical Officers, representatives of statutory boards, line ministries, and health NGOs, for their participation, contributions and support to the process of formulating this strategic plan.

Dr Peter Mwaba
Permanent Secretary
MINISTRY OF HEALTH

ACRONYMS AND ABBREVIATIONS

ACT	Artemisenin based Combination Therapy
ADH	Adolescent Health
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARH	Adolescent Reproductive Health
ARI	Acute Respiratory Infections
ART	Antiretroviral Treatment
ARV	Antiretroviral Drugs
ATDP	Annual Training Development Plan
BCC	Behavior Change Communication
BHCP	Basic Health Care Package
BSc	Bachelor of Science
CBOH	Central Board of Health
CBOs	Community Based Organisations
CDC	Centre for Disease Control
CDE	Classified Daily Employee
CHAZ	Churches Health Association of Zambia
CHERG	Child Health Epidemiological Resource Group
CHSR	Country Health Status Report
CHW	Community Health Workers
CIDA	Canadian International Development Agency
CO	Clinical Officer
CPD	Continued Professional Development
CPR	Contraceptive Prevalence Rate
CPs	Cooperating Partners
CSO	Central Statistical Office
CTC	Counseling, Testing and Care
DALYS	Disability Adjusted Life Years
DANIDA	Danish International Development Agency
DCI	Development Cooperation Ireland Aid
DHBs	District Health Boards
DHMT	District Health Management Team
DHO	District Health Office
DHS	Demographic and Health Survey
DILSAT	District Integrated Logistic Self- Assessment Tool
DOTS	Directly Observed Treatment Short Course
DPT	Diphtheria Pertusis Tetanus
DRF	Drug Supplies Fund
DSBL	Drug Supply Budget Line
EDL	Essential Drugs List
EHT	Environmental Health Technician

EMOC	Emergency Obstetric Care
EPI	Expanded Program on Immunisation
ESS	Epidemiological Sentinel Surveillance
EU	European Union
FAMS	Financial Administration and Management System
FANC	Focused Antenatal Care
FDL	Food and Drugs Laboratory
FP	Family Planning
GAVI	Global Alliance Vaccine Initiative
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GHE	Government Health Expenditure GIS
	Geographical Information Systems
GRZ	Government of the Republic of Zambia
HBC	Home Based Care
HE	Health Expenditure
HIPC	Highly Indebted Poor Countries
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HNP	Health Nutrition and Population
HQ	Headquarters
HRH	Human Resources for Health
HRHSP	Human Resources for Health Strategic Plan
HSSP	Health Services and Systems Program
HW	Health Workers
ICT	Information Communication Technology
IDA	International Dispensary Association
IEC	Information Education and Communication
IGAs	Income Generating Activities
IMCI	Integrated Management of Childhood Illnesses
IMF	International Monetary Fund
IMNCI	Integrated Management of Neonatal and Childhood Illness
IMR	Infant Mortality Rate
IP	Infection Prevention
IPT	Intermittent Presumptive Treatment
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Net
JASZ	Joint Assistance Strategy for Zambia
JICA	Japan International Cooperation Agency
LASF	Local Authorities Superannuation Fund
LCMS	Living Conditions and Monitoring Survey

LDC	Least Developed Countries
LIC	Low Income Countries
LMIS	Logistics Management Information System
LMU	Logistics Management Unit
M & E	Monitoring & Evaluation
MBB	Marginal Budgeting for Bottlenecks
MCDSS	Ministry of Community Development and Social Services
MDGs	Millennium Development Goals
MLGH	Ministry of Local Government and Housing
MMR	Maternal Mortality Ratio
MOFNP	Ministry of Finance and National Planning
MOH	Ministry of Health
MOU	Memorandum of Understanding
MSL	Medical Stores Limited
MTEF	Medium Term Expenditure Framework
NASA	National AIDS Spending Assessment
NASF	National AIDS Framework
NDP	New Decentralisation Policy
NDQCL	National Drug Quality Control Laboratory
NFNC	National Food and Nutrition Commission
NGOs	Non-governmental organisations
NHA	National Health Accounts
NHC	Neighbourhood Health Committee
NHSP	National Health Strategic Plan
NMCC	National Malaria Control Centre
NORAD	Norwegian Agency for Development
OOPE	Out-of-Pocket Expenditures
ORET	Ontwikkelings Relevant Export Transakie (Development of Relevant Export Transaction)
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PAC	Post Abortion Care
PE	Personnel Emoluments
PEMFAR	Public Expenditure Management Financial Accounting Reform
PEPFAR	The U. S President's Emergency Plan for AIDS Relief
PETS	Public Expenditure Tracking Survey
PHAST	Participatory Hygiene and Sanitation Transformation
PHC	Primary Health Care
PHO	Provincial Health Office
PLWA	People Living with AIDS

PMEC	Payroll Management and Establishment Control
PMTCT	Prevention of Mother to Child Transmission of HIV
PPP	Public Private Partnership
PRA	Pharmaceutical Regulatory Authority
PRSP	Poverty Reduction Strategy Paper
PSM	Procurement Supplies Management
PSMD	Public Service Management Department
PSPF	Public Service Pension Fund
PSU	Procurement Supplies Unit
PTWG	Procurement Technical Working Group
QA	Quality Assurance
QSDS	Quality of Service Delivery Survey
R&D	Research and Development
RBF	Results-Based Financing
RBM	Roll Back Malaria
RDU	Rational Drug Use
RH	Reproductive Health
RHC	Rural Health Center
SADC	Southern Africa Development Community
SHI	Social Health Insurance (SHI)
SIDA	Swedish International Development Agency
SMAGs	Safe Motherhood Action Groups
SNDP	Sixth National Development Plan
SP	Sulphadoxine Pyrimenthamine
STGS	Standard Treatment Guidelines
STI	Sexually Transmitted Diseases
SAG	Sector Advisory Group
SWAp	Sector Wide Approach
SWOT	Strengths, Weakness, Opportunities and Threats
TA	Technical Assistance
TB	Tuberculosis
TTBA	Trained Traditional Birth Attendant
TGE	Total Government Expenditure
THE	Total Health Expenditure
TI	Training Institution
ToT	Trainer of Trainers
TTIs	Transfusion Transmitted Infections
TWGs	Technical Working Groups
U5 Children	Children under the age of five years.
U5MR	Under 5 Mortality Rate

UHC	Urban Health Center
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund
UNZA	University of Zambia
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organisation
YFHS	Youth Friendly Health Services
ZAAI	Zambia Access to Artemisenin Based Combination Therapy Initiative
ZANARA	Zambia Response to HIV / AIDS ZBHCP
	Zambian Basic Health Care Package.
ZCCM	Zambia Consolidated Copper Mines
ZDHS	Zambia Demographic and Health Survey
ZMK	Zambian Kwacha
ZNBTS	Zambia National Blood Transfusion Service
ZNF	Zambia National Formulary
ZNFC	Zambia National Formulary Committee
ZNTB	Zambia National Tender Board
ZPCT	Zambia Prevention Care and Treatment
ZRA	Zambia Revenue Authority

EXECUTIVE SUMMARY

1.1 Introduction

Zambia recognises health as one of the priority sectors that contribute to the well-being of the nation and, therefore, remains committed to providing quality health services to all its citizens. Recognizing that a healthy population is critical to improved production and productivity, Zambia will continue investing in the health sector, in order to ensure sustainability of the nation's human capital base, required for sustainable economic growth.

This document is the National Health Strategic Plan 2011 to 2015 (NHSP 2011-15) for Zambia. It seeks to provide the strategic framework for ensuring the efficient and effective organisation, coordination and management of the health sector in Zambia, for the next five years ending 2015.

1.2 Situation Analysis

1.2.1 Country Background

Zambia is a Lower Middle Income Country and since 2006, the country has been imple menting the Vision 2030, which aims at transforming it into a prosperous middle-income nation by 2030. Over the past 5 years, the country recorded major improvements in macro-economic performance, with the average annual economic growth rate, above 5 percent. However, these improvements have not yet significantly impacted on the socio-economic well-being of the population, majority of whom are poor and vulnerable.

1.2.2 Health Sector Performance

Zambia has a high burden of disease, which is mainly characterised by high prevalence and impact of communicable diseases, particularly, malaria, HIV and AIDS, STIs, and TB, and high maternal, neonatal and child morbidities and mortalities. The country is also faced with a rapidly rising burden of non-communicable diseases, including mental health, diabetes, cardio-vesicular diseases and violence.

Over the past five years, from 2006 to 2010, the health sector recorded significant progress in most of the key areas of health service delivery, and health support systems, leading to major improvements in most of the key health performance indicators. According to the 2007 Zambia Demographic and Health Survey (ZDHS 2007), Maternal Mortality Ratio (MMR) reduced, from 729 deaths per 100,000 live births in 2002, to 591 in 2007, Under-Five Mortality Rate (U5MR) reduced from 168 per 1000 live births in 2002, to 119 in 2007, and Infant Mortality Rate (IMR) from 95 to 70, respectively. Neonatal Mortality Rate (NMR) reduced from 37 to 34, respectively. During the same period, HIV prevalence in adults, aged 15 to 49 years, reduced from 16.1% to 14.3%.

The malaria and TB programme performance reviews conducted in 2010, and other reporting health systems, also reported major improvements in the prevention and control of malaria and TB. Malaria incidence per 1000 population dropped from 412 in 2006, to 246 in 2009. TB treatment success rate improved from 79% in 2005 to 86% in 2008.

However, despite these achievements, the sector continues to face major challenges, which include high disease burden, inadequate medical staff, weak logistics management in the supply of drugs and medical supplies, inadequate and inequitable distribution of health infrastructure, equipment and transport, and challenges related to health information systems, inadequate financing, and identified weaknesses in the health systems governance. During the NHSP 2011-15 period, the sector will focus on overcoming these constraints and challenges, in order to ensure effective implementation of this plan, and attainment of the national health objectives.

1.3 Mission, Vision, Overall Goal, Principles and Priorities

1.3.1 Mission, Vision, Overall Goal and Principles

Mission Statement:	To provide equitable access to cost effective, quality health services as close to the family as possible
Vision:	A Nation of Healthy and Productive People
Overall Goal:	To improve the health status of people in Zambia in order to contribute to socio-economic development
Key Principles:	Primary Health Care (PHC) approach; Equity of access; Affordability; Cost-effectiveness; Accountability; Partnerships; Decentralisation and Leadership; Clean, Caring and Competent health care environment

1.3.2 National Health Priorities

Public Health Priorities	Health System Priorities
• Primary health care services. • Maternal, neonatal and child health. • Communicable diseases, especially malaria, HIV and AIDS, STIs and TB. • Non-Communicable Diseases (NCDs). • Epidemics control and public health surveillance. • Environmental health and food safety. • Health service referral systems. • Health promotion and education	• Human Resources for Health (HRH). • Essential drugs and medical supplies. • Infrastructure and Equipment. • Health information. • Health care financing. • Health Systems Governance.

1.3.3 Main Objectives/Targets

- Reduce the under-five mortality rate from the current 119 deaths per 1000 live births to 63 deaths per 1000 live births by 2015;
- Reduce the maternal mortality ratio from the current 591 deaths per 100,000 live births to 159 deaths per 100,000 live births by 2015;
- Increase the proportion of rural households living within 5km of the nearest health facility from 54.0 percent in 2004 to 70.0 percent by 2015;
- Reduce the population/Doctor ratio from the current 17,589 to 10,000 by 2015;
- Reduce the population/Nurse ratio from the current 1,864 to 700 by 2015;
- Reduce the incidence of malaria from 252 cases per 1,000 in 2008 to 75 in 2015;
- Increase the percentage of deliveries assisted by skilled health personnel from 45 percent in 2008 to 65 percent by 2015; and
- Reduce the prevalence of non-communicable diseases associated with identifiable behaviours.

1.4 Strategic Directions	
1. Service Delivery: (a) Primary Care services	
1(a) Primary Care services	
To provide cost-effective, quality and gender sensitive primary health care services to all as defined in the Basic Health Care Package	a) Implementation of the comprehensive roadmap and plan for Maternal, Newborn and Child Health services b) Scale up and sustain high impact nutrition interventions including vitamin A supplementation, iron-folate supplements, iodations of salt, infant and young child feeding and management of malnutrition e) Implementation of the malaria prevention and control interventions including IRS, ITN distribution, Intermittent Preventive Therapy in Pregnancy (IPTP,) and prompt and effective treatment f) Implementation of High Quality Direct Observation Treatment Strategy and control of Multi-drug resistant with focus on high risk groups h) Expanded access to HIV/AIDS prevention services including Male Circumcision services; condom distribution, STI, Control, PMTCT and provision of safe blood i) Continued expansion of ART services for both adults and children and in both rural and urban areas. j) Strengthen key interventions such as school health and nutrition programmes, SAFE strategy, community Mass Drug Administration to address Neglected Tropical Diseases k) Promote a multi-sectoral approach to environmental health within the framework of the decentralisation process l) Implement comprehensive Health Promotion/BCC strategies to strengthen Health Promotion and disease prevention and address the social determinants of health in the country m) Strengthen the preventive and promotive interventions to control the emerging and existing NCDs n) Create a desk for clinical care specialist for non communicable diseases
1(b) Hospital services	
To increase access to and quality of advanced referral medical care services.	a) strengthen the clinical management and other services in non-communicable diseases b) Continue the development of ophthalmologic services to move towards the vision 2020: The right to sight
1 (c) Specialised Support Services	
To strengthen and scale up medical support services, to ensure efficient and effective service provision	a) Strengthen and scale up blood transfusion services and universal precautions. b) Strengthen laboratory Capacity by ensuring availability of adequate and appropriate infrastructure, equipment and supplies and qualified staff c) Strengthen and scale up medical imaging and radiotherapy services. d) Strengthen and scale up medical rehabilitative services.

2. Human Resource for Health	
To improve the availability of and distribution of qualified health workers in the country	(a) Hospital Reforms Programme encompassing strengthened referral structures, outreach programmes from tertiary to regional referral hospitals, mobile referral services and improved quality of clinical services in hospitals (b) Building capacity in Hospital Management in financial management and mobilisation (c) Promote private sector participation in the provision of specialised care (d) Increasing the number of trained Health workers available to the sector improving the remuneration package and expanding training output (e) Improve efficiency in utilisation of existing staff by improving HR management and better training coordination (f) Provide appropriate training and incentives to community health workers to mitigate HR shortages
3. Infrastructure, Equipment and Commodities	
3(a) Medical Commodities & Logistical Systems	
To ensure availability and access to essential health commodities for clients and service providers	a) Ensure availability of skilled Human Resource logistics management at all levels b) Ensure availability of adequate finances for procurement of identified medical commodities, transport and training in logistics management c) Strengthen Logistics management systems for Essential commodities d) Ensure rational use of commodities and services
3(b) Infrastructure	
To provide sustainable infrastructure, conducive for the delivery of quality health services at all levels of the health care system	a) Update the existing infrastructure database and review of the HCIP to assess health facility requirements and expedite its implementation b) Review and gradually rehabilitate existing facilities and building communication and transport systems c) Develop maintenance and rehabilitation guidelines for all levels d) Construction of National Drug Quality Control Laboratory, Laboratories and Drug storage facilities e) Revision of the design of Health facilities with key stakeholders
3 (c) Equipment, Transport and ICTs	
To ensure the availability of adequate, appropriate and well-maintained medical equipment and accessories in accordance with service delivery needs at all levels	a) Finalise policy to support acquisition, management and maintenance of medical equipment. b) Develop capacity program for management and maintenance of medical equipment c) Development of Standard Equipment Lists at 2nd and 3rd Level Hospital Facilities d) Strengthen capacity for transport management e) Strengthen the vehicle service centres at provincial centres. f) Establish & upgrade LAN connectivity in all major health facilities g) Build ICT capacity in innovative developments and progression of ICT services and infrastructure , including mobile technology

4. Health Management Information System (HMIS)	
To ensure availability of relevant, accurate, timely and accessible health care data to support the planning, coordination, monitoring and evaluation of health care services	a) Strengthening and capacity building of health information cadre at all levels in order to improve the efficiency, quality and timely availability b) Strengthen data capturing capacity of HMIS to include other important conditions e.g. NCDs and eye diseases c) Rollout and strengthening the HMIS to all public and private Hospitals and at community level d) Strengthening the harmonisation and co-ordination of different health information systems among programmes e) support use of research evidence to translate knowledge into policy and practise
5. Health Care Financing	
To mobilise resources through sustainable means and to ensure efficient use of those resources to facilitate provision of quality health services	a) Promote adoption of Health Financing Policy as a long-term guide for financial reform b) Resource Mobilisation: explore alternative ways of raising health finances including PPP, private and social health insurance and ear-marked taxes c) Resource Allocation: Refine RSF for Districts to account for input costs and develop RAF for other levels and inputs such as HR d) Resource Tracking: Institutionalise NHA and PETS and strengthen routine resource tracking systems to link inputs to outputs (SAG Reports)
6. Leadership & Governance	
To implement accountable, efficient and transparent management systems at all levels of the Health Sector	a) Introduce a management development programme b) Review and strengthen the existing fiduciary systems c) Strengthen the Sector collaboration mechanisms d) Introduce Performance based financing e) Review the overall legal and policy framework f) Support the implementation of the National Decentralisation Implementation Plan

1.5 Implementation Framework

The plan will be implemented within the existing policy and regulatory, institutional and coordination, and monitoring and evaluation frameworks, with necessary improvements.

1.5.1 Policy and Regulatory Framework

During the course of this plan, the sector will finalise the revision of the National Health Policies of 1992 in order to harmonise various policies and pieces of legislation. Additionally, the sector will embark on the development of a comprehensive National Health Service Act to replace the repealed 1995 Act. The sector will also collaborate with relevant stakeholders to speed up the implementation of the National Decentralisation Policy, National Health Strategic Plan 2011-2015 in order to facilitate improved service delivery.

Furthermore, the sector will develop National Social Health Insurance Scheme; Health Care Financing Policy; undertake finalisation and adoption of the Basic Health Care Package (BHCP); implement the Community Worker Strategy; and review the Sector Wide Approach (SWAp) coordinating mechanisms. In order to ensure provision of quality health care, the sector will strengthen the monitoring and regulatory function of health services at all levels.

1.5.2 Institutional and Coordination Framework

The plan will be implemented through the existing health sector institutional and coordinating framework. MOH will take the overall responsibility for coordinating and ensuring successful implementation and attainment of the objectives of this plan. However, several other players will be involved in its implementation, including: other line ministries and government departments; Churches Health Association of Zambia (CHAZ); private sector; traditional and alternative medicines sector; civil society/communities; the Cooperating Partners (CPs).

To ensure efficient and effective coordination of the partnerships with all these players, MOH shall strengthen the SWAp and inter-sector collaboration and coordination mechanisms at all levels. Emphasis will be placed on strengthening the leadership and governance systems and structures, so as to ensure the highest levels of participation, transparency and accountability at all levels.

The NHSP 2011-15 will be implemented through the development and implementation of medium-term expenditure framework (MTEF) and annual action plans (AAPs) and budgets, based on a bottom-up planning process.

1.5.3 Monitoring and Evaluation

Monitoring and evaluation of the plan will be conducted through appropriate existing and new systems, procedures and mechanisms. The Monitoring and Evaluation Sub-Committee of SAG will be responsible for providing advice on all matters concerning monitoring and evaluation.

There will be two evaluations during the duration of each NHSP developed under this plan. These will consist of a mid-term assessment after the first 2.5 years of implementation and a comprehensive final evaluation at the end of the duration.

2 BACKGROUND

Health outreach programmes

2.1 Context

Since 1992, Zambia has been implementing wide-ranging health sector reforms, aimed at attaining equity of access to assured cost-effective quality health services, as close to the family as possible. These reforms have been based on the National Health Policies and Strategies of 1992 (NHP&S-92) and implemented through a system of health sector plans, which includes successive five-year National Health Strategic Plans (NHSPs), three-year medium-term expenditure frameworks (MTEF), and annual action plans (AAPs) and budgets. In this respect, over the past 5 years, the country has been implementing the National Health Strategic Plan 2006 to 2010 (NHSP 2006-10), which came to an end in 2010. The NHSP 206-10 was also integrated into the Fifth National Development Plan 2006 to 2010 (FNDP), and linked to Zambia's Vision 2030 strategy (Vision 2030), and prioritised within the overall national development agenda.

Following the end of the NHSP 2006-10, in order to consolidate and build upon the achievements of the NHSP 2006-10, the Ministry of Health (MOH), in collaboration with the key sector stakeholders and development partners, identified the need to develop a new NHSP to cover the period from 2011 to 2015.

This document presents the National Health Strategic Plan 2011 to 2015 (NHSP 2011-15) for Zambia. It seeks to provide the strategic framework for the efficient and effective organisation, coordination and management of the health sector in Zambia, for the next five years ending 2015. The plan aims at improving the health status of the Zambian population, in line with the national, regional and global health objectives and targets, particularly the Vision 2030 for Zambia and the health related Millennium Development Goals (MDGs).

2.2 Process and Structure

2.2.1 Process

This strategic plan was developed through a highly consultative process, aimed at achieving consensus and promoting ownership of the process and plan by all the key stakeholders. Through the strategic planning workshops, all the key stakeholder groups, including MOH, other relevant government line ministries and departments, the Churches Health Association of Zambia (CHAZ), the private sector, civil society, and international Cooperating Partners (CPs), actively participated and contributed to the development of this plan. The plan was also reviewed and approved by the Sector Advisory Group (SAG), which is the highest policy making organ of the health sector.

NHSP Secretariat

2.2.2 Structure

The plan is divided into the following chapters: introduction, situation analysis, strategic focus, (which includes the mission, vision, goal, objectives, key principles, and national health priorities), proposed strategic directions, costing of the plan, implementation framework, and annexes. The implementation framework, outlines the policy and regulatory, institutional, and Monitoring and Evaluation (M&E) arrangements that will be in place, to facilitate smooth and success implementation of the plan. The detailed structure of the plan is presented in the table of contents, above.

2.3 Links to other National, Regional and International Policies

The NHSP 2011-15 has been developed within the context of the overall national development agenda, and forms an integral part of the Sixth National Development Plan 2011 to 2015 (SNDP) and the Vision 2030 strategy, which aims at transforming Zambia into a prosperous middle-income nation by 2030. The plan is also linked to multi-sector strategic frameworks, with relevance to health, including the National Multi-sectoral HIV and AIDS Policy and strategic framework, National Food and Nutrition Policy, and the National Youth, Sport and Child Development Policy.

At regional and international levels, the plan is linked to various relevant policies and strategic frameworks, including the MDGs, the Roll Back Malaria (RBM) strategy, the Stop TB strategy, the Abuja and Maputo Declarations on health, the Accra Agenda for Action of 2008, the Paris Declaration on Aid Effectiveness of 2005, the International Health Partnerships and related initiatives (IHP+), and other policy pronouncements and resolutions of the World Health Assembly (WHA), as far as they are signed and ratified by Zambia.

3 SITUATION ANALYSIS

3.1 COUNTRY BACKGROUND

The Republic of Zambia is located in the southern part of the Sub-Saharan Africa continent. It covers approximately 752,612 Km2 and is surrounded by 8 other countries, namely: Tanzania and the Democratic Republic of Congo (DRC) in the North; Malawi and Mozambique in the East; Zimbabwe, Botswana and Namibia in the South; and Angola in the West. Figure 1 presents the map of Zambia.

Source: © 1993-2003 Microsoft Encarta

Zambia attained its independence from the United Kingdom in 1964, and has since that time continued to enjoy uninterrupted peace and political stability. Administratively, the country is divided into 9 provinces and 72 districts. Out of the 9 provinces, Lusaka and Copperbelt provinces are predominantly urban, while the rest are predominantly rural provinces.

Zambia is a developing country, classified as a lower middle income country. Since 2006, the country has been implementing the Vision 2030 strategy, which aims at transforming it into a prosperours middle-income nation by 2030. This is being implemented through successive 5-year National Development Plans (NDPs). In this respect, the last NDP was the FNDP, which ended in 2010. Currently, the country is implementing the SNDP, which outlines the country's overall socio-economic development agenda for the next 5 years ending in 2015.

Over the past 5 years, the country has registered consistent economic growth, averaging 6.2% growth in the Gross Domestic Product (GDP) per year, and significant improvements in other key macro-economic indicators. However, these achievements have not yet significantly impacted on the socio-economic status of the majority of the population, most of whom have continued to face poverty and socio-economic depreviation. The situation is further compounded by the inequities in the distribution of wealth and socio-economic infrastructure across the country, which currently favours the urban areas and adversely impacts on the provision of social services, such as health and education in rural hard-to-reach areas. Table 1 below presents a summary of selected demographic and socio-economic indicators for Zambia. More socio-economic data on Zambia could be accessed at www.mof.gov.zm, www.zamstats.gov.zm and www.boz.zm.

Table 1: Zambia – Selected Demographic and Socio-Economic Indicators, 2010

Indicator	Source	Status
Population	CSO 2010 Census, Interim results	13.2 million
Sex Ratio (Males per Female)	CSO	0.99
Average Annual Population Growth Rate	CSO Projections	2.7%
Life Expectancy at Birth	CSO Projections	51.3 Years
Population Under the Age of 15 Years (%)	CSO, 2000 Census	47%
Urban Population	CSO, 2000 Census	34.7%
Poverty Levels	ZDHS 2007[1]	67% (overall)

3.2 Key Determinants of Health

3.2.1 Overview

The health of individuals and communities is, to a large extent, determined by the environments and circumstances in which they live and operate. These factors are commonly referred to as the determinants of health and include: the social and economic environment; the physical environment; and the person's individual characteristics, behaviour and circumstances. Even though most of these factors are beyond the normal scope of the health sector, it is the responsibility of the health sector to ensure that such factors are considered and included in the health sector and national development agenda, in order to promote good health and quality of life of the population. In Zambia, the key determinants of health manifest differently and contribute to the high burden of disease, as discussed below.

3.2.2 Social and Economic Environment

The social and economic environment is a major determinant of health. It includes factors such as the demographic situation and trends, income and socio-economic status, education and literacy, employment and working conditions, and gender:

- *Demographic situation and trends:* The population of Zambia has rapidly grown from about 3 million people in 1964, to 13.2 Million in 2010[2]. The average life expectancy at birth has also increased from 40.5 years in 1998 to 51.3 years in 2010. This rapid population growth, places an increasing burden on the national economy, particularly the country's capacity to keep pace with the health needs of a rapidly increasing population and its dynamics.

- *Income and socio-economic Status:* The country is experiencing high levels of unemployment and weak socio-economic status of the population, which have implications on the health status of the population. Income inequity among the population has remained high, with the Gini Coefficient at 0.57 in 2004 (a drop from 0.66 in 1998).

  High poverty levels (67% in 2006) and poor access to safe water and sanitation also remain serious factors on health.

- *Nutrition:* Access to good nutrition is a major and cross-cutting determinant of health. In Zambia, malnutrition underlies up to 52% of all under-five deaths. The stunting rate in under-five children currently stands at 45%, with 5% being acutely malnourished (wasted) and 15% underweight. The rates of micronutrient deficiencies are also high, with 53% Vitamin A deficiency and 46% Iron deficiency anaemia (NFNC, 2003), while 4% of school aged children were at risk of mild to severe iodine disorders deficiency (NFNC, 2002).

- *Education and Literacy:* Education is the gateway to better employment and improved household income, while literacy is an important tool for accessing health information and education. Zambia has recorded major improvements in education and literacy. According to the Economic Report for 2009, net enrollment of children in primary education (Grade 1 – 7) and completion

[1]Zambia Demographic and Health Survey 2007 (ZDHS 2007)
[2]2010 National Census of Population Interim Report, Central Statistical Office, Zambia

rates have increased from 80% and 64% in 1990 to 101.4% and 93% in 2009, respectively. However, the completion rate for girls at secondary school level remained low, at 17.4% in 2009. It is estimated that 64% of women and 82% of men are literate, with urban areas having higher literacy levels than rural areas. Literacy rates among men are fairly high across all provinces, ranging from 71% in Eastern to 90% in Copperbelt province.

- *Social and cultural environments:* Zambia is among the most politically stable countries in Africa, and has continued to experience uninterrupted peace since its independence in 1964. The country has a multi-cultural society, characterised by different racial and ethnic groups, religious and traditional groupings, urbanisation, and increasing access to the internet and other sources of information, with significant potential for promoting good health. However, there are some social, cultural and religious beliefs and practices that negatively affect health. These include cultural practices, such as sexual cleansing of surviving spouses, unsafe traditional male circumcision procedures, early marriages for the girl child, gender discrimination in favour of males, and risky traditional health practices.

- *The family and community:* The families and communities have an important role in shaping the character and behaviours of the people. Peer pressure also has potential to mislead people, particularly the adolescents, into practices that are risky to health, such as alcohol and substance abuse, smoking, sexual abuse, and violence. These could lead to severe consequences on health, including the risks of contracting HIV and other Sexually Transmitted Infections (STIs), trauma, teenage pregnancies and mental illnesses.

- *Gender:* Zambia has made commitments towards promoting gender equality towards MDG 4 and SADC targets. With regard to education, the Gender Parity Index (GPI) for primary education improved from 0.90 in 1990 to 1.01 in 2009. However, for secondary level education, it decreased from 0.92 in 1990 to 0.87 in 2009, and for the 15-24 years old it stagnated at 0.8 from 2003 to 2005. On women's representation in parliament, despite the increase from 3.8% in 1991 to 14% in 2009, the country scored low against the target of 30%.

3.2.3 Physical Environments

Water and Sanitation: Poor access to safe water and good sanitation, poor housing and unsafe food has continued to drive diseases, such as diarrhoea, including cholera. The Zambia Demographic and Health Survey 2007 (ZDHS2007) indicates that only 41% of the households in Zambia have access to improved sources of water. Households in urban areas are more likely to have access to improved sources of water than those in rural areas (83% compared with 19%). Overall, 25% of households in Zambia have no toilet facilities. This problem is more common in rural areas (37%) than in urban areas (2%). Partly because of the water and sanitation conditions, the CFR for Diarrhea has only showed a slight decrease from 43 in 2006 and to 40 in 2008 per 1000 admissions (HIMS). .

Climate Change: Climate change is a major global threat to health, and is becoming a major problem for Zambia. The Zambia National Policy on Environment of 2005 recognises the need to harmonise the different sectoral development strategies, through a National Climate Change Response Strategy.

Employment and Working Conditions: Whilst it is recognised that in Zambia there are appropriate legal, regulatory and institutional frameworks, aimed at assuring healthy working environments, there are still challenges with respect to enforcement.

3.2.4 Personal Health Practices and Coping Skills

Personal character and commitment to health seeking behaviours, including prevention of disease, promotion of health and early seeking of appropriate treatment and care, are enhance health. In Zambia, there are attempts to promote these practices and skills through strengthening of health promotion and education. However, this area of health is not adequately developed and requires significant strengthening to meet the required levels of health awareness and education among individuals and communities.

3.3 Disease Burden, situation and trends

The burden of disease in Zambia is high, and is largely influenced by the high prevalence and impact of communicable diseases, particularly malaria, HIV and AIDS, Tuberculosis (TB) and Sexually Transmitted Infections (STIs).

The country is also faced with a high burden of Maternal, Neonatal and Child Health (MNCH) problems, and a growing problem of Non-Communicable Diseases (NCDs), including mental health, cancers, sickle cell anaemia, diabetes mellitus, hypertension and heart diseases, chronic respiratory disease, blindness and eye refractive defects, and oral health problems. Currently, the top 10 causes of morbidity and mortality in Zambia include malaria, respiratory infections (non-pneumonia), diarrhoea (non-blood), trauma (accidents, injuries, wounds and burns), eye infections, skin infections, respiratory infections (pneumonia), ear, nose and throat infections, intestinal worms and anaemia[3].

The country is also faced with the high burden of the HIV&AIDS epidemic, which has significantly impacted on the morbidity and mortality levels across the country. An analysis of the top 10 causes of morbidity and mortality in Zambia is presented at Annex I.

However, recent trends in both malaria and HIV&AIDS prevalence, morbidity and mortality are pointing to significant improvements. According to available statistics, malaria incidence has dropped from 383 cases per 1000 population in 2005 to 246 cases in 2010 (MIS 2010). At the same time, prevalence of HIV in the adult population, aged between 15 and 49 years, has also reduced from 16.1% in 2002 to 14.3% in 2007 (ZDHS 2007).

Zambia is among the countries with the highest maternal and child health mortality levels in the world. However, over the past 10 years, significant improvements have been reported. According to the ZDHS 2007, Maternal Mortality Ratio (MMR) reduced from 729 per 100000 live births in 2002 to 591 in 2007. Infant Mortality Rate (IMR) reduced from 95 per 1000 live births in 2002 to 70 in 2007. Under-five Mortality Rate (U5MR) reduced from 168 per 1000 live births in 2002 to 119 in 2007. Although neonatal deaths constitute approximately half of the proportion of infants who die, the reduction in neonatal mortality remains insignificant, from 37 per 1000 live births in 2002 to 34 in 2007, leading to concerns of poor peri-natal care in the country. While these gains in mortality reductions are acknowledged, the prevailing rates are still unacceptably high, and of major concern to the health sector.

3.4 Health Sector Organisation and Coordination

The health sector in Zambia is liberalised and embraces diversity in ownership, including: public health sector, which includes health facilities and programmes under the MOH, and some government line ministries and departments; faith-based health sector, under the coordination of CHAZ; the private sector, including for- and not-for profit health services, owned by private investors and Civil Society Organisations (CSOs); and traditional and alternative health service providers, which however operate informally and are not regulated or monitored MOH.

Since 1991, Zambia's approach to health sector organisation has focused on decentralisation of planning, management and resources, to the district level, where health services are delivered. This approach has also inevitably called for broader participation of all the key stakeholders, particularly the communities, in the governance of the health sector.

3.4.1 Sector Coordination

MOH is responsible for the overall coordination and management of the health sector in Zambia. In order to facilitate efficient and effective coordination, the following sector coordination structures have been established at national, provincial, district and community levels:

National Level: The MOH Headquarters in Lusaka is responsible for overall coordination and management of the health sector.

Provincial Level: Provincial Health Offices (PHOs) are responsible for coordinating health service delivery in their respective provinces.

District Level: District Health Offices (DHOs) are responsible for coordinating health service delivery at district level.

Community Level: At community level, Neighbourhood Health Committees (NHCs) have been established, to facilitate linkages between the communities and the health system.

National management units for specific health programmes have also been established, including: Reproductive Health Unit; Child Health Unit; National Malaria Control Centre (NMCC); National AIDS Council (NAC); and the National Tuberculosis and Leprosy Control Programme Management Unit. In addition to the formal sector organisational structure, MOH has also established the Sector Advisory Group (SAG), which is the forum for policy dialogue and coordination of health sector partners under the Sector-wide Approaches (SWAps).

3.4.2 Core Health Facilities

Core health service delivery facilities fall into five categories, namely: Health Posts (HPs) and Health Centres (HCs) at community level; Level 1 hospitals at district level; Level 2 general hospitals at provincial level; and Level 3 tertiary hospitals at national level. The referral system also follows the same hierarchy. Table 2 presents a summarised analysis of the existing core health facilities in Zambia, by level and type of ownership.

[3]Health Management Information System (HMIS) Reports for 2009 and 2010

Table 2: Zambia: Health Facilities by Type, Size and Ownership, 2010

Description	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	North-Western	Southern	Western	Zambia
A) By Level of Care										
Level 3 Hospitals	0	3	0	0	3	0	0	0	0	6
Level 2 Hospitals	2	9	2	1	0	2	2	2	1	21
Level 1 Hospitals	6	8	8	5	15	6	10	14	12	84
Urban Health Centres	32	137	8	1	182	14	18	34	10	436
Rural Health Centres	113	53	156	125	47	145	120	174	127	1, 060
Health Posts	35	25	53	10	32	49	17	30	24	275
Total	188	235	227	142	279	216	167	254	174	1, 882

B) By Type of Ownership

Public Health Facilities	164	164	211	132	116	189	137	217	159	1, 489
Mission Health Facilities	10	10	16	7	8	14	22	24	11	122
Private Health Facilities	14	61	0	3	155	13	8	13	4	271
Total	188	235	227	142	279	216	167	254	174	1, 882

Source: Heath Institutions in Zambia, Ministry of Health, 2010

3.4.3 Health Training Institutions (TIs)

Several training institutions for health professionals have been established. These institutions are responsible for production of health workers in various health disciplines, through pre-service and in-service training programmes. These facilities include the University of Zambia School of Medicine (UNZA-Med.), under the Ministry of Education (MOE); Evelyn Hone College, under the Ministry of Technical Education and Vocational Training (MTEVT); the Chainama Hills College of Health Sciences (CHCHS), and various nursing and midwifery schools, bio-medical training schools and other paramedical training institutions, at different levels, under MOH; mission health training schools, under CHAZ; and emergent private health training institutions at different levels.

3.4.4 Health Statutory Boards

Health statutory boards have also been established to provide the necessary technical and regulatory support to the core health service delivery facilities. These are sub-divided into service delivery and regulatory boards. Service delivery statutory boards are responsible for providing specialised support services to core health service delivery facilities. Regulatory statutory boards are responsible for enforcing specific government policies, legislation and regulations, related to health. These include the Zambia Medical Professionals Council (ZMPC), the General Nursing Council (GNC), the Pharmaceutical Regulatory Authority (PRA), the Radiation Protection Board (RPB) and the Occupational Health Services Board (OHSB).

3.4.5 Gender and Health

Zambia has declared its commitment to gender mainstreaming accross the sectors and at all levels of socio-economic life. To support this commitment, the National Gender Policy, and its Implementation Plan have been developed and widely disseminated. However, there are still major gender disparities in health outcomes, particularly in terms of morbidity, mortality, and nutrition, as reported in the ZDHS 2007. Further, currently, the participation of men in reproductive and family health is still relatively low. The challenge for the health sector is to ensure gender mainstreaming at all levels.

3.4.6 Partnerships for Health

Partnership was among the key principles identified in the NHSP 2006-10. In this respect MOH has established strong partnerships with key stakeholders, including: the other government line ministries and departments; local communities; the private sector; faith-based health institutions, under the coordination of CHAZ; the civil society and the CPs. These partnerships have continued to significantly contribute to health sector development, through leveraging of financial, technical, material and logistical support to the sector.

3.5 Health Sector Performance

The review of performance for the health sector mainly covers the period of performance of the last NHSP, from 2006 to 2010. The review presents summarised performance highlights of the health sector, along the “Six Health Systems Building Blocks”, highlighting performance against the key targets of the NHSP 2006-10. It also includes a brief review of performance against the national targets for the health related MDGs.

The analysis of the sector performance is based on the “Six Health System Building Blocks ”, adopted by the World Health Organisation’s (WHO) as an appropriate framework for analyzing the health sector. The same framework is also later used for analyzing the proposed strategic directions. This approach presents opportunities for logical analysis of the sector, and for inter-country comparisons and bench-marking. Figure 2 presents the conceptual framework of this framework.

[4]http://www.eldis.org/go/topics/dossiers/health-and-fragile-states/who-health-systems-building-blocks

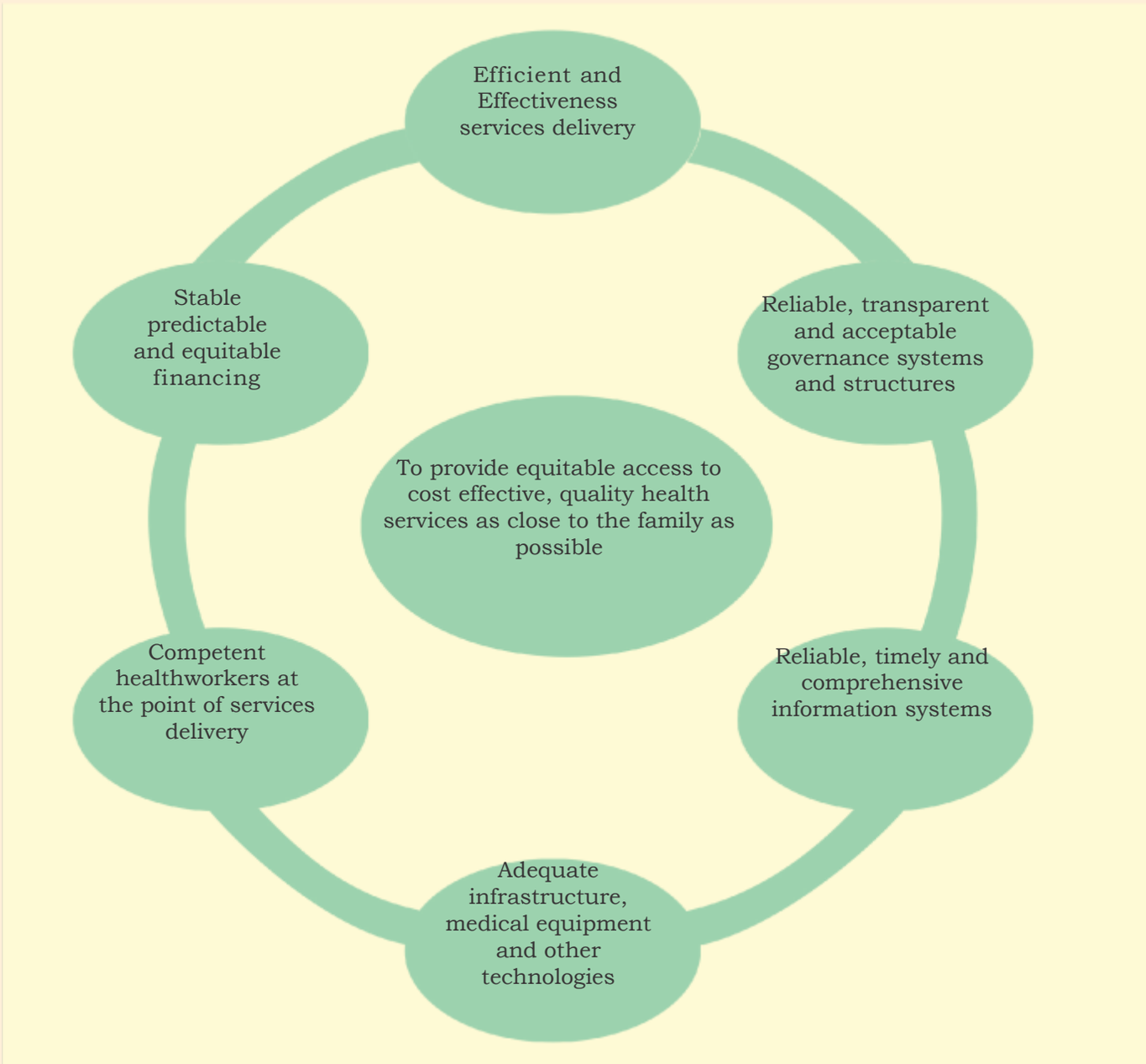


Figure 2: Conceptual Framework of Health System Building Blocks

3.5.1 Service Delivery

3.5.1.1 Overview

During the period under review, i.e. from 2006 to 2010, the main objective for the health sector was to *"ensure equity of access to cost-effective, quality health services, as close to the family as possible"*. The sector continued to face a high disease burden. However, with strong support from its partners, it embarked on the scaling up of high impact interventions in all the key areas of performance, particularly in the fight against malaria, HIV and AIDS, STIs, and TB, and in maternal and child health.

However, even though significant progress was reported, service delivery also continued to experience major constraints and challenges, which negatively affected performance. These included inadequate funding to the sector, critical shortages and inequitable distribution of health workers, erratic supply of essential medicines and medical supplies, and inadequate, as well as inequitable, distribution of health infrastructure, equipment, and transport. These are discussed in their respective sections below.

3.5.1.2 Access to Health Services

Zambia's vision is to attain universal access to cost-effective, quality health services. During the period under review, several efforts were made, aimed at improving access to health services. These included, the abolition of user fees in 54 rural districts, construction and renovation of health facilities across the country, investments in medical equipment and transport, scaling up of outreach health services, and health promotion and education.

Health Service delivery

It is currently, estimated that in urban areas, approximately 99% of households are within 5 Kilometres of a health facility, compared to 50% in rural areas. There are several factors hindering access to health services. These include: geographical challenges and the poor state of transport and communication infrastructure, particularly for rural areas. Other obstacles include the shortages and inequitable distribution of health infrastructure and health workers, availability of essential drugs and medical supplies; and inequities in income levels at household level.

3.5.1.3 Integrated Reproductive Health

Integrated Reproductive Health (IRH) incorporates Family Planning (FP), and MNCH services. During the period under review, the main objective was to scale up high impact FP and MNCH interventions, and significantly reduce maternal and child mortalities, in line with the national MDGs targets. The specific objectives were:

- To increase access to IRH and FP services and reduce MMR by one quarter, from 729 per 100000 live births in 2002, to 547 by 2010; and
- To reduce U5MR by 20%, from 168 per 1000 live births in 2002, to 134 by 2010.

Despite the gains in reducing MMR, the coverage of key MNCH interventions is still inadequate. Antenatal care (ANC) and has varied from, as high as 94% (First ANC visit), to as low as 39% (postnatal natal visit within two days). The first visit in the first trimester is at 19%, resulting in a number of interventions being missed for women who come after the 1st trimester (CSO et al 2009). While more than 80% of the facilities provide regular outreach ANC sessions and FP services, only 46.5% of deliveries are assisted by nurses/midwives or physicians (2008 HIMS Annual Report).

Although 53 out of 72 districts have EmONC trained health workers, there is need to address gaps in respect of the availability of essential equipment and infrastructure. For all these statistics, there are obvious urban rural disparities as well as significant differentials among the districts.

Apart from death, maternal complications lead to disabilities. It is estimated that for every maternal death, there are about 30 disabilities, some of which are Fistula cases. Prevention is closely integrated into EmONC, but the latter has gaps and the repair of fistulae is only in 4 sites, yet to be scaled up to provincial hospitals (10 sites).

While the contraceptive prevalence rate increased from 23% in 2002 (ZDHS 2002) to 33% in 2007 (ZDHS 2007), the total fertility rate remained high, at 6.2 %, with an unmet need for FP at 27% (DHS 2007), which if addressed, could positively impact on maternal mortality. However, for the adolescents, this remained another major area of concern. Teenage pregnancy is associated with higher morbidity and mortality for both the mother and child, and also has adverse social consequences. Other reproductive health programmes, such as prevention of cancer of the cervix (CaCx) are being scaled up from 1 province to all the 9 provinces. The general hospitals' capacity to carryout CaCx screening with the visual inspection using acetic acid (VIA) is being strengthened through human resource trainings and procurement of equipment.

The main child health interventions being implemented in Zambia are the Expanded Programme on Immunisation (EPI); and the Integrated Management of Child Illnesses (IMCI) programme. Both programmes have recorded significant achievements. The EPI programme has made tremendous achievements which include maintenance of the polio free status, Maternal Neonatal Tetanus Elimination (MTNE) since 2005, and significant reduction in morbidity and mortality from measles compared to the late 1990s. There is critical need to sustain this situation in order to avoid outbreaks. The national target for immunisation is to have at least 90% of the districts attaining 80% DPT3 coverage. The proportion of districts attaining coverage above 80% for DPT3 was 85% in 2008 and 77% in 2009 (HIMS).

The 'Reaching Every District' (RED) strategy remained the main strategy for EPI. All the districts are implementing IMCI strategies but reaching optimal saturation levels (80% health workers managing sick children trained in IMCI) has been a challenge due to resource constraints. Other major factors include: the supportive supervision monitoring tools used at provincial and district levels do not adequately address IMCI; staff shortages; and weak health systems. Further, the level and quality of care of the severely sick children has been compromised due to limited capacity (equipment and skills of health workers) at first referral levels. For example, access to early infant diagnosis of HIV at 6 weeks, initiation of Co-trimoxazole prophylaxis and initiation of ART for children under the age of 15 years stand at 36%, 24% and 61% respectively (MOH Paediatric Reports). Equally, there has been no significant change in CFR for diarrhoea- fluctuating between 40 and 50 between 2004 and 2008 (HIMS).

Zambia has adopted the Integrated Community Case Management-ICCM aimed at increasing equity access to high impact life saving health interventions close to the family. Of the 16 key family and community practices adopted, 6 have been prioritised for national wide implementation. The monitoring of implementation of these practices remains a challenge because of lack of a formal community HMIS and high turnover of community health workers resulting from inadequate retention mechanisms.

3.5.1.4 Malaria

Malaria is a major public health priority in Zambia and has for a long time remained the leading cause of morbidity and mortality. In 2009, 3.2 million cases of malaria (confirmed and unconfirmed) were reported countrywide with about 4,000 deaths[5]. Malaria accounts for over 40 percent of all health facility visitations in Zambia and the disease poses a severe social and economic burden on communities living in endemic areas. Zambia has continued to make significant progress in the fight against malaria and there is documented evidence that the malaria burden is reducing[6]. Annual malaria incidence has dropped from 412 per 1000 population in 2006 to 252 in 2008 and 246 in 2009.

[5]Malaria Indicator Survey 2010
[6]Zambia: Malaria Programme Review 2010 (MPR 2010)

Diagnostic services

These achievements could be attributed to the continued scaling up of high impact preventive, curative and care interventions, particularly: Vector control, using Indoor Residual Spraying (IRS) and Insecticide Treated Nets (ITNs); Intermittent Presumptive Treatment (IPT) of Malaria in Pregnancy (MIP); Malaria Case Management (MCM); Coartem use; and introduction and scaling out of the use of Rapid Diagnostic Tests (RDTs) in health facilities that do not have microscopy services. Based on available evidence, the National Malaria Programme Review 2010 (MPR-2010) proposed to stratify Zambia into three malaria epidemiological zones:

Zone 1: Areas where malaria control has markedly reduced transmission and parasite prevalence is <1% (Lusaka city and environs).

Zone 2: Areas where sustained malaria prevention and control has markedly reduced transmission and parasite prevalence is at or under 10% in young children at the peak of transmission (Central, Copperbelt, North-western, Southern, and Western Provinces).

Zone 3: Areas where progress in malaria control has been attained, but not sustained and lapses in prevention coverage have led to resurgence of infection and illness, and parasite prevalence in young children exceeds 20% at the peak of the transmission season (Eastern, Luapula, and Northern Provinces).

3.5.1.5 HIV and AIDS, and STIs

Zambia has a generalised HIV epidemic, which cuts across gender, age, geographical, and socio-economic status of the population. During the period under review, the main objective for the HIV and AIDS strategy was aligned to MDG 4. The specific objective was to halt and begin to reduce the spread of HIV/AIDS and STIs, by increasing access to quality interventions.

In this respect, significant country and global support was received, which facilitated rapid scaling up of all high impact interventions against HIV and AIDS, and STIs, in prevention, diagnosis, treatment and care. As a result, significant progress was reported at all these levels of intervention.

HIV prevalence in the adult population (15 to 49 years age group) declined from 16.1% in 2002[7] to 14.3% as of 2007[8]. It is estimated 16.1% females and 12.3% males are infected with HIV. Urban-rural differences exist, with urban areas having higher prevalence (20%), compared to rural areas (10%)[9]. New infections are projected to increase from an estimated 67,602 adults in 2006 to 72,019 in 2015, translating into approximately 185 new infections every day. Out of this, an estimated 10% of HIV transmission is from parent to child, occurring during pregnancy, birth or breastfeeding.

Although HIV prevalence and the rate of new HIV infections have been slowing down, the number of People Living with HIV (PLHIV) has continued to increase, partly due to the increase in population size and the scaling up of access to Anti-Retroviral Therapy (ART), leading to more infected people living longer. Currently, over 900,000 Zambians are living with HIV and over 250,000 are receiving ART. The main interventions being implemented in the fight against HIV and AIDS, and STIs, include the following:

Prevention: Voluntary Counseling and Testing (VCT); Abstinence, Be faithful and Condom use (ABC) strategies; male circumcision; Prevention of Mother-to-Child Transmission of HIV (PMTCT); blood safety and universal precautions; injection safety; and Post Exposure Prophylaxes (PEP). All these interventions were significantly strengthened and supported. PMTCT services were scaled up to all the districts in the country, and 61% of all the estimated number of HIV positive pregnant women who gave birth in 2009 accessed ARVs, to reduce the risk of transmission to the baby, as well as maintain their health. The major concern is that there are still some gaps in prevention, e.g. even though majority of incidents of occupational exposure to HIV occurs in health settings, in 2008, only 43% of the health facilities offered PEP. Further, current levels of male circumcision are low.

[7]National HIV and AIDS Strategic Framework 2006-2010
[8]Zambia Demographic and Health Survey 2007 (ZDHS 2007).
[9]Central Statistical Office Zambia Demographic and Health Survey,2007

Treatment: Over the past 5 years, the free access to ART programme has significantly expanded, with significant impact on the lives of the people living with HIV and AIDS (PLHIV). A total of 450 ART sites have been established nationwide and ART coverage increased from 32.9% in 2006 to 70% by June 2009, with the male to female ratio of people on ART estimated at 1:1.5. Currently, over 350,000 patients are accessing free ART, of which 25,000 are children (representing 74% of the estimated ART needs). The GFATM evaluation in 2008 showed that major investments are still needed in appropriate infrastructure, equipment and supplies for treatment and care.

Care: the main strategies in this area include home based care (HBC) and various economic empowerment and support initiative targeted at the infected and the affected.

3.5.1.6 Tuberculosis (TB) and Leprosy

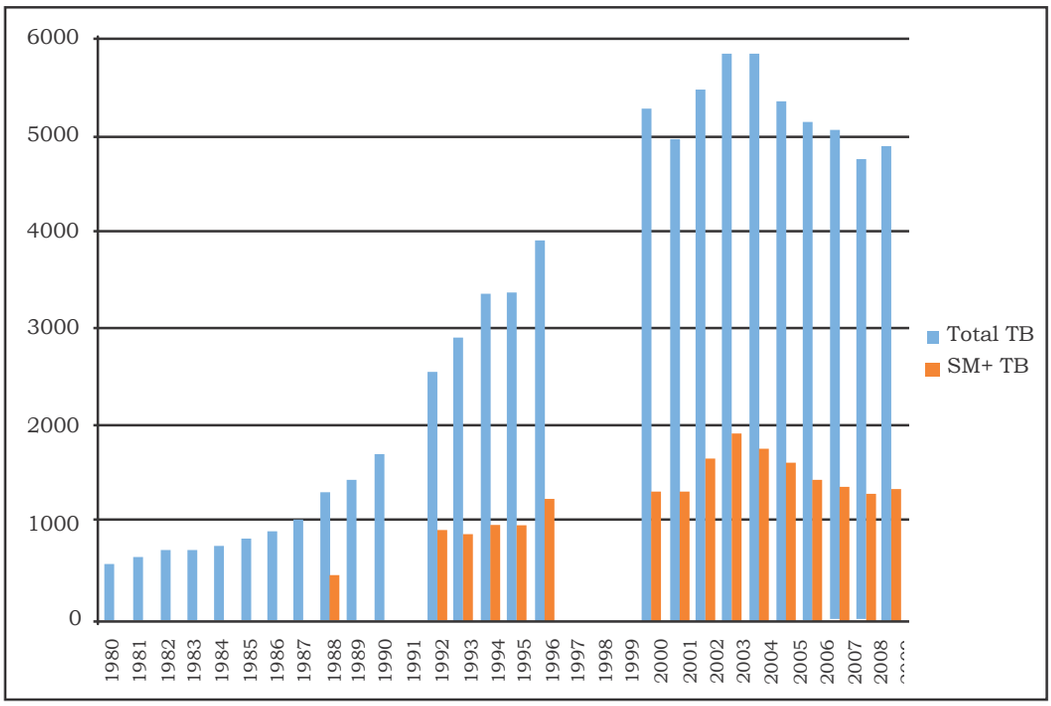
TB is among the major public health priorities in Zambia. During the period under review, the objective for TB to halt and begin to reduce the spread of TB, through effective interventions. This objective was also aligned to the MDGs.

Zambia has adopted the WHO Stop TB Strategy, based on the Directly Observed Treatment Scheme (TB-DOTS). There is universal facility coverage with TB-DOTS services in all the provinces in the country and microscopy services have been expanding progressively since 2006, including innovations involving DOT supporters and sputum referral systems, where laboratory services are not available on site. MOH has ensured availability of quality first line anti TB drugs at all times in all the public health facilities, facilitating the attainment of a treatment success rate of 86%, against the MDG target of 85%. TB/HIV collaborative activities are being implemented in all the provinces and Districts. This has been possible due to the adoption of the international TB control strategies (the Stop TB Strategy). The TB Programme has worked closely with all the relevant stakeholders, including community groups and organisations in programme implementation.

During the last 5 years, the country recorded good progress in the fight against TB, which was also confirmed by the TB Programme Review of 2010 (TB-Review 2010) and the ZDHS 2007. TB Case notifications reduced from 50,415 cases in 2007 to 47,333 in 2008, representing a decrease in the notification rate from 419/100,000 in 2007 to 408/100,000 in 2008. However, the TB/HIV co-infection remained high, at 70%. (See Figure 2 below).

Figure 2: Notified TB Cases of all Forms since 2005

Notified TB cases all forms are declining since 2005



Source: Zambia: National TB Programme

The TB case detection rate also improved from 44% in 2001 to 58% in 2009, showing progress towards attaining the 70% target for the MDG. However, the defaulter rate and death rate stand at 3% and 7%, respectively. The rate of HIV testing for TB patients has increased from 23% in 2006 to 72% in 2009, while the proportion of HIV positive TB patients receiving cotrimoxazole and ART, increased from 30% and 37% in 2006 to 63% and 42% in 2009, respectively. Due to improved care and treatment of both TB and TB/HIV infected patients, over the past 5 years, deaths have reduced to less than 5,000 per annum.

In 2008, a total of 59 cases of multi-drug resistant TB were notified to the National TB Programme. A national survey on TB drug resistance was conducted and dissemination of results awaits completion of quality assurance of samples. Meanwhile, management of MDR TB has been included in the core National TB Programmes.

Zambia achieved the goal of leprosy elimination as a public health problem in 2000. The elimination of leprosy has been made possible by the strong leprosy control strategies adopted by the national programme and concerted efforts of the implementers at the district and health facility levels. Currently the national registered leprosy prevalence is at 0.5 per 10000 inhabitants, with a registered detection rate of 0.34 per 10000 inhabitants. In 2009, Zambia notified 446 new leprosy patients, with 75% of the patients being Multi-bacillary leprosy (MB). Leprosy occurs in all provinces of Zambia, with varied geographical distribution within the provinces. The disability grading among newly diagnosed leprosy patients in Zambia for 2009 has been registered at 5%. A related concern is the spread of TB in clinical settings and prisons and other congregate settings and the program has begun implementing Infection control activities. Communities and people affected with TB are being empowered with information.

3.5.1.7 Neglected Tropical Diseases

Neglected tropical diseases (NTD) continue to place an unacceptable burden on the health of the poorest populations in Zambia. Schistosomiasis (Bilharzia) is prevalent in rural districts especially those close to the Lakes and rivers, with close to 2 million people infected in Zambia. Infections with soil transmitted helminths (hookworm, Ascaris and whip worm) are also common throughout the country. Other endemic NTDs include Lymphatic Filariasis (elephantiasis) with prevalence rates ranging between 1% and 25% of the circulating Filarial antigen, Trypanosomiasis (sleeping sickness) in Mpika, Chama, Chipata and Katete, and Trachoma in the southern and western provinces of Zambia. For the lallet, five districts were surveyed and the prevalence rates ranged between 14.3% of TF in Sinazongwe to 32.7 in Kaoma (MoH trachoma survey report 2007).

3.5.1.8 Epidemics Control and Public Health Surveillance

Zambia has continued to experience outbreaks of various communicable diseases including cholera, measles and typhoid. Communicable disease surveillance is conducted using the World Health Organisation (WHO) Integrated Diseases Surveillance and Response (IDSR) strategy. Using this model surveillance activities are conducted at national, provincial, district and health facility levels.

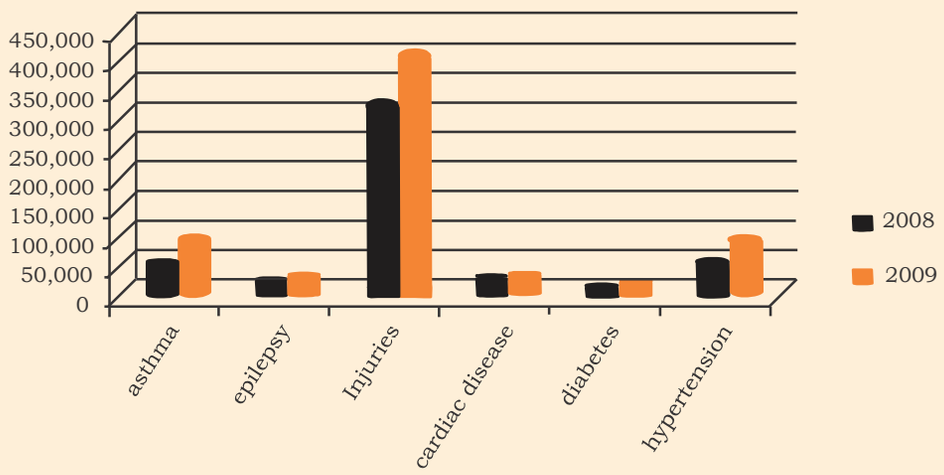
Since the introduction of IDSR in Zambia, there has been marked improvement in the ability to detect, investigate and respond to infectious disease outbreaks at district, provincial and national level.

The capacity to confirm most of the common notifiable diseases was available in 5, out of the 9 provinces (62.5%). However due to a lack of reagents and other laboratory consumables, seven out of 9 of the provinces send samples to the reference laboratory at University Teaching Hospital (UTH) for confirmation. All the provinces reported having a multi-sectoral provincial epidemic management committee responsible for the coordination of a timely and effective response to outbreaks.

3.5.1.9 Non-Communicable Diseases

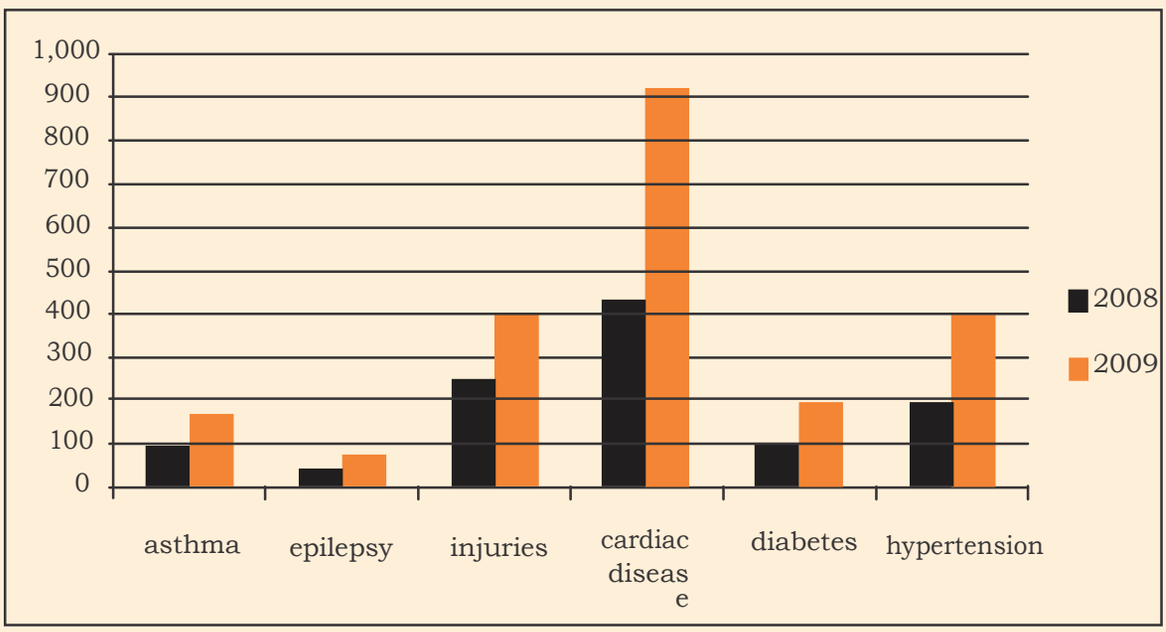
Zambia is currently experiencing a major increase in the burden of Non-communicable Diseases (NCDs). In this respect, the common NCDs include cardiovascular diseases, diabetes mellitus (Type II), cancers, chronic respiratory diseases, epilepsy, mental illnesses, oral health, eye diseases, injuries (mostly due to road traffic accidents and burns) and sickle anaemia. Most of these health conditions are associated with lifestyles, such as unhealthy diets, physical inactivity, alcohol abuse and tobacco use, while some are also associated with biological risk factors, which run in families. Figure 3 and 4 below present the trends in morbidity and mortality due to some of the NCDs,

Figure 3: Zambia: NCDs Morbidity at Primary Health Care: 2008-2009



Source: HMIS

Figure 4: Zambia: NCD Mortality at primary health care 2008-2009



Source: HMIS

A needs assessment for the NCD programme was carried out and key findings were made, which also identified the gaps. Table 4 below, summarises the key identified gaps.

Table 4: Zambia: Summary of the Needs Assessment on NCDs in Zambia

Disease	Lack/ inadequate drugs and lab reagents (%)	Lack or inadequate diagnostic facilities (%)	Lack or inadequate expertise (%)	Lack of community awareness (%)
Diabetes	89.6	80.6	73.1	76.1
Hypertension	13.4	53.7	50.7	74.6
Cancer Cervix	64.2	86.6	86.6	79.1
Breast Cancer	50.7	89.6	85.1	76.1
Prostate Cancer	59.7	91.0	85.1	80.6
Asthma	23.9	65.7	50.7	52.2
Epilepsy	28.4	89.6	68.7	70.1

Based on the recommendations from the NCD symposium (MOH NCD Symposium 2009), the NCDs programme has embarked on a number of interventions for the prevention and early detection of NCDs. These include: the development of treatment protocols that will be used at the second level hospitals, where specialised clinics are being set up for NCDs; development of clinical nutrition and dietary guidelines; training of health workers in the management of NCDs; raising awareness levels on NCDs, through IEC materials like TV documentaries, posters, brochures and media discussions; and collaboration with various associations, to carryout screening programs, such as Blood Pressure (BP) check, Nutritional assessment, prostate and breast cancer; and advocating for change in unhealthy lifestyles. However, these interventions are yet to be extended to all districts and institutions.

The other interventions that have been identified, but not yet being implemented, include: development and implementation of an NCD policy; introducing and strengthening physical activities in all schools; community physical/sporting activities; promotion of healthy diets; strengthening enforcement of legislation on tobacco use and harmful use of alcohol; operational research; and monitoring and evaluation.

3.5.1.10 Nutrition

Going by the WHO standards, nutrition indicators remain high with a negative impact on maternal and child health. Child Malnutrition in Zambia is decreasing but still contributes to 42% (CSO et al 2002), of all under five deaths in Zambia[10]. The following data illustrate the situation among women and children in the table below:

Table 5: Nutrition status indicators for women and children

Indicator	2002 (ZDHS)	2007 (ZDHS)
Stunting	53%	45%
Wasting	6%	5%
Underweight	23%	15%
Maternal underweight (BMI <18.5)	15%	10%
Overweight/obese	12%	19%
Vitamin A deficiency[11]	68% (NFNC ,1998)	54% (NFNC, 2003)
Anemia among children 6 – 59 months	65% (NFNC1998)	53% (NFNC2003)

In 2009, 61% of infants 5 months of age and below were found to be exclusively breastfed. Following the finding of low rate of exclusive breast feeding and initiation of breast feeding within an hour (CSO, 2009), in-service training in infant and young child feeding has been intensified since 2008.

Programme coverage for micronutrient control, Vitamin A supplementation coverage has remained above the 80% target ranging between 80% and 95% over the period 2008 to 2010. (MoH CHWk reports, 2008, 2009, 2010). Postpartum Vitamin A supplementation improved from 28% in 2002 to 45% in 2007. De-worming using Mebendazole in children 12 to 59 months has increased and remained between 80 to 95% coverage, while 36% of pregnant women received deworming tablets (CSO 2007). Regarding anaemia control 44% of pregnant women were reported to have taken iron supplements. Iodine deficiency has reduced in Zambia with only 4% at risk of mild to severe IDD[12].

Integrated Management of Acute Malnutrition (IMAM) programme has two key components of community and hospital level management. Although health workers have been trained in the management of acute malnutrition in all hospitals in the provinces, the case fatality rate remains unacceptably high at 20% - 40% in these hospitals. In order to reduce congestion in hospitals and increase coverage, community therapeutic care is being promoted for uncomplicated severe malnutrition and to improve early identification of malnutrition.

The IMAM programme faces a number of challenges including poor reporting by health facilities coupled with non existence of IMAM indicators in IMCI, inadequate supply of drugs, therapeutic feeds, equipment, shortage of staff and high rates of HIV infection. Although the ministry recognises the importance of nutrition in public health and clinical areas, such as HIV, TB, and NCDs, nutrition concerns have not been adequately integrated.

[10]CSO, CBoH, USAID, ORC Macro, 2003. African of Young Children and Mothers in Zambia. Findings from 2001 -2002, Zambia Demographic and Health Survey, ORC Macro 11785 Beltsville Drive, Calverton, Maryland, USA.
[11]NFNC, 2003, Report on the National Survey to Evaluate the Impact of Vitamin A Interventions in Zambia, July and November.
[12]NFNC 2003, Iodine Deficiency Disorders (IDD) Impact Survey, Lusaka, Zambia

3.5.2 Health Workforce

Zambia is facing a serious Human Resources for Health (HRH) crisis, both in the numbers and skills mix. The critical shortage of skilled manpower is a major obstacle to the provision of quality healthcare services and to the achievement of the national health objectives and MDGs. There are three main problems, namely the absolute shortages of health workers, inequities in the distribution of health workers and skills-mix, which all favour urban areas, than rural areas.

During the period under review, MOH implemented the National Human Resource for Health Strategic Plan 2006 to 2010 (HRH-SP 2006-10) and significant achievements were made, though the shortages have continued. The total number of staff in the health sector increased from 23,176 in 2005 to 29,533 in 2009, representing 57% of the approved establishment of 51,414. This included the absorption of the former Central Board of Health (CBOH) staff in the new MOH establishment. Table 6 presents the trends in the numbers of health staff, against the approved establishment.

Table 6: Staffing situation from 2005 to 2009

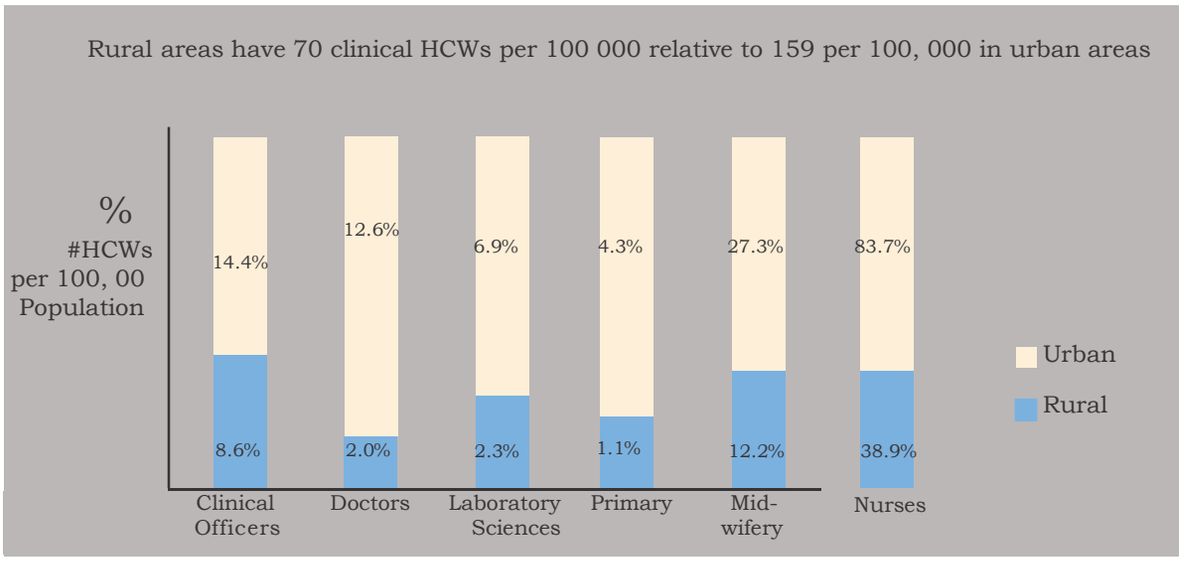
Staff Category	2005	2009	Recommended establishment	2005-2009 Var	2005-2009 %abs change	2009-rec var	2009-rec % gap
Clinical Officers	1161	1376	4,000	215	19%	-2,624	66%
Dental Surgeon	56	241	633	185	330%	-392	62%
Doctors	646	801	2,300	155	24%	-1,499	65%
Nutrition	65	112	200	47	72%	-88	44%
Lab Scientists	417	526	1,560	109	26%	-1,034	66%
Pharmacy	108	306	347	198	183%	-41	12%
Physiotherapy	86	191	300	105	122%	-109	36%
Radiography	142	226	233	84	59%	-7	3%
Midwives	2,273	2,374	5,600	101	4%	-3,226	58%
Nurses	6,096	7,123	16,732	1,027	17%	-9,609	57%
Environment Health	803	1,110	1,640	307	38%	-530	32%
Oral Health	320	773	5,815	453	142%	-5,042	87%
Total HCW	12,173	17,168	39,360	4,995	41%	-22,192	56%
Administration	11,003	12,365	12,054	1,362	12%	311	-3%
Overall total	23,176	29,533	51,414	6,357	27%	-21,881	43%

Source: Zambia: MOH

The available number of professional health workers in the health sector During the same period, the number of core health workers increased from 12,173 in 2005 to 17,168 in 2009, representing 44% of the establishment for such staff and a deficit of 22,201. The shortage cuts across all cadres, especially the professional health cadres: clinicians, nurses, pharmacy technologists, laboratory technologists, radiographers, physiotherapists and Environmental Health Technologists.

Given the average attrition rate from 2007 to 2009 of 4.27% per annum, this basically cancels out the average net gain of employees per annum. The low net increase has also been hampered by insufficient funds for net recruitments. Figure 5 presents an analysis of workloads comparisons between urban and rural areas.

Figure 5: Staff to Population Ratios, Rural Versus Urban Distribution



Source: MOH Payroll, January 2010; Central Statistical Office, 2009

The number of public sector Medical Officers, Medical Licentiates, Clinical Officers, Nurses and Midwives ("clinical HWs") as of December 2009 was 0.93 per 1,000 population. These numbers are skewed towards the urban areas, leaving the rural areas extremely vulnerable. Public Facilities in rural and remote areas have the lowest number of health workers, compared to urban areas. It is estimated that rural areas have seventy clinical HCWs per 100,000 population relative to 159 per 100,000 in urban areas. The situation is so severe that there are still a number of Health facilities in the rural areas, which are run by unqualified staff or only one qualified staff.

At community level, only 19% of Community Health Workers (CHWs) and 10% of trained Traditional Birth Attendants (tTBAs) are active in providing services within their communities. The situation is further compounded by the problem that private health facilities are mainly found in urban areas. Currently, there are less than 50% of clinical health workers available, against the approved establishment, leading to high workloads. Table 7 below presents staffing levels and staff population ratios for clinical health workers as at December 2009.

Table 7: Clinical staffing per 1000 pop as at December 2009

Cadre	Number[13]	Per 1000 pop[14]
Clinical officers	1,376	0.11
Medical Doctors	801	0.06
Medical Licentiates	34	0
Registered Midwife	643	0.05
Enrolled Midwife	1,731	0.14
Registered Nurses	1,913	0.15
Enrolled Nurses	5,210	0.42
Total	11,708	0.93

In order to address the inequitable distribution of health workers, MOH is implementing the Zambian Health Workers Retention Scheme (ZHWRS). The aim of this scheme is to attract and retain core health workers in the underserved rural and remote areas. Selected cadres of health workers are receiving a monthly retention allowance for the duration of the contract, as well as other non-monetary incentives. Even if this has led to an improvement in the distribution of health workers between the least deprived districts and others, it has not led to the worst-off category of districts getting the larger share of health workers under the support of the retention scheme, because the scheme is a voluntary one.

One of the major problems in the distribution of health staff is insufficient information. The MOH, the General Nursing Council (GNC) and the Health Professional Council of Zambia (HPCZ) have recognised the need for enhanced information systems and are all in the process of creating new and/or improving existing databases. Further, all positions of HR Officers in districts and provinces are now filled and should assist in ensuring that human resources management activities are performed to standard and that there are recommendations for more equitable distribution of core health workers in the health facilities within the rural areas.

Financing of the production and recruitment of additional health staff is crucial to matching the expansion of health facilities. The ability to produce trained health workers is limited by both finances and capacity of the training institutions. For example only 100 medical students are admitted to the University of Zambia – School of Medicine annually, and out of these, the student drop-out rate is about 30% and therefore the net gain of Medical Officers is between 55 and 67 per annum.

In order to alleviate the shortage of health workers, the concept of Community Health Workers (CHWs) has been considered. MOH has developed a CHW Strategy, in order to standardise the training and certification of this cadre, and to provide guidelines for the tasks and remuneration in order to ensure equity. Availability of funds to finance the recruitment of health workers is the factor that will determine the numbers of CHWs needed.

[13]Based on December 2009 PMEC
[14]Based on a population of 12,525,791 from http//www.statoids.com/yzm.html

Clean, Caring and Competent Environment at the Health Facility

3.5.3 Essential Pharmaceuticals & medical supplies

Pharmaceuticals are an essential component of the health system. The National Drug Policy (NDP) reflects government's commitment to addressing the issues affecting the Pharmaceutical Sector in a comprehensive manner. The NDP is currently under review, to respond to emerging issues and challenges in the Pharmaceutical Sector.

Over the past 5 years, the following major achievements were made. These included: the establishment of the Drug Supply Budget Line (DSBL) department; Two-year Framework Agreements were awarded, totalling over ZMK 80 billion, to both Zambian and international suppliers for essential medicines, health centre kits and community health worker kits; Significant investments were made in upgrading the Medical Stores Limited (MSL) infrastructure and drugs logistics systems; In 2009, a pilot project on improving the distribution of essential pharmaceuticals was implemented in the selected pilot districts. This project has provided valuable evidence on the most appropriate organisation of the supply chain; A "bottom-up" quantification method for pharmaceuticals was introduced, which provides necessary information for forecasting; and Zambia participated in the Medicines Transparency Alliance (MeTA) and Good Governance for Medicines (GGM), international multi-stakeholder initiatives to increase the transparency and accountability of the healthcare marketplace.

During the period from 2006 to 2008, the supply of essential drugs and medical supplies remained erratic. However during the last two years, 2009 and 2010, drug availability improved to over 80%. The emergence of new programmes, limitations in human resources, weak supply chain management at certain levels, growing demand on services, and lack of appreciation of the logistics function as a core activity in health delivery system, negatively affected performance in this area. Zambia is one of the least developed countries and a signatory to the International Property Rights and TRIPS, under the World

Trade Organisation (WTO). Under this arrangement, Zambia has the right to exercise the flexibilities e.g. compulsory licensing in order to have access to affordable medicines. However, the country is yet to formulate policies on accessing medicines through the TRIPS flexibilities.
In order to strengthen drugs logistics management, MOH established a Logistics Management Unit (LMU) at MSL, whose main responsibilities include managing all data reported from facilities, approving all regular and emergency orders and providing regular feedback reports to all levels of reporting.

The LMU has greatly contributed to the improvement in the Logistics Management Information System. However, there is still notable inadequate coordination in procurement of commodities by MOH and partners. Vertical programs have continued to run independent logistics systems, which call for integration. MSL is not adequately involved in the procurement and replenishment of stocks, which affects access to essential medicine and other commodities.

Irrational use of drugs and medical supplies has continued to be a major problem. Zambia has an established National Formulary Committee, whose mandate among others is that of ensuring adherence to the concept of Rational use of Medicines and other commodities. Drug and Therapeutic Committees (DTCs) are in place throughout the country at all levels, but have not been fully functional. While some of these structures exist, there is notable non-adherence to set standard guidelines. There is need to review the old DTC guidelines, activate the committees, and to train members of DTC's and prescribers at different levels on Rational Drug Use.

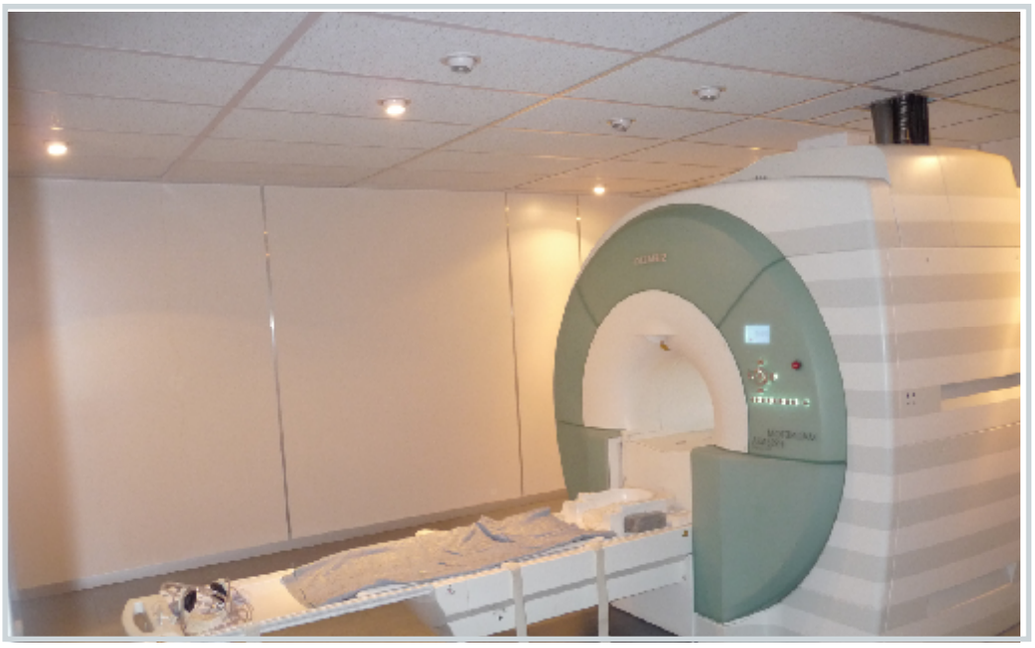
The establishment of the Pharmaceutical Regulatory Authority (PRA) is a strong commitment by government to improve regulatory environment for medicines and related substances. However, the absence of a National drug quality Control Laboratory has greatly affected the monitoring of quality and safety of products circulating on the Zambian market. This poses a serious risk to public health from substandard or counterfeit medicines and related products.

Current levels of funding are not sufficient to ensure full supply of all types of essential medicines and other commodities. Of the required annual amount to ensure full supply of commodities (excluding ARVs, Tuberculosis, Reproductive Health Commodities and ART's), estimated at around ZMK200 billion, only 60% of this amount has been made available annually. Though the Government of the Republic of Zambia has prioritised the national response to HIV and AIDS and has steadily funded interventions, including the provision of free ARVs, the national response is mainly funded by bilateral, multilateral and Global Health Initiatives which is not financially sustainable. In this regard, there is need to explore other means of financing the ART program.

3.5.4 Medical Infrastructure & Equipment

Investments in health infrastructure and equipment have been insufficient, despite improved funding from the Ministry of Finance during the last 5 years. As a result, the country is still far away from meeting the policy objective of ensuring that the population has access to health facilities within a 5 km radius.

Health centre structures are not responding to new challenges in health service delivery such as HIV/AIDS, Maternal Health, and TB. Some of the challenges include inadequate space, fragmented services, cultural issues, standards etc. Notwithstanding the above, new programmes frequently require new equipment and infrastructure. In response to the need for increased access to health services, the Zambian Government has embarked on the construction and rehabilitation of a number of health facilities. New equipment is needed for these facilities as well as replacement of obsolete equipment in old facilities.



MRI equipment at Cancer Hospital

3.5.4.1 Infrastructure

In both rural and urban areas health infrastructure is inadequate. In rural areas 46% of households live outside a radius of 5 km from a health facility (compared to 1% in urban areas) making it difficult for many people to access the needed services. The main bottlenecks to physical accessibility include insufficient or inappropriate infrastructure; ; inaccessibility due to geographic factors; sparsely distributed population in rural areas; inadequate resources for outreach (fuel, vehicle, bicycle, motor-bike, boats); and poor scheduling of services leading to missed opportunities.

Sector infrastructure does not only include public health facilities but also private facilities which have significantly increased in number over the last decade in urban areas. The existing health facilities per region and ownership are shown on Table 2, which indicates that there were 1,882 health facilities (public, private-not-for-profit, and private-for-profit) in Zambia in the year 2010. Provincial comparisons show that, Lusaka Province had the highest number at 279 health facilities followed by Southern at 254, and Copperbelt at 235. Luapula province had the lowest number of health facilities in the country at 142.

In 2006, MOH conducted a health facility census and the data from this mapping exercise was used to develop an infrastructure database and capital investment plan for Equipment and Infrastructure. The plan outlined major infrastructure projects to be undertaken covering health facilities, construction of training institutions, offices and staff houses. Development of infrastructure is undertaken on the basis of this plan and is being implemented with priority for underserved rural areas. However, full implementation of the Capital Investment Plan will take time due to financial constraints. Further, the operationalisation of the new health facilities has been constrained by the limitation in health professionals and other resources. During the NHSP 2006-2010, infrastructure planning and development was not adequately integrated with key drivers of quality health services delivery such as staff and basic medical equipment for the appropriate level of service provision. This lack of proper balancing further worsened the human resource challenges. In this regard, as of end 2010, over 360 Health facilities could not be commissioned and opened due to lack of staff, staff accommodation, medical equipment and furniture.

The pace of implementing the health capital investment plan is also compromised by a number of factors including inadequate funding toward infrastructure development, inadequate support in monitoring and management of health construction projects, and inadequate infrastructure staff to manage construction projects and contracts.

Over the past 5 years, the main achievements included the placement of infrastructure officers in all the provinces except for Lusaka province, general increase in the number of facilities constructed or rehabilitated following the relatively increased funding towards infrastructure development. Under the last strategic plan 42 Health Posts, 89 Health Centres, 18 District Hospitals, seventy staff houses were built in addition to carrying out rehabilitation of a number of health facilities. As part of further support to the sector, the Ministry is implementing the health capital investment support project which is being piloted in three provinces to address management of physical capital assets and the development of standards and guidelines for maintenance of physical infrastructure. Additional funds are also required not only for putting up of new health infrastructure, but also completion of incomplete Hospitals and rehabilitation and maintenance. In view of the above the sector will prioritise, among others, construction of a National Drug Quality Control Laboratory, public health laboratory, medical Laboratories, Drug storage facilities, Tropical Disease Research Centre, second public medical school, and more training institutions.

3.5.4.2 Medical Equipment

The quality, efficiency and effectiveness of health service delivery are determined and dependent on the availability of appropriate Health Care Technology (Medical equipment) in appropriate quantities and varieties. It is further desirable that this Health Care Technology is kept in functional order most of the time as non functioning equipment does not contribute to service delivery. The list of essential equipment and accessories has already been defined for the health post, health centre and level 1 referral

hospitals, development of lists for the level 2 and 3 referral hospitals is yet to be done. Equipment Database was established in 2007 through the HFC. Equipment maintenance officers are part of the establishment at Provincial level.

MOH has taken very serious interest in acquiring Health Care Technology (Medical equipment) in the country. The development of the Health of Standard Equipment Lists for District Facilities (HP, HC, and LLIH) has helped in enhancing and improving planning. MOH has also put on the establishment maintenance officers for medical equipment, albeit at provincial level only for now. The commencement of the capital investment project which will among others develop maintenance and management systems for equipment and infrastructure is very timely.

Currently, there is a critical shortage of key equipment in most of our hospitals which is hampering provision of quality critical services in level 2 and 3 hospitals. Laundry and kitchen equipment in most of our hospitals have deteriorated to very unacceptable levels and need to be replaced. Theatre and Anaesthesia, maternity, CSSD and general bedside nursing equipment are also in dire need of replacement in most of our hospitals. There are currently seven (07) level 1 hospitals, thirty eight (38) health centres and one hundred and thirty five (135) health posts that have been completed but cannot be commissioned due to lack of equipment among other inputs.

CT scan examination

The Government also faces a lot of challenges in management and maintenance of Health Care Technology due to lack of properly qualified maintenance personnel leading to a good number of equipment not in functional order. This is partly due to poor and unattractive conditions of service which makes it difficult to recruit and retain engineers and partly due to inadequate budgets allocated for maintenance of hospital

equipment. There is also lack of capacity in the local private sector to support sustenance of Health Care Technology in our Hospitals. Other challenges include the need to develop criteria to determine human resource needs for equipment management and maintenance at hospital level, the need to develop appropriate maintenance facilities with appropriate tools, test and calibration equipment, develop and implement systems for equipment maintenance and management.

3.5.4.3 Transport and Storage

Optimal provision of health services requires the existence of an efficient transport system including ambulances for patients, vehicles for the distribution of medicines and supplies and for managerial and the supervision purposes. Currently, the transport system is inefficient and inadequate. The maintenance system is poor and there is inadequate air, marine and land transport for outreach and referral services. There is inadequate ambulance with patient care facilities. Capacity for vehicle transport management and maintenance is still very limited. The Ministry has however expended a lot of effort in improving the transport situation as demonstrated in the procurement of vehicles, motorbikes and boats for districts, hospitals and training institution.

A strategy for maintenance and replacement of vehicles is needed, as well as guidelines and capacity building for preventive maintenance to ensure that through better care for equipment and means of transport their lifespan is extended. The Ministry of health will require strengthening provincial maintenance workshops to ensure better care for government vehicles and provide more supervision to enhance adherence to maintenance protocols.

3.5.4.4 Information & Communications Technologies (ICTs)

In the health sector, ICTs have been recognised internationally and by the Government to be of strategic importance as it facilitates the sharing of health data, information and resources between different stakeholders and the delivery of appropriate services to the population. ICT mainstreaming in health care delivery will facilitate the implementation of the NHSP and coordination of health information for planning and decision making as well as effective sharing of scarce resources for optimal health care delivery for all Zambians.

Currently, the main use of ICTs is for information aggregation and analysis, and for data processing. ICTs are also being used to support planning and accounting systems in the districts and hospitals. Gradually access to internet has been created for districts and hospitals and all the provincial medical offices are fully connected to the broadband Internet. However, the systems are weakened by poor maintenance of computers and network infrastructures, as well as lack of data storage, recovery and security management. There is no good storage and back-up policy leading to loss of critical information. Opportunities for web-based communication and collaboration are insufficiently used.

3.5.5 Health Information and Research

3.5.5.1 Overview

Zambia has developed a well integrated health information system providing information for evidence based planning, within the health sector. This system comprises both routine and non-routine information sources, institutionalised among the various players within the health sector and coordinated as part of the national monitoring and evaluation framework. The GRZ with the support of its CPs has over the years facilitated the development and strengthening of the health information system at different levels of the health system.

To better understand the drivers of the diseases burden, incidence and strategies to tackle there is also an urgent need to promote research in the country. Little research has been conducted in Zambia on how these many challenges are affecting the poorest people and how known tools and strategies can be adapted, or new ones created, to meet local conditions and make best use of available resources.

Evidence-based decision-making is the most rational and professional approach to attaining positive health outcomes. Without effective evidence based health interventions, it is impossible to achieve the national health targets and millennium development goals (MDGs).

3.5.5.2 Routine Sources of Health Information

The routine data sources include; the HMIS, the Integrated Diseases Surveillance and Response (IDSR), the Human Resource Information System (HRIS), Drug and Logistics Management Information System (DLMIS) and the Financial and Administrative Management Information System (FAMS). However, the main source of routine health information is the facility based Health Management Information System (HMIS). The HMIS was designed in 1996 under the context of health sector reforms in order to provide efficient and effective support to the planning, monitoring and evaluation of health care services.

The HMIS underwent a revision in 2008, which enabled the incorporation of facility indicators to monitor progress of health targets, and as a result of this, a new software, District Health Information System (DHIS) was developed. The DHIS has enhanced capabilities in terms of the number of data elements that can be captured, analyses that can be performed and reports that can be generated. The level of data disaggregation has also been greatly improved in the new software. Zambia has also developed an electronic health record system to capture and store individual patient record in 2005, the Smart-Care system. The system captures data on ART, TB, VCT & PMTCT, and is operational in 552 health facilities as at October 2010. The system has a drug and logistic component and feeds into HMIS and a national patient data base while protecting confidentiality. The system runs on both electronic and paper version in some facilities. Scale-up is still ongoing and opportunities for expanding the services captured by the system are actively being explored.

3.5.5.3 Non Routine Sources of Health Information

Non routine sources of health information include population based and household surveys, antenatal sentinel surveillance as well as health systems assessments and surveys (including service provision assessments and health facility censuses). Among the key non-routine sources of health information are the Zambia Demographic and Health Survey (ZDHS), the Living Conditions Monitoring Survey (LCMS), the Zambia Sexual Behavior Survey (ZSBS), the Zambia HIV/AIDS Service Assessment (ZSPA), the Malaria Indicator Survey (MIS). Other sources of information for health information include annual planning processes, joint annual reviews, performance assessments reviews and programme progress reports, the Health Facility Census (HFC), surveillance of causes of deaths, and the national census of population and housing.

3.5.5.4 Health Research

Research has in recent years received a fair amount of attention but a number challenges still need addressing. The Health Research Policy which outlines various aspects of health research including bioethics, priority setting, coordination, dissemination, data protection, financing was approved in June 2010. The implementation of the health research policy has however been hampered by the absence of a comprehensive legal framework to provide for health research involving live human participants and other factors outlined in the research policy. To address this legal gap, a draft health research bill has been developed and is pending enactment by parliament. The bill will also provide a legal mandate for the research ethics committee and outlines code of conduct for researchers.

Financing for health research form central government needs to be improved in line with the health research priorities which have been defined for 2011-2013. The other funding arrangements from partners sometimes are not aligned to the information gaps required by MOH to meet its health vision. Infrastructure and human resource for the conduct for research and development remains limited.

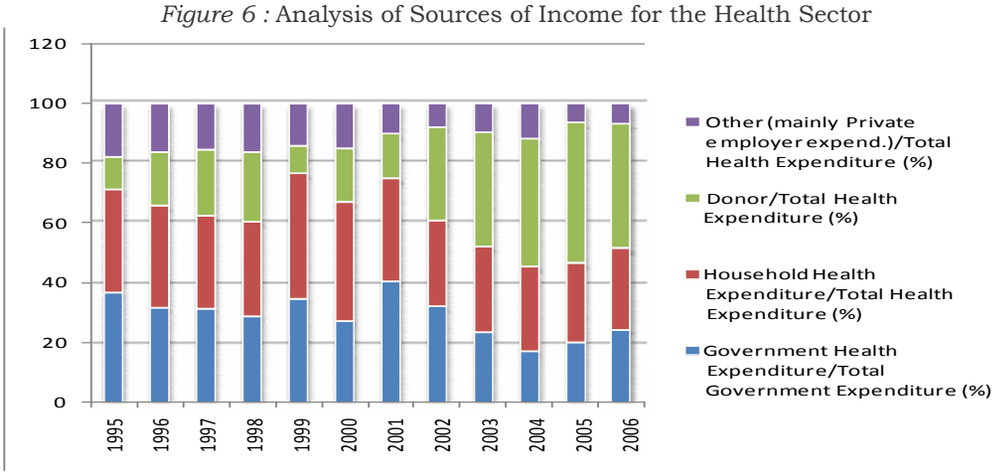
The monitoring of approved research activities needs to be intensified to ensure adherence to standards sets out in the ethics guidelines including regulated transfer of biological materials. Inadequate internet facilities in health research institutions in Zambia results into reduced access to internet facilities with the result that they miss out on latest information on various scientific websites.

3.5.6 Healthcare Financing

Despite improvements in nominal allocations by government to the health budget, the resource envelope is still far below the minimum required for the delivery of an optimum package of health care. Over the years, there have been massive increases in the flow of funds to the health sector, mainly in support of vertical programs such as HIV/AIDS, Malaria and TB. The effect of such flows has been the reduction in the share of government expenditure in the total health expenditure and an increase in the donor component. Such funds are, however, rigid and unpredictable and may not be moved to other priority areas, less favored by donors.

Figure 6 shows that in 2006 the major source of funding for the health sector was external support, followed by households, government public expenditure and other sources, including private sector schemes.

Figure 6 : Analysis of Sources of Income for the Health Sector



The variance between approved budgets and actual expenditures has gone down, leading to better budget performance. In tandem to this, the release of funds from MOH headquarters to the districts and hospitals has also dramatically improved this being one of the PAF indicators.

The MOH has established the SWAp mechanism to coordinate donor support to the sector. As part of the SWAp, some donors have agreed to pool funds in a health sector basket to fund jointly agreed upon health plans. A number of challenges however have remained with a number of key partners funding vertical programs. The view of government has been that such vertical and parallel programmes/projects can undermine the health system, especially if not properly integrated into the SWAp framework.

The major challenges with regard to heal care fining include the lack of an approved Healthcare Financing Policy, lack of defined Resource Allocation Formula (RAF) for some levels of care, non-completion of implementation of the Social Health Insurance scheme, and the weak harmonisation of the various sources of funding. Major opportunities for sector financing include, advocacy for more funding from the treasury, stronger partnerships with the international community, implementation of the Social Health Insurance scheme, strengthening the coordination and harmonisation of partners' support, based on the principles of the International Health Partnerships and related initiatives (IHP+), and promotion of private sector participation, including the PPP initiatives.

3.5.6.1 Domestic Funding

Government spending on health accounts for 60% of total public health sector funds. This represents 10.7% of the central government discretionary budget or 8.5% of the total national budget, which is way below the Abuja Target of 15%. As a percentage of the Gross Domestic Product (GDP), health care spending represents between 5.4% to 6.6%, which translate to approximately US$ 28 per capita. Other sources of health care financing include user fees, which until the introduction of the User Fees Removal Policy for rural and peri-urban areas in 2006 represented about 4% of total health care financing. User fees are a source of flexible financing for major hospitals like the University Teaching Hospital (UTH), Ndola and Kitwe Central Hospitals. Government also collects an earmarked 1% tax

on interest earnings, which contributes about ZMK8 billion to the Health Sector basket annually.

For the vast majority of the population there are no prepayment schemes, leading to high out of pocket expenditures on health care. It is important to note that there are some pre-payment arrangements in Zambia, with employer and private insurance schemes. However, it has been observed that private health insurance is not working well, due to lack of a guiding health care financing policy and adequate market regulation.

3.5.6.2 External Funding for Health

During the period under review, above 40% of total health expenditure comes from various cooperating partners. However, some key cooperating partners have moved from the sector and therefore the need to seek support from other partners.

The Global Fund to Fight AIDS, TB and Malaria (GFATM) has been a major source of financing for HIV and AIDS, TB and malaria, including areas of health commodities, medicines, human resources, and other inputs. Another major source of external funding for HIV and AIDS and malaria programs has been the US Government, through its PEPFAR programme. The UN Family has also supported the health sector in form of technical and financial assistance.

3.5.6.3 Allocation of Funds

In 2003, MOH developed an objective resource allocation criteria for districts, which takes into account both the population level and degree of deprivation of various districts. This formula was updated in 2009, to further promote the equity goal in resource allocation by including key cost drivers not previously factored in. However, the formula does not take into account the costs of providing services associated with factors, such as land terrain, district size, and the use of marine transport. In addition, MOH does not have objective resource allocation formulas between levels of care and for the 2nd and 3rd levels of care and statutory bodies. A study to develop an allocation criteria between levels has however been commissioned. A strong resource tracking mechanism is also required, that could build upon and strengthen existing systems such as National Health Accounts (NHA), Public Expenditure Tracking (PETS) and Household Health Expenditure Surveys.

3.5.7 Leadership and Governance

Good leadership and governance provides vision and policy direction and ensures efficiency, effectiveness and promotes equity in use of resources, in order to achieve set goals and objectives. Governance is analysed based on a framework Developed within the IHP+ collaboration and is structured around the principles of participation and consensus; regulation; transparency; equity, effectiveness and efficiency; accountability and ethics.

3.5.7.1 Policy Guidance

National Health Policy: The overall health policy was developed in 1992, the National Health Policies and Strategies of 1992 (NHP&S-1992), with the vision to develop a health care system that provides Zambians with equity of access to effective quality health care as close to the family as possible, through the Primary Health Care Strategy. The policy advocates for decentralisation to the districts and promotes peoples' power in health care through popular representation on area-specific health management boards, thus creating a health care system that is responsive to local and national interests and needs. In order to operationalise the Policy, in 1995, through the Health Services Act 1995, the Central Board of Health (CBOH) was established to be responsible for implementation of health services, while the MOH was responsible for policy, financing and regulation.

However, following 10 years of implementation, the Act was repealed in 2006, leading to the abolition of the CBOH structures and creation of a unified four-tier health system under the MOH. The four levels include: the MOH Head Office at the Centre, responsible for policy guidance and oversight, regulation and defining standards; the Provincial Health Offices (PHOs), responsible for coordination, monitoring, technical supportive supervision, and quality assurance and performance management at provincial level; the District Health Offices (DHOs) at district level, as the focal point for services delivery, providing supervision, coordination, planning and management support to Health Posts, Health Centres and 1st level hospitals; and the health service delivery facilities, which are the backbone of the system, providing "treatment and care services" to the general population. It is recognised that the NHP&S-1992 is old and needs replacement with a new comprehensive and up to date overall health policy. This process was commenced in 2010.

The Decentralisation Policy: In 2003, the Government launched the National Decentralisation Policy, which aims at devolving specified functions and authority, with matching resources, to local authorities at district level. Under this environment, the role of the centre would be to provide policy, strategic guidelines, overall coordination, monitoring and evaluation while implementation and supervision of the programmes would be through the local authorities. The Decentralisation Implementation Plan was approved by the Cabinet in late 2009, and the country is heading towards a full-scale devolution.

Other policies: Apart from the NHP&S-1992, a number of health programme policies and strategies (such as child health policy, reproductive health policy, HIV and a defined Basic Health Care Package (BHCP) have been developed over the last 15 years. However, their status of implementation are at different level. A strategy for community health workers is currently under development.

3.5.7.2 Legal Framework

Since 2005, the National Health Service Act of 1995 was repealed to pave way for the dissolution of the CBOH and restructuring of the health sector. However, since that time, this Act has not been replaced, presenting a major gap.

3.5.7.3 Partnerships and Coordination

MOH has adopted the Sector Wide Approach (SWAp) to sector coordination, where the CPs are requested to align their support to the national health sector priorities as specified in the NHSP. The current overall framework for partnership coordination was agreed upon in a 2006 Memorandum of Understanding (MOU 2006) between MOH and the CPs. The existing coordination structures in the health sector are also in line with the broader structures developed in the Joint Assistance Strategy for Zambia and in harmony with the overall national planning framework.

Since 2009, following Government's disclosure of corruption in the health sector, the partnerships with CPs have suffered weakening. Most partners suspended their financial support to the sector basket, which has continued to negatively affect the financing and performance of the sector. This also affected the signing of the addendum to the MOU, which sought to strengthen harmonisation and coordination, by aligning the MOU to the International Health Partnerships and related initiatives (IHP+). There is need for further strengthening of policy dialogue and partnerships with the CPs and other partners, particularly the civil society.

3.5.7.4 Equity

A key principle governing provision of health services in Zambia is equity. Zambia has fared relatively well in promoting equity in areas, such as antenatal care, immunisation, management of childhood illnesses, though some key equity concerns still remain. Health services like attended deliveries, contraceptive use, HIV testing, and indoor residual spraying favour the rich and urban populations. Even distribution of health facilities and health workers is skewed to the urban areas.

From the resource allocation perspective of equity, the government has implemented a number of measures aimed at distributing health resources more equitably, including: the resource allocation criteria for district health grants; and the retention scheme for health workers. . However, overall the district grant formula only affects about 20% of the MOH budget and specifically recurrent expenditure for districts. Further, even though the staff retention scheme has led to an improved the distribution of health workers, it has not led to the worst-off category of districts getting the largest share of health workers under the support of the retention scheme.

In 2006, the Government introduced the User Fees Removal Policy for rural and peri-urban areas, in order to increase access to health services. Evidence on the he removal of user fees in rural and peri-urban areas has shown that this policy shift resulted in increased utilisation of health

services, though undermined by the impact of the shortages of drugs and human resources. However, this pro-poor policy shift has not benefited the urban poor, who still need to pay fees before accessing health services. One major weakness is the poor or insignificant targeting of poor or underprivileged households. However, there are some promising initiatives ongoing, such as (i) the participatory reflection and action methods tested in four districts, and (ii) the Social Cash Transfer Scheme administered by the Public Welfare Assistance Scheme.

3.5.7.5 Transparency and Access to Information

At the national level, plans and budgets are prepared and discussed in consultative processes. Basket financing reports etc are also disseminated through the SWAp structures. Auditing is done according to overall Government structures and procedures, which have been criticised for being lengthy and cumbersome, making the final audit report almost irrelevant once it is published. At district and community levels, the health sector has established structures for participation of stakeholder at all levels, which include Village Health Committees, committees at health facilities and District Health Boards. As part of the restructuring, the District Health Boards were dissolved and replaced with advisory committees.

3.5.7.6 Responsiveness of Institutions

At the local level, village health and health facility committees do provide an opportunity to capture views and sentiments from the community. However, there are no mechanisms and tools, such as client satisfaction surveys, exit interviews etc., that are institutionalised to assess client satisfaction with health care provision. Thus an area that requires more effort is to live up to people's expectations on the health system. The performance assessment programme could, if redesigned, provide a framework for pursuing this agenda.

3.5.7.7 Accountability

The allegations of financial mismanagement that transpired in 2009 exposed significant weaknesses in the fiduciary systems particularly in the financial management and procurement systems. As a response to these developments, the sector with the support of the wider Government structures and Cooperating Partners developed a Governance Action Plan to address the weaknesses which were disclosed. It is expected that an action plan based on the recommendation of the systems audit which is part of the Governance Action Plan will provide further guidance on how to strengthen fiduciary structures and systems based on mutual accountability.

3.5.7.8 Monitoring and Evaluation

To ensure value for money and pursuing the result oriented approach, strengthening monitoring and evaluation is key, including continuing quality assessment. The following processes are currently implemented

for monitoring and evaluation of the sector: Quarterly progress reports; Performance Assessments; Joint Annual Reviews; and mid-term review and final evaluation of the implementation of the strategic plan. The implementation of the strategic plan is assessed through a midterm review and a final evaluation. The mid-term review and final evaluation are intended to feed into both the implementation process and the design of futuristic plans. The current M & E system relies both on routine and non-routine information sources institutionalised among the various players within the health sector, both private and public. They need to be well coordinated as part of the national monitoring and evaluation framework.

3.5.8 Performance Against the MDGs

During the period under review, significant efforts were made towards meeting the health related MDGs. Table 8 presents the trends for the key MDG health related indicators.

Table 8: Zambia: Selected Impact/MDG Indicators

Indicator		MDGs Targets	ZDHS92	ZDHS96	ZDHS02	ZDHS07
Under 5 Mortality Rate (U5MR)	Per 1000 Live Births	63	191	197	168	119
Infant Mortality Rate	Per 1000 Live Births	36	107	109	95	70
Maternal Mortality Rate	Per 100000 Live Births	162	N/A	649	729	591
Adult Mortality Rate	Per 1000 Population		N/A	10.9	14.1	12.5
HIV Prevalence in adults aged 15-49 years	%				16.1	14.3
TB Cure rate	%	85				86
TB Case Detection Rate	%	70				404
Malaria Incidence Rate	Per 1000 Population	<121	255		388	

Source: Zambia Demographic Health Survey 2001/02 and 2007

3.6 Strengths, Weaknesses, Opportunities and threats

This section presents an analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the health sector.

3.6.1 Service Delivery

S/N	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Defined packages of healthcare, based on the Basic Health Care Package. • Defined structures for decentralised management and supervision. • Improved access through on-going expansions and improvements in the distribution of health infrastructure. • Good coverage of key health interventions, (immunisation, Vitamin A, PMTCT, HIV and AIDS, ART, malaria, TB, School Health and Nutrition). • Increased attention to NCDs, Neglected Tropical Diseases and adolescent health. • Improvements in the availability, and distribution frontline health workers. • Strengthening of mobile services, through the acquisition of mobile hospitals. • Strong support from health service and statutory boards • Improvements in M&E support.	• Inadequate and inequitable distribution of health infrastructure, equipment and transport, and weak maintenance. • Shortages and inequitable distribution of frontline health workers: urban Vs rural, geographical, and skills distribution. • Erratic supply of essential medicines and medical supplies. • Weaknesses in coordination among departments and programmes. • Weak referral systems, with impact on continuity of care. • Inadequate numbers of specialist Medical Practitioners. • Lack of appropriate CHW strategy	• Reductions in the incidence and prevalence of major communicable diseases, including malaria, HIV, TB and STIs • Reductions in maternal, under-five and infant mortalities. • Decentralisation policy could provide opportunities for stronger multi-sector planning and implementation, especially for prevention programmes. • Strong partnerships with the communities, CHAZ, cooperating partners and civil society, particularly in major health programmes. • Private financing for high quality care. • Public private partnerships in development of care programmes. • Inter-sector health related programmes. • Telemedicine and other new technologies for health.	• The burden of major communicable diseases, including malaria, HIV, TB, STIs, is still unacceptably high. • Significant increases in the burden of NCDs: mental problems, hypertension, diabetes, cancer and others. • Worsening determinants of health and implications of climate change. • Changing disease patterns, with emerging and re-emerging diseases-increase in NCDs. • High internal and external brain drain. • Weak inter-sectoral linkages. • Dwindling support from cooperating partners. • Weak cross-border public health activities/ interventions. • Weak regulation of traditional and alternative health services. • Limited confidence in quality among clients.

3.6.2 Health Workforce

1.	HR Recruitment and Management			
S/N	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Completion of the restructuring of the health sector. • On-going improvements in the numbers of health workers. • On-going efforts towards improving equity and skills-mix distribution. • Scaled-up Health Worker Retention Scheme, with Government taking up an increasingly role in its financing. • Improved HR management capacities, through recruitment and orientation of more HR staff. • Development of HRH Strategic Plan 2011-15. • Active HRH Technical Working Group (HR-TWG), platform for joint coordination and monitoring.	• Continued shortages of qualified health workers at all levels, especially mid-wives. • Inequitable distribution of health workers, often skewed towards urban and more attractive areas. • Unattractive terms and conditions of service for health workers: poor remuneration; poor working environment; and inadequate housing/ housing allowances. • Weak enforcement of the bonding mechanism for graduating workers. • Lack of an appropriate staff performance management system. • Lack of a harmonised database to report on HRH in both the public and private sectors.	• Political will to address the HRH crisis. Government approved the expanded MOH staff establishment. • Government commitment to increase funded positions annually. • Development of the Community Health Worker strategy to guide the implementation of the policy	• The restriction that the overall public wage bill PE/GDP ratio puts on expanding public sector staff. • High attrition of health workers to private sector and donor funded projects, and abroad. • Inadequate funding and uncertainties concerning Cooperating Partners' support to HRH strengthening, particularly the health worker retention scheme. • Inadequate alignment in terms of management of technical assistance for human resource for health.
2.	HR Training and Development			
	• Expansion of capacities at health training institutions. • National Training Operational Plan developed, to support scaling up of production of health workers.	• Inadequate investments in expansion of capacities at training institutions. • Shortages of teaching staff and unattractive conditions of service. • Inadequate training aids, models, study materials and ICTs. • Inadequate management development programmes.	• Increased private sector investment in establishing health training facilities. • High potential for Public-Private-Partnerships (PPP).	• Weak coordination of trainings being carried out by the various partners (duplications, and deviating health workers from performing their routine activities. • Inadequate funding to health training institutions.

3.6.3 Medical Products, Vaccines, Infrastructure and Transport

1.	Essential Medicines and Medical Supplies			
	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Appropriate pharmaceutical policies and regulations are in place. • Strong Drug Supply Budget Line system. • Improved disbursement of funds from MOFNP to MOH, for procurement of medicines and medical supplies. • Strengthened the distribution and logistics management systems. • Piloted new models of drugs supply logistics systems in selected districts that are yielding good results. • Training of health personnel (pre and in-service) on logistics management. • MOH is a member, and chairs the health sub-committee of the National Committee on IP and TRIPS. • Recently conducted a Procurement Systems Audit.	• Insufficient integration of the logistics system. • Inadequate staff trained in Logistics management. • Limited storage capacity at central and district levels. • Limited supervision of staff involved in logistics at certain levels. • Poor communication in the supply chain. • National Drug Policy not implemented in full. • Ineffective NFC and DTCs contributes to irrational use of medicines. • Lack of instruments at MoH to exercise flexibilities. • Lack of strong local pharmaceutical manufacturing industry.	• Availability of financial and technical support from partners towards commodity security. • Growing recognition of the concept of commodity security. • Mechanisms to finance strategic commodities, such as ARVs are available. • Improve visibility and coordination on procurement of essential medicine by all health stakeholders. • Zambia's position on Patents Acts is well established and shared with pharmaceutical companies both local and international.	• Over-dependence on donor funding of the drugs budget, especially for the ARVs. • High drug prices on the international market, coupled with MOH inability to negotiate better pricing. • The requirements to apply Patents Law by countries such as India will remain in force till 2016, after which production of generic drugs will cease as India applies the Patent Laws.
2.	Medical Infrastructure			
	• Availability of good infrastructure planning framework: Capital Investment Plan (CIP), annual infrastructure operational plans and Health Facility Census database. • Existence of budget line for Infrastructure Development and management. • Availability of infrastructure planners at the HQ and provincial levels.	• Low levels and volume of funding toward infrastructure. • Inadequate staff to manage construction projects and contracts. • Limited capacity to monitor and manage health construction projects. • Lack of operationalisation of the infrastructure database. • Inadequate integrated planning for infrastructure, human resource and equipment.	• Political will to implement infrastructure projects. • Existence of the Health Capital Investment support Project for management of infrastructure. • Political will to implement infrastructure projects. • Decentralisation implementation Plan. (DIP). • Support from CPs towards infrastructure development.	• Unclear devolution process in the DIP. • Sparse distribution of the population.

3.	Medical Equipment			
	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Availability of Standard Equipment List for Level 1 facilities. • Existence of budget line for equipment. • Upgraded equipment through the ORET project. • Procured MRI and CT Scan at CDH. • Entered into service contracts for major equipment. • Introduced the position of medical equipment maintenance officers in the new MOH staffing structure.	• Lack of management policy/standards for medical equipment. • A lot of health facilities have been constructed but remain unutilised because of lack of equipment. • Inadequate funding for high-end technology acquisition. • Maintenance problems: shortage of maintenance officers, lack of maintenance workshops at hospital level, and inadequate funding.	• Political will to address equipment issues. • Reduction in external costs for equipment maintenance and for specialised care abroad. • Potential for production of maintenance officers at NORTEC. • Availability of equipment in private facilities. • Support from CPs.	• Limited choices on sourcing of equipments and spare parts. • Limited capacity to negotiate with manufacturers on pricing of equipment. • High operational and maintenance costs.
4.	Transport			
	• Existence of budget line for transport. • Availability of vehicle service workshops in the provinces. • Availability of fleet management database.	• Inadequate capacity for transport management. • Limited budgets for maintenance of vehicles. • Badly equipped vehicle maintenance workshops.	• Situation analysis Report on the status of transport is available. Includes appropriate recommendations. • JICA Infrastructure management project.	• Poor state of road networks threatening life spans of vehicles. • High cost of spare parts for motor vehicles and other types of transport.
5	Information and Communication Technologies (ICTS)			
	• Draft health sector ICT policy and Health Information Systems Strategic Plan (HIS-SP). • Significant investment in ICTs, particularly to support the HMIS, SmartCare and Administrative and Financial Management systems. • Availability of some ICT trained staff. • General appreciation of ICTs appreciation across the sector	• Inadequate ICTs infrastructure and networks at provincial and district levels of the health system. • Lack of standardisation of ICTs. • Shortages of ICTs staff, particularly at provincial and district level. • Limited skills among users to exploit ICT to its full potential. • Outdated or missing radio communication systems in most of the health facilities.	• Availability of a National ICT Policy. • Availability of the Communications Act. • Continued CPs support.	• Over-reliance on donor support. • Inadequate funding for ICTs procurement and maintenance.

3.6.4 Health Information

S/N	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Established system of routine and non-routine systems for capturing and management of health information, including HMIS, IDSR, ZDHS, and others. • Reviewed and installed a new comprehensive and robust HMIS for capturing health information, including: new HMIS to support planning, monitoring and evaluation of health services. • Developed pre- and in-service curricula on the HMIS.	• New HMIS is not yet functioning optimally. There challenges in respect of scope of coverage, timeliness and completeness of reports etc. • Limited coverage and under utilisation of the SmartCare patient management system. • Low levels of computer literacy at facility level.	• Support from co-operating partners towards strengthening health information management. • Increased use of evidence and information in decision making and programme development. • Increased demand for information by stakeholders.	• The increasing parallel and vertical reporting systems. • Competing demands for resources, challenging priority surveys and censuses.

3.6.5 Health Financing

S/N	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Consistent increases in Government funding to the health sector. • Well defined resource allocation criteria for districts and training institutions. • Improved budget execution. • Equity oriented financing mechanisms (no user fees in rural areas). • Well developed sector coordination structures with health sector financing technical working group. • Significant progress on the process of establishing Social Health Insurance (SHI) in Zambia.	• No Health Care Financing policy. • Inadequate funding to the health sector (both domestic and external). • Weak coordination and harmonisation of external sources of funding. • Limited decentralisation beyond district level. • No reliable resource allocation criteria for 2nd and 3rd level hospitals. • Inequities in health care financing. • Weak tracking mechanisms for vertical funding.	• Government commitment to meet the Abuja Declaration of increasing health budget to 15% of total national budget. • Global sources of support, particularly the MDGs, GFATM, GAVI, PEPFAR, Malaria Presidential Initiative (MPI), CARMA, MUSKOKA, MACEPA, and Clinton Foundation. • Public Private Partnership (PPP) initiatives in providing health care and other services in the sector.	• Unpredictable donor funding. • On-going suspension of CPs support to the Sector Basket, due to governance challenges. • Inadequate funding to the Strategic priorities. • Dwindling private sector expenditure on health.

3.6.6 Leadership and Governance

S/N	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
	• Strong and consistent leadership of the sector from MOH. • Developed and institutionalised "Bottom-Up" planning system, encompassing all levels. • Presence of institutional structures for decentralised management and stakeholder participation at local levels. • Well developed Sector-Wide Approaches (SWAp) systems. • On-going restructuring of the service and regulatory statutory boards. • Conducted the procurement and financial systems reviews. • Governance Action Plan, jointly developed with the CPs and civil society, aimed at strengthening sector governance and accountability. • Strong and defined monitoring and evaluation systems (M&E). Jointly supervised with the sector partners, through SWAp Governance structures.	• Outdated overall national health policy, the "National Health Policies and Strategies of 1992". • Delayed replacement of the National Health Services Act of 1995, which was repealed in 2005. • Not very well elaborated structures for performance management. • Ineffective mechanisms for targeting the poor. • Fragile management structures due to the restructuring and significant replacement of staff at all levels. • Limited systems for participation of communities, CSOs, and NGOs in governance and financing of health care. • Weaknesses in the systems for and structures for promoting transparency, accountability and access to information.	• Health prioritised in the Vision 2030 and SNDP. • Political commitment to strengthen governance and accountability at national level, including IFMIS. MOH included in the IFMIS roll out programme. • Strong partnerships with the communities, CHAZ, CPs, and civil society. • Decentralisation Implementation Plan, which has potential to strengthen multi-sector coordination of health related issues at district level. • International support to harmonisation and alignment, particularly the International Health Partnership and Related Initiatives (IHP+). • Renewal of the MOU with CPs and civil society.	• Global financial crisis. • CPs and CSOs concerns over sector governance, transparency and accountability. • Lack of predictability of funding from the CPs. • Weak systems for coordination and harmonisation of sector support. • Weak linkages with other Government sectors/departments with mandates linked to health e.g. water and sanitation.

4 MISSION, VISION, GOALS AND PRIORITIES

4.1 Mission, Vision and Overall Goal

Mission Statement:	To provide equitable access to cost effective, quality health services as close to the family as possible
Vision:	A Nation of Healthy and Productive People
Overall Goal:	To improve the health status of people in Zambia in order to contribute to socio-economic development
Key Principles:	Primary Health Care (PHC) approach; Equity of access; Affordability; Cost-effectiveness; Accountability; Partnerships; Decentralisation and Leadership; and; clean, caring and competent envilronment

4.2 Key Principles

Primary Health Care (PHC) Approach: To consistently adhere to the PHC approach to organisation, management and control of the health service delivery systems, in line with the relevant World Health Assembly (WHA) declarations, as endorsed by the WHO African region at the Ouagadougou Declaration of 2008.

Equity of access: To ensure equitable access to healthcare services for all, regardless of their geographical location, gender, age, race, social, economic, cultural or political status.

Affordability: To ensure affordability of healthcare services to all, taking into account the socio-economic status of the people.

Cost-effectiveness: To ensure efficient and cost-effective delivery of healthcare services, always ensuring “Value for Money”.

Transparency and Accountability: To ensure highest standards of transparency in the

management of the health sector at all levels, and accountability for the actions taken, resources utilised and to the communities served at all levels.

Decentralisation: To further strengthen decentralisation of health service management and delivery, in line with the National Decentralisation Policy of 2003.

Partnerships: To continuously review and strengthen partnerships with all the main stakeholders, through stronger and effective coordination and harmonisation, in line with the relevant international protocols.

Gender Sensitivity: To ensure gender sensitivity and balancing in the management of the health system and delivery of health services at all levels.

Leadership: To ensure appropriate, visionary, efficient and effective leadership in the management and control of the health sector at all the levels.

Quality Health Care: To ensure provision of clean, caring and competent health services to our clients.

4.3 National Health Priorities

Table 9: Zambia: National Health Priorities 2011-2015

S/N	Priority Intervention/System	Objective/Main Targets
A.	Service Delivery - Public Health Priorities	
1.	Primary health care.	To provide cost-effective, quality and gender sensitive primary health care services to all as defined in the Basic Health Care Package.
2.	Maternal, neonatal and child health (MNCH).	To reduce U5MR from 119 per 1,000 live births in 2007 to 119 by 2015.
		To increase access to integrated reproductive health and family planning services and thereby, reduce Maternal Mortality Ratio (MMR) from 591 per 100,000 live births in 2007 to 159 by 2020.
		To mainstream the provision of comprehensive adolescent friendly health services at all levels, so as to reduce their vulnerability.
3.	Communicable diseases, particularly malaria, HIV and AIDS, STIs, TB and Neglected Tropical Diseases (NTDs).	To halt and reduce the incidence of malaria from 252 per 1000 population in 2010, to 75 by 2015, by targeting appropriate packages of interventions based on the identified malaria epidemiological zones.
		To halt and begin to reduce the spread of HIV/AIDS and STIs by increasing access to quality HIV/AIDS, STI and blood safety interventions.
		To halt and begin to reduce the spread of TB through effective interventions.
4.	Non-Communicable Diseases (NCDs).	To significantly strengthen national response to NCDs and consistently reduce the prevalence of these diseases
5.	Epidemics control and public health surveillance.	To significantly improve public health surveillance and control of epidemics, so as to reduce morbidity and mortality associated with epidemics.
6.	Environmental health and food safety.	To promote and improve hygiene and universal access to safe and adequate water, food safety and acceptable sanitation, with the aim of reducing the incidence of water and food borne diseases.
7.	Hospital referral services.	To increase access to and quality of advanced referral medical care services, including mobile outreach services, in order to ensure efficient and effective continuity of care.
B. Support Systems Priorities		
8.	Human Resources for Health (HRH).	To ensure equitable distribution of adequate, well motivated, committed and skilled professional workforce who will deliver cost effective quality health care services as close to the family as possible.
9.	Essential Pharmaceuticals and Medical Supplies:	To ensure availability of adequate, quality, efficacious, safe and affordable essential drugs and medical supplies at all levels, through effective procurement management and cooperation with pharmaceutical companies.
10.	Infrastructure and Equipment:	To improve on the availability, distribution and condition of essential infrastructure and equipment, in order to improve equity of access to essential health services.
11.	Health information: (HMIS, FAMS, Procurement and R&D)	To strengthen the integration and performance of health information systems and research, in order to provide for relevant, accurate and timely health information for evidence-based decision making.
12.	Leadership and governance: (Governance and Health Care Financing)	To strengthen leadership and governance systems, in order to ensure highest standards of transparency and accountability at all levels.

5 STRATEGIC DIRECTIONS

Collaborative visit with Cooperating Partners

5.1 HEALTH SERVICE DELIVERY

5.1.1 Overview

The scope of service delivery comprises promotive, preventive, curative and rehabilitation care, which are provided at various levels, from the community level, up to tertiary hospital level of care. This hierarchy also determines the structure of the referral system, aimed at ensuring continuum of care. The health sector in Zambia has a pyramid area based structure, with provision of basic health services in lower health facilities i.e. HPs and HCs, covering a limited geographical area, supported by the first, second and third level referral hospitals, through an established referral system.

5.1.2 Primary Health Services

5.1.2.1 Overview

The government's strategic direction is to provide quality and cost-effective health services, as close to the family as possible. The district health services will continue to be the key level in the provision of primary health care services to the communities, aimed at attaining the national health objectives and health related MDGs.

The district is where the formal health service delivery systems interface with the community, to support community-based services, and also interacts with other sectors, to address social determinants of health and cross-cutting health

issues, which are a major source of public health problems and epidemics. In this respect, the health facilities provide prevention, treatment and care for health conditions that include water and food borne diseases, such as cholera, dysentery and typhoid, and other health conditions such as malaria, pneumonia, cardiovascular disease, HIV and AIDS, cancer, and mental health problems.

While high impact interventions in key health programs are being implemented, aimed at reducing the disease burden, capacity constraints are presenting major challenges. In this respect, the key implementation bottlenecks include: inadequate and inequitable distribution of human resource for health service delivery at the primary level, both in numbers and in skills mix; poor integration and coordination of vertical programmes; inequitable geographical coverage of health services, especially in remote rural areas; and an ill-functioning referral system.

5.1.2.2 Overall Objective

To provide cost-effective, quality and gender sensitive primary health care services to all, as defined in the Basic Health Care Package.

5.1.2.3 Overall Key Strategies

1. Review the performance of primary health care systems, and carry-out a business process re-engineering, to improve health service delivery at this level.
2. Strengthen community support systems.
3. Promote household support to managing health and health care.
4. Develop capacities to provide single entry for counseling, diagnosis, treatment and follow up for HIV and TB patients in both out-patient and in-patient situations.
5. Ensure functional referral systems, both horizontally and vertically, including referrals between private and public health facilities.
6. Promote and ensure an integrated approach to staff capacity building programmes, especially at operational level, to facilitate coordination and harmonisation of support from various partners.

5.1.2.4 Integrated Reproductive Health

5.1.2.4.1 Objectives

- To reduce Maternal Mortality Ration (MMR) from 591 per 100000 live births in 2007 to 159 by 2015.
- To reduce Under-Five Mortality Rate (U5MR) from 119 per 1000 live births in 2007 to 63 by 2015.

5.1.2.4.2 Key Strategies

1. Strengthen Reproductive Health (RH):
   (i) Strengthen safe motherhood services, including: Family Planning (FP); Focused Antenatal Care (FANC); Post Natal and Newborn care; and Emergency Obstetrics and Newborn Care (EmONC).
   (ii) Strengthen and improve visibility of adolescent reproductive health services.
   (iii) Scale up and expand the coverage for Reproductive Health (RH)

services, including: FP, cancer of the cervix; Fistulae; Sexual and Gender based violence; and male reproductive health.

2. Strengthen the adolescent health programme:
   (i) Strengthen the adolescent health programme and improve its visibility (including adolescent sexual and reproductive health services).
   (ii) Develop and implement a comprehensive strategy for adolescent health.

3. Scale up the child health programme:
   (i) Scale up coverage of the Expanded Programme on Immunisation (EPI), care for the sick child and Emergency Triage Assessment and Treatment.
   (ii) Strengthen implementation of the Integrated Management of Child Illnesses (IMCI) strategy.
   (iii) Scale up infant and young child feeding services, including promotion of breastfeeding and complementary feeding after 6 months.
   (iv) Strengthen the School Health and Nutrition (SHN) Programme.

4. Strengthen response to cross-cutting issues:
   (i) Strengthen MNCH interventions through the CARMMAZ strategy
   (ii) Improve the availability of MNCH and nutrition commodities (e.g. FP commodities, vaccines, therapeutic feeds).
   (iii) Strengthen community involvement in MNCH and nutrition services.
   (iv) Mainstream nutrition in other key health sector interventions, such as maternal and adolescent health, HIV care, TB, IMCI and NCDs.

(v) Scale-up and sustain high impact nutrition interventions, such as micronutrients deficiency control (Vitamin A supplementation in under five children, iron-folate supplements to pregnant women and iodations of salt).
(vi) Provide comprehensive health promotion services in all programmes.
(vii) Strengthen operational research.

5.1.2.5 Malaria

5.1.2.5.1 Objectives

1. To halt and reduce the incidence of malaria from 252 per 1000 population in 2010, to 75 by 2015.
2. To reduce Malaria Case Fatality Rate among children below the age of 5 years from 38 per 1000 in 2008 to 20 by 2015.

5.1.2.5.2 Key Strategies

1. Scale up and direct high impact malaria prevention and treatment interventions, including IRS, ITNs, IPTp and case management, based on the identified 3 malaria epidemiological zones.

2. Strengthen monitoring of insecticide resistance to chemicals used in IRS and ITNs.
3. Strengthen malaria surveillance and response.
4. Build and extend malaria control operational strengths at provincial, district and community levels.
5. Strengthen partnership and performance management.

5.1.2.6 HIV and AIDS

5.1.2.6.1 Objectives

1. Reduce the spread of HIV and STIs, by scaling up and increasing access to high impact HIV and STIs prevention interventions.
2. Increase access to high quality curative and care services for people living with AIDS, in order to increase their quality of life and life expectancy.

5.1.2.6.2 Key Strategies

Implement the following strategies, within the scope of the national HIV/AIDS, TB and STIs Policy and strategic framework:

1. Strengthen and scale up diagnosis and prevention:
   (i) Scale up access to quality counseling and testing services at health facilities and at community level, across the country.
   (ii) Increase access to male circumcision services.
   (iii) Increase availability of both male and female condoms in public institutions.
   (iv) Strengthen prevention and management of Sexually Transmitted Infections.
   (v) Prevention of Mother-to-child transmission of HIV services.
   (vi) Strengthened systems for blood collection, screening, storage, and clinical use of blood and blood products.
2. Strengthen and scale up HIV and AIDS treatment, care, and support:
   (i) Increase access to and enrolment on ART, for both adults and children.
   (ii) Increase access to and uptake of paediatric HIV testing and treatment services.
   (iii) Improve adherence to treatment.
   (iv) Strengthen HIV drug resistance (HIVDR) surveillance.
   (v) Scale up systems for early identification and treatment of TB/HIV co-infections.
   (vi) Strengthen and increase access to community-and home-based care / palliative care.
3. Cross-cutting Interventions:
   (i) Improve GRZ funding for HIV and AIDS including the introduction of earmarked taxes to address the GAP in funding.
   (ii) Training of specialist cadres in HIV and AIDS.

5.1.2.7 Tuberculosis and Leprosy

[15]These objectives aligned to the Stop TB Strategy.

5.1.2.7.1 Objectives[15]

1. To detect at least 70% of the infectious TB cases.
2. To successfully treat 85% of the TB infectious cases detected.

5.1.2.7.2 Key Strategies

Based on the recommendations of the National TB Programme Review of 2010, the following will be the key strategies for this strategic plan:

1. Strengthen and expand high Quality Direct Observation Treatment Strategy, adhering to the five elements defined by WHO.
2. Aaddress TB/HIV, MDR TB and other challenges.
3. Target prisoners and other high risk groups with TB prevention and treatment.
4. Scale up TB case detection.
5. Strengthen infection control.
6. Contribute to health systems strengthening.
7. Engage all care providers.
8. Empower people and communities affected with TB.
9. Implement isoniazid preventive therapy for TB.
10. Further reduce the disease burden due to leprosy and sustain the provision of high-quality leprosy services for all affected communities.
11. Promote operational research.

5.1.2.8 Neglected Tropical Diseases

5.1.2.8.1 Objectives

To reduce the incidence and prevalence of the Neglected Tropical Diseases (NTDs) in Zambia.

5.1.2.8.2 Key Strategies

1. Strengthen mapping of neglected tropical diseases in Zambia.
2. Train health workers and teachers in clinical Management and preventive chemotherapy.
3. Mass drug administration against schistosomiasis, Soil Transmitted Helminths (STH) and lymphatic Filariasis.
4. Health promotion.
5. Coordination of drug procurement and distribution.
6. Conduct operational research.

5.1.2.9 Epidemics Control and Public Health Surveilance

5.1.2.9.1 Objective

To significantly improve public health surveillance and control of epidemics, in order to reduce morbidity and mortality associated with epidemics.

5.1.2.9.2 Key Strategies

1. Strengthen the country's capacity to conduct effective surveillance for both communicable and non-communicable diseases by:
   (i) Strengthening epidemic data management capacity.
   (ii) Strengthening laboratory capacity.
2. Strengthen the country's capacity to respond to and control epidemics by:

(i) Provision of logistical support necessary for surveillance, epidemic management and control.

3. Strengthen monitoring and evaluation of the surveillance system.

5.1.2.10 Non-Communicable Diseases (NCDs) and Mental Health

5.1.2.10.1 Objectives

To halt and begin to reverse the incidence and prevalence of NCDs including the improvement of mental health services throughout Zambia.

5.1.2.10.2 Key Strategies

Key strategies for NCDs such as heart diseases, stroke, cancers, diabetes, sickle cell anaemia, mental illnesses, epilepsy, injuries, asthma, oral health and nutritional conditions will be:

1. Conduct a situational analysis of NCDs and their social, behavioral, and political determinants.
2. Introduce and strengthen the reduction in the levels of exposure of individuals and the populations at large to the common modifiable risk factors for NCDs.
3. Strengthen overall delivery of mental health services and in particular the integration of mental health at primary care level.
4. Strengthen and scale up screening programmes for NCDs.
5. Strengthen the health system to respond to the need for effective management of NCDs, (e. g. developing evidence based standards and guidelines for cost effective interventions).
6. Strengthen school oral health programs.
7. Undertake operational research.
8. Develop a comprehensive NCDs Strategy.

5.1.2.10 Oral and Eye Health

5.1.2.10.1 Objectives

To reduce the incidence and prevalence of oral health problems/diseases.

5.1.2.10.2 Key Strategies

1. Strengthen the policy framework for oral and eye health.
2. Scale up oral and eye health services to all districts.
3. Strengthen prevention, through public awareness and education.
4. Strengthen treatment and care, through improved referral systems, including strong component of outreach services.
5. Integrate oral and eye health in child health and HIV/AIDS programmes.
6. Strengthen human resource capacities, including recruitment, retention and training.
7. Strengthen M&E for oral and eye health.

5.1.2.11 Nutrition

5.1.2.11.1 Objective

To significantly improve the nutritional status of the population and ensure food safety, particularly for children, adolescents and mothers in child bearing age, so as to prevent diseases.

5.1.2.11.2 Key Strategies

1. Strengthen nutrition service delivery in HIV/AIDS and TB programmes and activities.
2. Strengthen implementation of infant and young child feeding programme.
3. Promote maternal nutrition in pregnancy and during lactation;
4. Provide support to micronutrient deficiency prevention and control (supplementation).
5. Provide quality dietary, including food aid management services and information to in- and out patients.
6. Strengthen use of Growth Monitoring and Promotion to improve nutrition interventions.
7. Capacity building in Nutrition Advocacy and technical support and supervision.
8. Scale-up public awareness and education on the importance of nutrition.
9. Strengthen national and multi-sector coordination of nutrition programmes.

5.1.2.12 Environmental and Occupational Health

5.1.2.12.1 Objective

To promote and improve hygiene and universal access to safe and adequate water, food safety, and acceptable sanitation, with the aim of reducing the incidence of water and food borne diseases throughout Zambia.

5.1.2.12.2 Key Strategies

Within the framework of the decentralisation policy, the following strategies will be implemented:

1. Promote establishment of new and strengthening of existing Water, Sanitation and Hygiene Education (WASHE) Committees at national, provincial, district and sub-district levels.
2. Institutionalise Food Safety Protocols of Hazard Analysis and Critical Control Point System (HACCP).
3. Promote the provision of appropriate and suitable water and sanitation facilities in peri-urban and rural areas.
4. Strengthen national health care waste management at all levels of care.
5. Strengthen training and capacity building in environmental health; and
6. Strengthen internal and multi-sector coordination and management of environmental health at all levels of care.

5.1.2.13 Health Education and Promotion

5.1.2.13.1 Objective

To provide efficient and effective health education and promotion, in order to empower individuals, families and communities with appropriate knowledge to develop and practice healthy lifestyles.

Second Level Hospital

5.1.2.13.2 Key Strategies

1. Strengthen the policy and strategic framework for health education and promotion.
2. Strengthen the health promotion unit at MOH head quarters, so as to ensure effective coordination.
3. Advocate for public policies that support and promote health.
4. Strengthen community response and participation in health education and promotion.
5. Strengthen health education and promotion in schools, through the School Health and Nutrition Programme.
6. Integrate health education and promotion in all health programmes and at all levels.
7. Establish collaborative systems with partners, private sector, civil society, CHAZ and other stakeholders to support health education and promotion.

5.1.3 Hospital Referral Services

Currently, the hospital referral systems are not working as planned. This is largely attributed to the insufficient capacities at lower levels, including shortages of health workers, erratic supply of essential drugs and medical supplies, and inequities in the distribution of essential physical infrastructure and equipment to offer services that are appropriate to their level, and also due to the limited scope of services offered by facilities at lower levels. In view of the foregoing, Level 2 hospitals are forced to operate more as district hospitals, as many patients by-pass the HPs and HCs due to the observed capacity challenges. Similarly, Level 3 hospitals are mainly providing 1st and 2nd level hospital services. This situation amounts to inappropriate use of resources, leading to inefficiencies in service delivery.

The over concentration of Level 2 hospitals in some provinces, particularly the Southern and Copperbelt provinces brings in a problem of financing. The decision to right size these facilities has not yet been implemented, however, MOH has already developed a policy on the number and type of hospitals required per

province (namely, one 3rd level hospital and at least two 2nd level hospitals in each province). Right sizing and strengthening the hospital referral systems would result in reductions in congestions at higher level referral facilities, and increase in the efficiency and effectiveness of health service delivery.

Apart from services offered by static health infrastructure, over the years, the MOH has been providing outreach mobile health services to the communities. These services include the Zambia Flying Doctors Service (ZFDS), mobile eye clinic services, mobile Counseling and Testing (CT) services, mobile Anti-retroviral therapy (ART) services, mobile immunisation services and other routine outreach services. These services have contributed to the improvement of access to services in hard-to-reach areas and also reduced the indirect cost barriers, such as transport and time costs, and food and accommodation for in-patients and relatives, faced by the poor people in rural areas in accessing health care.

In order to further improve the efficiencies and effectiveness of health service delivery, MOH will review and strengthen the hospital referral systems, and also scale up mobile health services, across the country, particularly in rural areas.

5.1.3.1 Objective

To streamline and further strengthen the hospital referral systems and mobile health services, in order to increase access to appropriate quality hospital referral services, and provide for continuity of care.

5.1.3.2 Key Strategies

1. Establish NCDs desk for clinical care specialists at national and PHOs.
2. Develop and implement an appropriate Hospital Reform Programme:
   (i) Redefine the packages of health services for each level of health facilities.
   (ii) Develop outreach programmes from tertiary to regional referral hospitals, contributing to technical supervision of those facilities.
   (iii) Improve quality of clinical services in hospitals.
   (iv) Strengthen diagnostic capabilities at all levels.
   (v) Strengthen rehabilitative services.
   (vi) Improve the availability and distribution of health workers, essential medicines and other medical supplies.
3. Review and strengthen hospital referral health services, horizontally and vertically.
4. Strengthen mobile health services, including the mobile hospital services, Zambia Flying Doctor Service, tele-medicine services, and routine and adhoc outreach health services at all levels.
5. Build capacity in hospital management: including introducing and maintaining financial and accounting management software systems; and exploring opportunities to generate additional income from cost sharing arrangements and other financing modalities.
6. Further strengthen ophthalmological services: Zambia is signatory to vision 2020, the right to sight.
7. Promote private sector participation in the provision of specialised health care services, through innovative modalities, including Public-Private-Partnerships.

Laboratory services

5.2 HEALTH WORKFORCE/HUMAN RESOURCE FOR HEALTH

5.2.1 Objectives

1. To improve the availability of and distribution of qualified health workers in the country.
2. To significantly increase the annual outputs of the health training institutions, to mitigate the critical shortages of qualified health workers.

5.2.2 Key Strategies

1. Scale up the recruitment, and improve distribution and retention of human resources for health:
   (i) Scale up recruitment of health workers, to reach optimum levels, in accordance with the approved staff establishment.
   (ii) Increase numbers of specialist doctors to provide specialised services in hospitals, and contribute to the strengthening of referral services.
   (iii) Develop and implement appropriate mechanisms for more equitable distribution of health workers, including improved targeting and regulation of staff posting.
   (iv) Review, strengthen and expand the health workers' staff retention scheme, as a tool for staff retention and for attracting health workers to rural areas.
   (v) Carryout a skills gap analysis and, based on its findings, develop a comprehensive human resources plan.

2. Strengthen human resource management, in order to improve efficiency and effectiveness in utilisation of existing staff:
   (i) Implement an appropriate staff performance management system and

performance-based incentive systems.

(ii) Improve HRH information system.

(iii) Improve the standards of HRH planning.

(iv) Finalise and implement the CHW strategy, to ensure their effective participation.

(v) Strengthening multi-sectoral collaboration with Government line Ministries, Faith-Based Institutions, the private sector, Cooperating and Development Partners and other governments to address the HRH crisis.

3. Strengthen training and staff development.

(i) Develop and implement an appropriate plan for production of health workers, based on projected HRH needs, both in numbers and skills-mix.

(ii) Develop and implement an appropriate in-service training plan, to improve skills levels for existing staff.

(iii) Expand capacities at health training facilities and increase training outputs, based on the projected HRH needs.

(iv) Collaborate with the Ministry of Education towards increasing the intakes for medical students at the University of Zambia, Medical School.

(v) Scale up the recruitment and retention of teaching staff at health training institutions.

(vi) Provide appropriate and coordinated training to CHWs, in order to mitigate the shortages of health workers, and scaling up in health promotion at community level.

5.3 MEDICAL PRODUCTS, VACCINES, INFRASTRUCTURE AND TRANSPORT

5.3.1 Essential Medicines, Vaccines and Medical Supplies

5.3.1.1 Objective

To ensure availability of adequate, quality, efficacious, safe and affordable essential medicines and medical supplies at all levels of service delivery, through efficient and effective procurement, and logistics management.

5.3.1.2 Key Strategies

1. Strengthen systems and procedures for selection of medical products.
2. Review and update the essential drugs and essential medical supplies lists.
3. Improve planning and forecasting for essential supplies. Develop comprehensive annual commodities projections, and procurement plans for essential medicines and medical supplies.
4. Strengthen systems for procurement of essential medicines and medical supplies. Improve linkages and coordination between MOH and MSL, to strengthen procurement activities.
5. Improve storage for essential medicines and medical supplies, at all levels of the supply chain. Implement recommendations of the storage capacity assessment done in 2009/2010.
6. Strengthened logistics management systems, at all levels. Roll-out the pilot project on drugs distribution logistics, which was successfully piloted in selected districts.
7. Strengthen regulatory capacity to meet all established Laws and

regulations for procurement, storage, usage and disposal of medicines and other medical supplies.

8. Set up appropriate instruments to access medicines, through the IP and TRIPS agreements.

5.3.2 Medical Infrastructure

5.3.2.1 Objective

To ensure optimal availability, appropriateness, distribution and conditions of essential infrastructure, in order to facilitate equity of access to essential health services.

5.3.2.2 Key Strategies

1. Review, update and implement the Capital Investment Plan (CIP), integrating planning and construction of health facilities with the availability of other critical inputs, particularly health workers and equipment.
2. Study and revise the designs of health facilities, at different levels, to address current concerns, e.g. appropriateness and location of maternal/ delivery rooms, and adolescent health services.
3. Promote private sector participation, including PPPs.
4. Undertake periodic updates of the existing infrastructure database.
5. Strengthen maintenance and rehabilitation at all levels.

5.3.3 Medical Equipment, Transport and Communication

5.3.3.1 Objective

To significantly improve on the availability and condition of essential medical equipment, transport and communication, in order to facilitate efficient and effective delivery of health services.

Mobile and Emergency Health Services

5.3.3.2 Key Strategies

1. Medical equipment:
   i) Review, update and implement the Capital Investment Plan (CIP).
   ii) Strengthen capacity for management and maintenance of medical equipment, including staffing, training and appropriate facilities.

2. Transport and Communication:
   i) Ensure availability and equitable distribution of adequate appropriate transport for supporting health service delivery at all the levels.
   ii) Strengthen capacity for management and maintenance of transport, including the mobile hospitals.

3. Information and Communication Technologies (ICTs):
   i) Develop an ICTs standards and procedures manual.
   ii) Revise the ICT staff structure to include positions at district and provincial offices.
   iii) Develop and implement an appropriate plan for ICTs development.
   iv) Establish and upgrade LAN connectivity in major health facilities (especially second and third level hospitals) and District Health Offices.

5.3.4 Specialised Health Service Support Services

5.3.4.1 Laboratory Support Services

5.3.4.1.1 Objective

To provide appropriate, efficient, cost-effective and affordable laboratory support services at health centre and hospital levels throughout the country.

5.3.4.1.2 Key Strategies

1. Review and maintain appropriate policy and legal framework for laboratory support.
2. Provide appropriate laboratory protocols and standard operating procedures.
3. Ensure adherence to laboratory protocols and standards by implementing effective quality assurance systems.
4. Provide and appropriately maintain essential laboratory infrastructure and equipment.
5. Provide adequate supplies of laboratory supplies and auxiliaries, and ensure their proper storage, distribution and usage.
6. Strengthen training and capacity building for bio-medical scientists and laboratory staff.
7. Strengthen coordination and management of laboratory services.

5.3.4.2 Medical Imaging Services

5.3.4.2.1 Objectives

To provide the health care delivery system with high quality, cost effective and safe medical imaging and radiation therapy support at various levels of health care.

5.3.4.2.2 Key Strategies

1. Scale up Continued Professional Development in imaging and radiography.
2. Review and strengthen the policy, guidelines and regulations for medical imaging and radiation therapy.
3. Improve availability and maintenance of medical imaging equipment.
4. Prioritise the development of digital imaging and tele-radiography.
5. Strengthen the existing logistics management systems for medical imaging consumables.
6. Promote public awareness on the hazards of Radiation.
7. Strengthen supervisory and monitoring of medical imaging facilities.
8. Procure and install MRI equipment at all second level hospitals.

5.3.4.3 Rehabilitation Services

5.3.4.3.1 Objective

To provide optimal care by taking into consideration client needs, organisational and professional considerations.

5.3.4.3.2 Key Strategies

1. Develop and disseminate Rehabilitation Standard Operating Procedures for all levels of care.
2. Establish procurement plan for essential equipment and consumables.
3. Train rehabilitation therapists at all levels of care in Palliative care.
4. Purchase basic equipment, consumables and other accessories for rehabilitation services.

5. Provide appropriate infrastructure to support rehabilitation services.
6. Create adequate positions in new ministry of health structure to cater for both Diploma and Degree graduates in rehabilitation sciences.
7. Sensitise the public on rehabilitation.

5.3.4.4 Blood Transfusion Services

5.3.4.5 Objective

To attain equity of access to safe blood and blood products throughout the country, in order to contribute to national health and development objectives.

5.3.4.6 Key Strategies

(i) Maintain 100% dependency on Voluntary Non-Remunerated blood donors from low-risk populations.
(ii) Increase dependency on regular repeating blood donors.
(iii) Mandatory screening of blood for HIV, Hepatitis B and C, and Syphilis, using approved national and WHO methods and guidelines.
(iv) Promote appropriate clinical use of blood and blood products.
(v) Strengthen commodity security for blood transfusion services.
(vi) Strengthen policy and regulation of blood transfusion services/practices.
(vii) Strengthen national coordination and control of blood transfusion services.

5.4 HEALTH INFORMATION AND RESEARCH

5.4.1 Objective

To ensure availability of relevant, accurate, timely and accessible health data, to support the planning, coordination, monitoring and evaluation of health services.

5.4.2 Key Strategies

5.4.2.1 Health Information

1. Ensure smooth functioning of all routine and non-routine health information systems, including HMIS/DHIS, ZDHS, MIS and others.
2. Further improve the usage of the new HMIS/DHIS system, by reviewing and updating the indicators sets, to ensure adequate coverage of all programmes and levels, e.g. the NCDs and Adolescent Health indicators.
3. Improve hospital and community level health information, by ensuring their access to fully functional HMIS.
4. Expand the Smart-Care system, by ensuring that more health facilities have fully functional Smart-Care system.
5. Strengthen staff training and capacity building in ICTs and health information systems, particularly HMIS and Smart care systems, through tailored pre- and in-service training programmes.
6. Strengthen linkages and integration of the existing health management systems, including HMIS, Financial and Administrative Systems (FAMS), and HRIS.

5.4.2.2 Health Research

1. Strengthen the coordination of all health research to ensure that research

activities respond to national health research priorities and needs.

2. Capacity building in health research and bioethics through development ultramodern research infrastructure and establishment of linkages between neighbourhood health committees and community research advisory boards
3. Enhance the use of research findings for policy and decision making through improved dissemination of research findings to all stakeholders
4. Strengthen mechanisms for monitoring the conduct of health research to ensure adherence to human protection guidelines and prevent protocol violations.
5. Strengthen strategic partnerships for health research with partners to improve and rationalise resource availability and use.

5.5 HEALTH CARE FINANCING

5.5.1 Objective

To mobilise adequate financial resources, through sustainable means, and ensure efficient and effective utilisation of such resources, to facilitate provision of equitable quality health services to the population.

5.5.2 Key Strategies

1. Resource Mobilisation:
   - i) Finalise and implement the Health Financing Policy for the health sector.
   - ii) Increase the total funding for health, towards the Abuja target of 15% of national budget, through increasing on the existing local revenues, and introduction of additional new innovative sources, such as:
     - New health-related domestic taxes.
     - Establishment of the Social Health Insurance scheme (SHI).
     - Promotion of private sector participation and PPPs, while safeguarding equity.
   - iii) Increase external funding, through further strengthening of partnerships with CPs and civil society:
     - Develop and implement a new MOU with CPs and CSOs.
     - Incorporate the IHP+ principles in the MOU, as the basis for mutual accountability and predictability of financing.
     - Strengthen health sector governance, transparency and accountability.
   - iv) Strengthen inter-sectoral/Ministerial collaboration at all levels.
   - v) Strengthen decentralisation of financing, in consultation with MOFNP.

2. Review and strengthen resource allocation:
   - i) Resource Allocation Formula (RAF) at district level to take into account epidemiological, geographic, demographic, and socioeconomic factors.
   - ii) Develop and implement RAFs for intra-district, 2nd and 3rd level facilities, statutory boards, and training institution.
   - iii) Roll-out the Marginal Budgeting for Bottlenecks (MBB) tools/programme.
   - iv) Evaluate and explore the Results Based Financing initiatives including financial sustainability.
   - v) Advocate for improved disbursement mechanisms from MOFNP to MOH, and strengthen internal systems for disbursing to all levels of the health system.

3. Resource Tracking:
   - i) Institutionalise National Health Accounts and make it regular every two years.
   - ii) Establish the HCF database and strengthen integration of health information systems.

iii) Institutionalise the PETS, and explicit accountability tools.
iv) Ensure timely audits and financial reporting.

5.6 LEADERSHIP AND GOVERNANCE

Cooperating partners with MoH staff during the JAR field visit

5.6.1 Objective

To implement an efficient and effective decentralised system of governance, ensuring high standards of transparency and accountability at all the levels of the health sector.

5.6.2 Key Strategies

1. Strengthening the overall legal and policy framework for health:
   i) Finalise and implement the overall National Health Policy.
   ii) Develop and enforce a new National Health services Act, to replace the NHSA 1995, which was repealed in 2005.
   iii) Review the lessons learnt from the User Fees Removal Policy to inform policy direction on user fees.
   iv) Implement the Social Health Insurance Scheme and strengthen resource mobilisation.
   v) Develop BHCPs for secondary and tertiary level hospitals, as part of the planned hospital reforms.
   vi) Finalise and implement the CHW Strategy.
   vii) Periodically review and update the various pieces of health policies and legislation.
2. Implement the National Decentralisation Policy - strengthen capacities at district level in planning and management of health services.
3. Strengthen sector collaboration mechanisms: Review and update the Memorandum of Understanding (MOU) with sector partners and civil society; incorporate IHP+ principles into the MOU; and further strengthen the Joint Annual Reviews (JAR).
4. Strengthening leadership, management and governance systems and structures, to enhance transparency and accountability at all levels, in accordance with the jointly agreed governance action plan and the recently conducted systems audits.
5. Strengthen transparency, accountability and access to information at all levels, especially the community level.

6 COSTING OF THE STRATEGIC PLAN

6.1 FINANCIAL REQUIREMENTS

To determine the financial requirements for the implementation of this plan, the Marginal Budgeting for Bottlenecks (MBB) tool was applied. The MBB is an analytical costing and budgeting tool which assesses performance of the health system by identifying bottlenecks at specific points in the delivery system for a set of evidence-based high impact health related interventions. Under the MBB, health system improvements are measured through six coverage determinants:

- Availability of commodities;
- Availability of human resources;
- Physical accessibility;
- Efficient and equitable utilisation; and
- Effective quality services.

The increase in coverage, resulting from the difference between new coverage targets and baselines is combined with established estimates of efficacy for interventions based on global literature. The model estimates the additional costs needed to remove bottlenecks and improve the health system to achieve new coverage targets/frontiers, as well as, the returns in terms of mortality reduction. In practice, MBB is organised around the elements of the results framework, where resource inputs are translated into outputs, outputs into outcomes, and outcomes into impact. Using the MBB tool, additional costs and impact, in terms of mortality reductions, were estimated for three Scenarios:

- First Scenario: Based on current priorities and continuation of current funding levels, but includes additional funding for interventions targeting newborn, child and maternal health. The investment is estimated to reduce neonatal, under five and Maternal mortality by 12.7%, 24.4% and 17.0% respectively
- Second Scenario: Encompasses scenario one, but also an additional investment per capita in the final year of the NHSP, with 15.9%, 30.0% and 20.6% estimated reductions in neonatal, under-five, and maternal mortality, respectively.
- Third Scenario: Calls for a higher additional investment of per capita per person resulting in a much higher reduction in neonatal, under-five, and maternal mortality estimated at 20.7%, 43.7% and 24.8% respectively.

The total budget requirement by the NHSP program areas is presented in full in Annex 5.

6.2 FINANCING GAP ANALYSIS

To scale up health interventions to reach the health related Millennium Development Goals, donors and government have to increase their efforts to ensure adequate funding for health. At the current funding levels huge funding gaps are bound to arise.

Table 10 below provides summary of total budgeted costs, estimated GRZ resources, and the funding gaps for all three scenarios. Total GRZ budget estimates between 2011 and 2015 under funding scenario 2 depict an average annual increment of 10 percent and will increase from USD 642 million in 2011 to USD 797 million in 2015.

Table 10: Zambia: Projected Financing for the Health Sector

Cost in X 1000 USD 1USD = 5 000

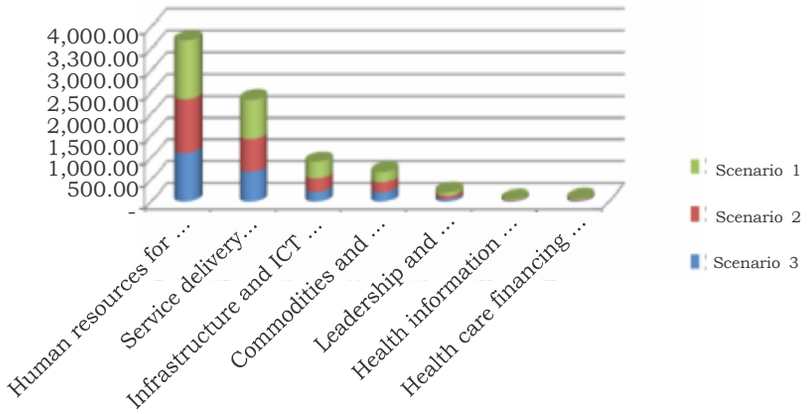
Additional budget in Thousands US$ (Scenario 3)						
NHSP Programs	2011	2012	2013	2014	2015	Total
Leadership& governance	1,703.24	3,406.47	5,109.71	6,812.94	8,516.18	25,548.54
Service delivery	25,796.25	45,768.42	65,740.59	85,712.77	105,684.94	328,702.97
Human resources	51,194.01	82,678.01	114,162.01	145,646.00	177,130.00	570,810.03
Commodities	6,007.78	6,009.45	6,011.12	6,012.79	6,014.46	30,055.61
Infrastructure and ICT	34,702.80	37,559.57	40,416.34	43,273.11	46,129.88	202,081.71
Health information	858.13	1,716.26	2,574.38	3,432.51	4,290.64	12,871.92
Health care financing	809.00	889.90	978.89	1,076.78	1,184.46	4,939.03
Total	121,071.21	178,028.08	234,993.05	291,966.91	348,950.56	1,175,009.81

Cost in X 1000 USD 1USD= 5 000

Program	2011	2012	2013	2014	2015	Total
	Total budget in Thousands US$ (Scenario 1)					
Leadership& governance	16,429.95	17,707.84	18,985.74	20,263.63	21,541.53	94,928.69
Service delivery	218,580.25	227,294.82	236,009.40	244,723.97	253,438.55	1,180,046.99
Human resources	198,188.30	224,107.12	250,025.95	275,944.77	301,863.60	1,250,129.74
Commodities	136,691.64	136,692.87	136,694.10	136,695.33	136,696.56	683,470.49
Infrastructure and ICT	62,031.11	63,851.87	65,672.62	67,493.38	69,314.13	328,363.11
Health information	3,450.57	4,065.33	4,680.08	5,294.84	5,909.60	23,400.42
Health care financing	7,326.81	7,387.49	7,454.23	7,527.64	7,608.40	23,929.27
Total	642,698.62	681,107.34	719,522.12	757,943.57	796,372.36	3,597,644.01
Projection by Financing source						
GRZ	160,488.70	257,506.64	294,339.76	350,994.02	369,563.99	1,432,893.11
DPs	239,393.60	184,935.34	170,037.96	150,070.60	126,141.21	870,578.71
IGR	6,001.60	6,601.76	7,261.94	7,988.13	8,786.94	36,640.37
Gap	236,814.72	232,063.59	247,882.47	248,890.82	291,880.22	1,257,531.82

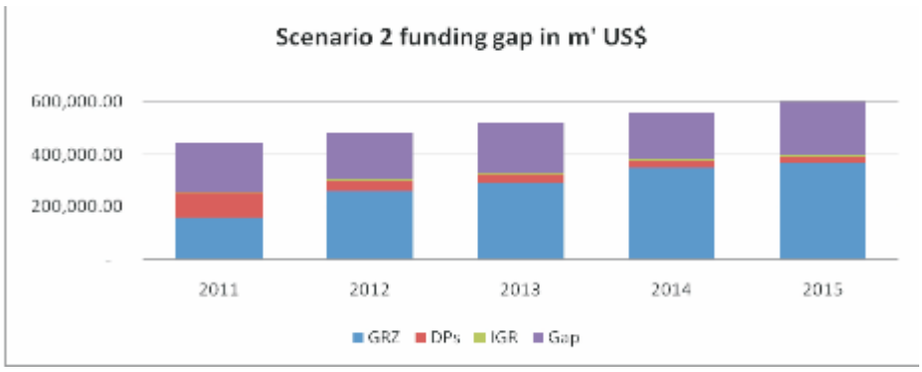
As indicated in Figure 10 human resources, service delivery and infrastructure accounts for over 90% of the projected budget requirements for the period 2011 to 2015. Human resources alone accounts for about 35% of the resources followed by service delivery and commodities at 33% and 20% respectively. However, these figures need to be interpreted with some caution since there is no clear delineation in the allocation of inputs into the various program areas.

Figure 1: Projected Budget requirements for period 2011 - 2015



For the needs based scenario two, the total amount of additional resources required for the for the five year plan is about USD 802 million with an annual average of about USD 160 million which under the current financing scenario will give rise to deficit of about USD 1.2 billion. If results based scenario three is adopted instead the additional funds will come to 1.2 billion.

Figure 2: Funding Gap



6.3 SOURCES OF FUNDING

In this plan contributions from the Global fund are assumed to continue to be a major source of financing for the sector for commodities, human resources and other inputs. In the same vein, support from basket partners such as Sweden and Canada is expected to continue as well as supporting the strengthening of the national systems and structures. Another source external support for funding HIV/AIDS and malaria programs will be the US government through its PEPFAR projects. Other partners including Japan, Clinton foundation are also expected to continue supporting various health sector projects. Finally, the UN Family is expected to continue supporting the Health sector at its current level. However, it is also noted that the comparative advantage of these organisations is more technical than financial.

The figures mentioned in the overall framework derive from the MTEF as captured in the sixth national development plan. The MTEF projects that government funding for health services will grow from USD 160 million in 2011 to USD 370 million in 2011. The projected government expenditure for the whole period of the plan is USD1.4 billion. To achieve the objectives of the strategic plan, it is necessary that external sources continue to be a substantial contributor to the health sector in Zambia though there are indications of reduced donor support.

7 IMPLEMENTATION FRAMEWORK

7.1 LEGAL AND REGULATORY FRAMEWORK

The plan is closely linked to the Zambian Constitution, which is the supreme Law of the land. The Constitution guarantees the right to life and right to health. It also guarantees other fundamental human, social and economic rights to the population, which have direct and/or indirect impact on the key determinants of health. .

7.1.1 Overall National Health Policy and Legal Frameworks

Following the repeal of the National Health Services Act of 1995 (NHSA-1995), the health sector has been operating without an overarching legal framework. Further, the existing overall national health policy, the NHS&P 1992, is outdated and requires updating. In this respect, the Government is in the process of developing and implementing the overall National Health Policy and a new National Health Services Act, which will provide a comprehensive policy and legal framework for implementation of this plan. In addition, there are various health related pieces of legislation for addressing specific aspects of health. The Government will continuously review the needs and gaps for specific health related legislation, and develop appropriate legislation necessary for enforcement of particular aspects of health, in support of the NHSP 2011-15.

The Ministry of Finance and National Planning (MOFNP) has developed the Performance Assessment Framework (PAF) for monitoring the implementation of the SNDP. MOH will ensure that implementation of the NHSP 2011-15 is appropriately aligned to all critical national policy and strategic frameworks, including the PAF, so as to ensure coordination.

7.1.2 National Decentralisation Policy 2003

MOH will aim at making progress towards implementation of this policy by developing and implementing appropriate measures aimed at empowering the local authorities to start actively participating in the planning, management, and monitoring and evaluation of health services. These measures will include:

- Ensuring that the process of developing district health plans includes inputs from other non-health sectors such as agriculture, community development, education, child and youth departments at district level, and reviews by the District Health Advisory Committees (DHAC) before submission to the DDCC for approval;
- Build appropriate capacities for local authorities, especially the District Development Coordinating Committees (DDCC) in health planning and programme oversight. In this respect, the procedure for approving district health plans will be changed to allow the DDCC to review and approve these plans at local level, before submission to PHOs/MOH; and
- Increasingly integrate district health planning into the overall District Development Plans and long-term vision.

7.2 INSTITUTIONAL FRAMEWORK

The plan will be implemented through the existing health sector institutional framework. MOH will take the overall responsibility for coordinating and ensuring successful implementation and attainment of the objectives of this plan. However, several other key sector partners will also be involved in its implementation.

7.2.1 Ministry of Health

The plan will be implemented and coordinated through the existing health sector organisational and management structures, which will include:

- MOH Head Office and Sector Advisory Group (SAG): At the centre, the MOH Head Office will take full responsibility the successful implementation of the plan, through the formulation and implementation of successive MTEFs, annual action plans and budgets. It will also be responsible for policy leadership, management decision-making, standards setting and enforcement, and the overall coordination of implementation of this plan. The SAG is the high level consultative forum for the sector, bringing together MOH and all its partners, including relevant government ministries and departments, private sector, civil society and CPs, to provide advice to MOH on aspects of health sector governance. As part of its mandate, the SAG will be responsible for overall steering of the implementation of the plan and monitoring and evaluation of performance.

  National programme coordination units have also been established for some specific programmes. These include the National Malaria Control Centre (NMCC), National TB and Leprosy Programme unit, Child Health Unit, and Reproductive Health Unit. All these units will play their respective mandates of coordinating implementation of their respective programmes.

- Provincial Health Offices: PHOs will serve as intermediaries for implementation of the plan within their respective provinces. They represent the ministry's functional link to the lower level structures, training institutions and the civil society. PHOs will continue to be responsible for coordinating and supervising the implementation of the NHSP and technical support to all health service institutions, within their respective provinces.

- District Health Offices (DHOs) and Hospitals: District health and hospital management structures will be responsible for implementing the plan district and health facility levels. Harmonisation of the district and hospital plans to match the aspirations of the NHSP 2011-15 will therefore be crucial for successful implementation.

- Health service delivery facilities: Health Posts, Health Centres and Hospitals, Health Centres and Health Posts: community level;

- Statutory Boards: There are two types of Statutory Boards under the MOH structures, regulatory and service statutory boards. The role of the regulatory statutory boards will be to ensure that the relevant Laws and regulations are developed and enforced, in order to ensure high standards of safety, ethics and professionalism in the health sector. On the other hand, the role of the service statutory will be to provide their respective services in support to the core health services. MOH and SAG will facilitate the approval, implementation, monitoring and evaluation of the implementation of these plans.

- Health Training Institutions (HTIs): These institutions will be responsible for the production of appropriately qualified health workers, for implementation of the plan.

7.2.2 Key Sector Partners

All the key sector partners will play their respective roles in the implementation of this plan. In order to ensure efficient and effective coordination of the partnerships with all these players, MOH will strengthen inter-sector collaboration and coordination mechanisms at all levels. The following are the key partners:

- Government Line Ministries and Departments: Several other government ministries and departments impact differently on the performance of the health sector, with some actively participating in health service delivery; others impact on the determinants of health, while others provide support to the health sector. Strong inter-sector coordination mechanisms will be maintained.

- The Faith-based Health Sector/CHAZ: The CHAZ group is the largest partner to the Government in the health sector and is currently the second largest provider of health services to the general public, after MOH. CHAZ will therefore play an important role in the implementation of the plan, through their network of health facilities, which include hospitals, health centres and health posts, distributed throughout the country. An important aspect to note is the fact that CHAZ has good coverage of rural areas. The MOU with CHAZ will be reviewed, updated and implemented.

- Private Sector: In Zambia the private health sector is not fully developed, but is growing. Private health facilities include for- and not for profit facilities owned by private business entities and Civil Society Organisations (CSOs). Deliberate efforts shall be directed at promoting private sector participation, including PPPs, collaboration in research and development, and strengthening of coordination, harmonisation and cross-sector referrals.

- Civil Society: The civil society, both local and international, will play an important role in the implementation of the plan. Some CSOs are involved in the health promotion, provision of health services, training and capacity building, while others are involved in advocacy for health. MOH will work towards promoting stronger coordination and participation of the civil society in the health sector, through the Sector-wide Approach Structures (SWAp).

- The Communities: Much of the progress made in improving the health status of individuals depends on the existence of healthy environments and lifestyles. The government will work towards strengthening health promotion among the communities and strengthening community involvement and participation in the planning, management, implementation, and monitoring and evaluation of health services, to achieve higher impact. This will be achieved by strengthening the community participation structures, and transparency and accountability in the management of health services at community level.

- Cooperating Partners (CPs): The CPs are expected to play an important role in the implementation of the NHSP 2011-15, through provision of financial and technical support to the sector and specific programmes. The Government will work towards strengthening partnerships with the CPs, and harmonisation of their support efforts, for high impact. This will be structured and agreed upon in the Memorandum of Understanding (MOU) which will be signed between the MOH, CPs and CSOs.

- Traditional and Alternative Health Services: Traditional health practitioners are organised under the Traditional Health Practitioners of Zambia (THOPAZ). Traditional health practitioners provide herbal and spiritual healing services within the communities. Through implementation of this NHSP 2011-15, MOH will strengthen regulation, supervision, research and coordination of this sector, to ensure that they provide safe and evidence-based health services to the communities.

7.2.3 Planning and Capacity Building

7.2.3.1 Planning and Budgeting

The NHSP 2011-15 will be implemented through the development and implementation of appropriate plans at sector and sub-sector levels. Currently, the planning framework depends on a bottom-up planning process. MOH will work towards advocating for increased funding to the health sector, in line with the Abuja declaration target of 15% of the national budget. Further, GRZ/MOH will ensure that all plans, budgets and expenditures are in line with national policy and the requirements of the NDP, the NHSP and MTEF.

The CPs will be requested to support the health sector by aligning and – to the extent possible – by synchronising their interventions with the MOH priorities and timelines as specified in the NHSP. To support this process, MOH will work towards agreeing with the CPs to implement the IHP+ in Zambia.

7.2.3.2 Capacity Development

MOH, in consultation with the sector partners will be developing annual capacity building plans, aimed at ensuring adequate capacity building, linked to performance, for successful programme implementation. Programmes supported by CPs will work through the structures designated by the MOH, in order to build capacity, improve sustainability, and ensure maximum integration with the MOH policies and programmes.

7.3 MONITORING AND EVALUATION

Monitoring and evaluation of the implementation of the plan will be conducted through appropriate existing and new systems, procedures and mechanisms. The Monitoring and Evaluation Sub-Committee of SAG will be responsible for providing advice on all matters concerning monitoring and evaluation. The following describe the main tools and approaches that will be applied in the monitoring and evaluation of the implementation of the plan.

7.3.1 NHSP Indicators

MOH and the sector partners will harmonise sector performance indicators, and use these as the basis for monitoring and joint reviews. Indicators will include: sector performance benchmarks and triggers for sector budget support, output and process indicators to assess service delivery (quality, access, efficiency) and indicators of health status (impact). They will be derived as far as possible from routine monitoring systems (HMIS) and build upon those required for the monitoring and evaluation of the NDP/PRSP and the MTEF in order to avoid duplication of effort.

7.3.2 Monitoring

MOH will be responsible for coordinating health sector monitoring and reviews. The HMIS, FAMS and other routine systems will be the major tools for data collection. The SAG, MOH and other agencies will primarily use this data and its analyses for decision making. It will also plan and lead the Joint Annual Reviews (JAR) every year, together with appropriate involvement and support of the CP, other Government ministries and other key stakeholders.

7.3.3 Evaluation

There will be two evaluations during the duration of each NHSP developed under this plan, a mid-term review, after the first 2.5 years of implementation, and a final review at the end of the duration. Stakeholders will jointly agree on the timing, terms of reference and composition of these two review missions. Where appropriate, the MTR and the final NHSP evaluations will be combined with the JAR for that year.

8 ANNEXURES

8.1 ANNEX I: THE TEN (10) MAJOR CAUSES OF VISITATIONS TO HEALTH FACILITIES (FOR ALL AGES COMBINED), ZAMBIA, 2006, 2008

Ten Major Causes of Visitation to Health Facilities, Zambia 2006 (All ages) - 2006	
Disease Name	Incidence per 1,000 pop.[16]
Malaria	412
Respiratory infection: non-pneumonia	192
Diarrhoea: non-bloody	81
Trauma[18]	48
Eye infection	41
Skin infections	41
Respiratory Infections: pneumonia	39
Ear/Nose/ throat infections	26
Intestinal worms	16
Sexually transmitted infections	14

Ten Major Causes of Visitation to Health Facilities, Zambia 2007 (All ages) – 2007	
Disease Name	Incidence per 1,000 pop.[17]
Malaria	359
Respiratory infection: non-pneumonia	219
Diarrhoea: non-bloody	76
Trauma[2]	50
Skin infections	38
Respiratory infections: pneumonia	37
Eye infection	35
Muscular skeletal &connective tissue	30
Digestive system not infectious	27
Ear/Nose/ throat infections	26

Ten Major Causes of Visitation to Health Facilities, Zambia 2008 (All ages) – 2008	
Disease Name	Incidence per 1,000 pop[1]
Malaria	251.7
Respiratory infection: non-pneumoni	197.6
Diarrhoea: non-bloody	69.3
Trauma[2]	46.6
Skin infections	38
Muscular skeletal &connective tissue	32.3
Eye infection	31.3
Respiratory infections: pneumonia	30.8
Skin infections	30.5
Ear/Nose/ throat infections	26.9

[16]This is incidence for all age groups
[17]This is incidence for all age groups
[18]This includes accidents, injuries, wounds, burns, etc

8.2 ANNEX 2: KEY PERFORMANCE MONITORING INDICATORS, 2011-2015

S/No	INDICATORS	LINKED TO	TYPE / PURPOSE	SOURCE OF DATA	FREQUENCY	BASELINE		NHSP TARGET 2015	MDGs TARGET 2015
						YEAR	VALUE		
A.	IMPACT INDICATORS								
1	Under-Five Mortality Rate / 1,000	MDGs, NDP	Impact	DHS	4 yrs	2007	119	63	63
2	Prevalence of underweight children under 5 years of age, %	MDGs, NDP	Impact	DHS	4 yrs	2007	15%		NS
3	Maternal Mortality Ratio (MMR) / 100,000 live births	MDGs	Impact	DHS, Census	4 yrs	2007	591	159	162
4	HIV prevalence (% of adults aged 15-49) years who are HIV infected	MDGs	Impact	DHS	4 yrs	2007	14.3%	6%	6%
B)	OUTCOME INDICATORS								
5	% of fully immunised children under one year of age	PAF(2), NHSP, MDGs	Access	HMIS	Annual	2009	90%	80%	NS[20]
6	% of deliveries assisted by skilled health personnel	NDP, PAF, NHSP, MDGs	Quality	HMIS	Annual	2009	46.5%	55%	NS
7	Total number of eligible persons living with HIV receiving ARV therapy	PAF, NASF, MDP, NHSP	Access	HMIS	Annual	2009	156.299%		NS
8	TB cure rate	NDP, NHSP	Access	TB	Annual	2009	77%	77%	77%
9	% of HIV infected pregnant women who received antiretrovirals to reduce the risk of mother-to-child transmission	UGASS, NHSP	Access	HMIS, SB UNGASS	Annual	2008	67%	87%	NS
10	Number of eligible children on antiretroviral treatment	UNGASS, NHSP	Access	HMIS	Annual	2009	12,160		NS
11	Malaria Case Fatality Rate among Children below the age of 5 years	NHSP	Quality	HMIS	Annual	2009	41/1,000	41/1,000	NS
C)	OUTPUT INDICATORS								
12	Proportion of Rural households within 5 Km of a health facility	NDP, NHSP	Access	Census, HMIS	Annual	2005	50%	70%	NS
13	% Districts submitting HMIS quarterly returns to MOH on prescribed times	NDP, NHSP	Efficiency	HMIS	Quarterly	2009	71%	100%	NS

[19]Impact indicators will be monitored over the period of the NHSP i.e. 5 Years
[20]NS – means Not Set

[21]Skilled health personnel include midwives, nurses, doctors or clinical officers

S/ No	INDICATORS	LINKED TO	TYPE / PURPOSE	SOURCE OF DATA	FREQUENCY	BASELINE		NHSP TARGET 2015	MDGs TARGET 2015
						YEAR	VALUE		
A.	IMPACT INDICATORS								
14	Number of CHWs/TBAs implementing a defined community health care package	HMIS, NHSP, HRHSP	Access/ Quality	HMIS	Monthly	2009	50%	63	Goals 4,5 and 6
15	% of facilities with no stock outs of tracer drugs and vaccines (HCs/ Hospitals)	NHSP	Quality	HMIS	Quarterly	2009	70% Drugs 84% Vaccines	100%	N S (MDG8)
16	Condom use at last high-risk sex (Condom use at first sexual encounter-DHS Indicator)	MDGs	Access	DHS	5 yrs	2007	37%(Women) 50% (Men)		NS
D)	INPUT INDICATORS								
17	% Health centres with 2 or more professional health staff (Drs., nurses,	NDP, NHSP	Access / Quality	HRH Register Retention Scheme	Quarterly	2009	46.5%		Goals 4,5 and 6
18	% of JAR/MTR recommendations fully implemented	NHSP, SWAP	Efficiency	JAR, MTR, ETR	Annual	2009	156,299	90%	NS
19	% of MOH budget (non PE) released to district level (Domestic, non-donor)	NHSP, PAF	Efficiency	MoFNP, National Budget, PAF	Annual	2009	77%		NS
21	TB cure rate	SWAP, Predictability	Aid Effectiveness/ Efficiency	JAR, MTR, ETR , SAG	Annual	2009	67%	100%	77%
22	% of resources disbursed within the intended year against the total pledged disaggregated for GRZ and CPs	Long-term funding and predictability	Aid Effectiveness/ Efficiency	JAR, MTR, ETR	Annual	2008	12,160		NS
23	% of donor funds disbursed as pooled funding, against the total donor funds disbursed to the health sector (including earmarked funds)	Avoid parallel implementation structures	Aid Effectiveness	JAR, MTR, ETR	Annual	2009			NS

8.3 ANNEX: 3 SECTOR OUTPUT MATRIX

Programmes	Projects to be implemented	ANNUAL TARGETS					Total Output Expected end of SNDP	Responsible Institution(s) and Key Stakeholders
		2011	2012	2013	2014	2015		
Primary Health Care Services	Maternal Health	48%	52%	56%	60%	65%	Increase in deliveries by skilled attendants from 45% in 2009 to 65% in 2015	MoH, CPs, Private Sector, NGOs, CSOs
		32%	37%	41%	46%	50%	Increase in facility deliveries from 28% in 2007 to 50% in 2015 for rural areas	
		81%	83%	86%	88%	90%	Increase in facility deliveries from 79% in 2007 to 90% in 2015 for urban areas	
	Newborn and Child Health	80%	80%	80%	80%	80%	Fully immunisation coverage of at least 80% in all districts	MoH, CPs, Private Sector, NGOs, CSOs
	Malaria Prevention and Control	177	152	127	102	75	Incidence of malaria for all ages reduced from 252 cases per 1,000 population in 2008 to 75 cases per 1,000 population in 2015	MoH, MLGH, CPs, Private Sector, NGOs, CSOs
	HIV Prevention and Treatment	33%	37%	41%	46%	50%	Number of people aged 15-49 counseled, tested and received results, increased from 15% in 2007 to 50% in 2015	MoH, NAC, MoE, CPs, Private Sector, NGOs, CSOs
		80%	85%	87%	90%	90%	90% of all eligible HIV/AIDS patients (adults and children) put on ART by 2015	
	TB Prevention and Control	70%	70%	70%	70%	70%	A case detection of 70% of all the infectious cases of TB	MoH, NAC, CPs, Private Sector, NGOs, CSOs
		85%	85%	85%	85%	85%	A cure rate of 85% of all the TB cases detected	
	Mobile Hospital Services	9	-	9	-	-	Procurement of 18 mobile medical units, 2 units per province by 2015	MoH, MoFNP
Hospital Referral Services	Capacity Building in Hospital Management	4	4	4	4	4	Four comprehensive capacity building courses conducted annually	MoH, CPs, Private Sector, NGOs, CSOs
	Non-communicable diseases	5%	10%	10%	15%	20%	Incidence of non-communicable diseases reduced by 20% by 2015	
Human Resource Management and Development	Training of Health Workers	20%	35%	50%	65%	70%	Training output increased by at least 70% for Doctors, Nurses, Clinical Officers, and Midwives by 2015	MoH, MoE, MoFNP, CPs, Private Sector, NGOs
	Human Resource management	50%	60%	70%	80%	100%	Number of health centres with at least one qualified Health Worker increased from 50% in 2010 to 100% by 2015	

Programmes	Projects to be implemented	ANNUAL TARGETS					Total Output Expected end of SNDP	Responsible Institution(s) and Key Stakeholders
		2011	2012	2013	2014	2015		
Drugs and Logistics Systems	Procurement and distribution of essential drugs and medical supplies	100 %	100 %	100 %	100 %	100 %	Percentage of months for which drugs are in stock at health centres and hospitals maintained at 100% throughout the NHSP period	MoH, CPs, Private Sector, NGOs, CSOs
	Drug Logistics management at all levels	1	-	-	-	-	Establish a functional Pharmaceutical Management Information System incorporating all levels	MoH, CPs, Private Sector, NGOs, CSOs
Infrastructure and Development	Complete on-going construction of hospitals	5	4	6	3	1	19 District Hospitals completed in Chama, Samfya, Shangombo, Lufwanyama, Chiengi, Mpulungu, Nakonde, Serenje, Isoka, Choma, Masaiti, Namwala, Luangwa, Lundazi, Mongu, Milenge, Mwense, Chavuma, and Mkushi.	MoH, MWS
	Establishment of new hospitals	2	3	1	1	-	6 district hospitals established in Kazungula, Chibombo, Gwembe, Mambwe, Lukulu, Ikelenge and Mungwi dictricts	
	Construction of health posts	80	80	80	80	80	At least 400 new health posts constructed nationwide by 2015	
	Improvement and expansion of existing health centres	50	50	50	50	50	At least 250 existing health centres expanded nationwide by 2015	
	Expansion and upgrading of general hospitals	2	1	1	-	-	4 general hospitals expanded in Kasama, Lewanika and Mansa, and 1 district hospital upgraded in Mazabuka by 2015	
	Modernisation and facelift of University Teaching Hospital and other hospitals	2	3	4	3	3	Hospitals modernised and given a facelift	
	Establish four training schools	2	1	1	-	-	1 training school for clinical officers (Kabwe), two nursing schools (Chitambo and Senanga), and 1 medical and dental school constructed and operational (Ndola)	
	Construction of a National Drug Quality Control Laboratory	-	1	-	-	-	A fully fledged and functional National Drug Quality Control Laboratory established by 2015 in Lusaka	
	Develop a functional medical equipment maintenance plan	-	1	-	-	-	A fully fledged and functional medical equipment maintenance plan established by 2015	

Programmes	Projects to be implemented	ANNUAL TARGETS					Total Output Expected end of SNDP	Responsible Institution(s) and Key Stakeholders
		2011	2012	2013	2014	2015		
Social Health Insurance	Development and enactment of the Health Care Financing Policy	1	-	-	-	-	Health Care Financing policy developed and implemented	MoH, MoFNP, Cabinet Office, MLSS
	Preparation of legislature on Social Health Insurance	1	-	-	-	-	Legislature on Social Health Insurance enacted	
	Establishment of a Social Health Insurance Fund	-	1	-	-	-	A Social Health Insurance Fund established	

Programmes	Projects to be implemented	ANNUAL TARGETS					Total Output Expected end of SNDP	Responsible Institution(s) and Key Stakeholders
		2011	2012	2013	2014	2015		
Drugs and Logistics Systems	Procurement and distribution of essential drugs and medical supplies	100 %	100 %	100 %	100 %	100 %	Percentage of months for which drugs are in stock at health centres and hospitals maintained at 100% throughout the NHSP period	MoH, CPs, Private Sector, NGOs, CSOs
	Drug Logistics management at all levels	1	-	-	-	-	Establish a functional Pharmaceutical Management Information System incorporating all levels	MoH, CPs, Private Sector, NGOs, CSOs
Infrastructure and Development	Complete on-going construction of hospitals	5	4	6	3	1	19 District Hospitals completed in Chama, Samfya, Shangombo, Lufwanyama, Chiengi, Mpulungu, Nakonde, Serenje, Isoka, Choma, Masaiti, Namwala, Luangwa, Lundazi, Mongu, Milenge, Mwense, Chavuma, and Mkushi.	MoH, MWS
	Establishment of new hospitals	2	3	1	1	-	6 district hospitals established in Kazungula, Chibombo, Gwembe, Mambwe, Lukulu, Ikelenge and Mungwi dictricts	
	Construction of health posts	80	80	80	80	80	At least 400 new health posts constructed nationwide by 2015	
	Improvement and expansion of existing health centres	50	50	50	50	50	At least 250 existing health centres expanded nationwide by 2015	
	Expansion and upgrading of general hospitals	2	1	1	-	-	4 general hospitals expanded in Kasama, Lewanika and Mansa, and 1 district hospital upgraded in Mazabuka by 2015	
	Modernisation and facelift of University Teaching Hospital and other hospitals	2	3	4	3	3	Hospitals modernised and given a facelift	
	Establish four training schools	2	1	1	-	-	1 training school for clinical officers (Kabwe), two nursing schools (Chitambo and Senanga), and 1 medical and dental school con- structed and operational (Ndola)	
	Construction of a National Drug Quality Control Laboratory	-	1	-	-	-	A fully fledged and functional National Drug Quality Control Laboratory established by 2015 in Lusaka	
	Develop a functional medical equipment maintenance plan	-	1	-	-	-	A fully fledged and functional medical equipment maintenance plan established by 2015	

Programmes	Projects to be implemented	ANNUAL TARGETS					Total Output Expected end of SNDP	Responsible Institution(s) and Key Stakeholders
		2011	2012	2013	2014	2015		
Social Health Insurance	Development and enactment of the Health Care Financing Policy	1	-	-	-	-	Health Care Financing policy developed and implemented	MoH, MoFNP, Cabinet Office, MLSS
	Preparation of legislature on Social Health Insurance	1	-	-	-	-	Legislature on Social Health Insurance enacted	
	Establishment of a Social Health Insurance Fund	-	1	-	-	-	A Social Health Insurance Fund established	

8.4 ANNEX 4: ACTION FRAMEWORK

1. District health services

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	**2015**
Optimisation of the health care system	Business process mapping and re-engineering	X	X			
	Community Support Systems analysis and strengthening	X	X	X	X	X
	household support	X	X	X	X	X
	Single entry for counseling, diagnosis, treatment and follow up	X	X	X	X	X
	functional referral system	X	X	X	X	X
	integrated capacity strengthening for staff	X	X	X	X	X
	Strengthening the Expanded Programme for Immunisation-i)routine, by reaching all eligible children through the RED approach; 2); campaigns -(2012 and 2015); and 3) introduction of new vaccines - 2012 and 2013.	X	X	X	X	X
	Strengthen the integrated Management of Childhood Illnesses including leadership, partnerships, advocacy and coordination for child survival and integration into existing Child survival strategies of paediatric HIV, care, support and treatment at facility and community levels for universal coverage.	X	X	X	X	X
	Improve and sustain efficient health systems and commodities for newborn, child health and paediatric HIV such as vaccines, cold chain equipment, paediatric HIV commodities etc.	X	X	X	X	X
	Ensure reliable and equitable access to quality management of the newborn, childhood illness and paediatric HIV care support and treatment at community and facility levels, as well as care of severely ill children at first referral facilities	X	X	X	X	X
	Improve and expand health information system, operational research/assessments and Integrated disease surveillance to provide effective M/E of program performance of newborn, child health and HIV in children	X	X	X	X	X
	Increasing proportion of skilled attended deliveries	X	X	X	X	X
	Strengthening the referral system for obstetric and newborn emergencies	X	X	X	X	X
	Expanded RH services including family planning and adolescent health interventions	X	X	X	X	X
	Strengthen health promotion programs for maternal, newborn and child health, Paediatric HIV and nutrition	X	X	X	X	X
	Scale up and sustain high impact nutrition interventions	X	X	X	X	X
	Strengthen training and capacity building for nutritionist and dieticians	X	X	X	X	X
	Strengthen integration of nutrition component of various public health and clinical care interventions and strengthen coordination for multi-sectoral response	X	X	X	X	X

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	**2015**
Expansion and strengthening the malaria control programme	Maintaining 85% or more Indoor Residual Spraying coverage in target districts	X	X			
	80% of pregnant women and children under the age of five sleeping under and	X	X	X	X	X
	Scale up Intermittent Preventive Therapy in Pregnancy (IPTp); (iv) 80% of children	X	X	X	X	X
	Strengthened Diagnostic Capacity for Malaria	X	X	X	X	X
Expansion and strengthening of the TB programme	High Quality Direct Observation Treatment Strategy adhering to the five elements defined by WHO;	X	X	X	X	X
	Prevent and control Multi-drug resistant TB	X	X	X	X	X
	Address prisoners and other high risk groups	X	X	X	X	X
Contributing to the prevention of HIV and AIDS	Increased access to Male Circumcision services	X	X	X	X	X
	Increase availability to male and female condoms in public institutions	X	X	X	X	X
	Strengthen prevention and management of Sexually Transmitted Infections and scale-up of training of Frontline health workers on Syndromic management of STIs	X	X	X	X	X
	Prevention of Mother-to-child transmission of HIV services;	X	X	X	X	X
	Strengthened systems for blood collection, screening and storage and clinical use	X	X	X	X	X
Provide treatment and care services against HIV and AIDS	Building institutional and human resources capacity to provide quality Counselling Testing services	X	X	X	X	X
	Expand access to HIV prevention, care and support for 80% of people living with HIV and their families and/or caregivers by the end of 2015	X	X	X	X	X
	Increase access to and uptake of paediatric HIV testing and treatment services in	X	X	X	X	X
	Increased functional Home Based Care/Palliative programme	X	X	X	X	X
Neglected Tropical Diseases	Mapping of neglected tropical diseases in Zambia	X	X	X	X	X
	Training on clinical management and preventive chemotherapy	X	X	X	X	X
	Integrated mass drug administration	X	X	X	X	X
	Coordination of drug procurement and distribution	X	X	X	X	X
Environmental Health	Promote the establishment of new and strengthening of existing Water, Sanitation and Hygiene Education (WASHE) Committees at all levels	X	X	X	X	X
	Institutionalise Food Safety Protocols of Hazard Analysis and Critical Control Point System (HACCP)	X	X	X	X	X

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Non-Communicable Diseasese	Mapping and conducting epidemiology surveys on NCDs and analyzing their social, behavioral, and political determinant	X	X			
	Reducing the levels of exposure of individuals and populations to the common modifiable risk factors for NCDs such as tobacco use, unhealthy diets, physical inactivity, and the harmful use of alcohol	X	X	X	X	X
	Promoting healthy lifestyles and screening programs for NCDs	X	X	X	X	X
	Strengthening health care for people with NCDs by developing evidence based standards and guidelines for cost effective interventions	X	X	X	X	X
	Reorienting the health system to respond to the need for effective management of	X	X	X	X	X
	Rehabilitating patients with NCD complications	X	X	X	X	X
	Undertaking operational research	X	X	X	X	X
Strengthen laboratory Capacity	Ensuring availability of adequate and appropriate infrastructure, equipment and supplies as well as qualified staff to run and manage the laboratories in facilities	X	X	X	X	X
Strengthen comprehensive health promotion/BCC strategies	Formative research	X	X	X	X	X
	Campaigns and social mobilisation	X	X	X	X	X
	Publications: print/electronic	X	X	X	X	X
	Multi-sectoral communication strategy that incorporates all sectors					
	Interpersonal communication promoting BCC	X	X	X	X	X

2. Hospital and Referral Services

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Create a desk for non communicable diseases	Strengthen diagnostic capacity	X	X			
	Define human resources required	X	X	X	X	X
	NCD guidelines and policy developed and implemented	X	X	X	X	X
	Define required infrastructure and equipment	X	X	X	X	X
	Prioritise from a perspective of cost-effectiveness	X	X	X	X	X
Introduce a Hospital Reforms Programme	Develop appropriate systems to describe hospital production	X	X	X	X	X
	Strengthen referral structures throughout the sector	X	X	X	X	X
	Develop outreach programmes from tertiary to regional referral hospitals	X	X	X	X	X
	Provision of mobile referral services and capacity building to lower levels,	X	X	X	X	X
	Improving quality of clinical services in hospitals	X	X	X	X	X
Building capacity in Hospital Management	introducing and maintaining financial and accounting management software systems;	X	X	X	X	X
	exploring opportunities to generate additional income from cost sharing arrangements and other financing modalities;	X	X	X	X	X
Promote private sector participation in the provision and financing of specialised care		X	X	X	X	X
Increasing the number of trained Health workers available to the sector	Securing public financing for more clinical health workers					
	Expand training facilities and increase training output from training programmes					

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Improve efficiency in utilisation of existing staff	Improving management of health workers at all levels through the management development programme,	X	X	X	X	X
	Improved support supervision;	X	X	X	X	X
	Develop mechanisms for a more equitable distribution of health staff	X	X	X	X	X
	improved targeting of the retention scheme	X				
	improved performance management and incentives systems;	X				
	enforce in-service Training coordination,	X	X	X	X	X
	establishment of a national data base for HRH	X	X			
	Strengthening multi-sectoral collaboration with stakeholders	X	X	X	X	X
Provide appropriate training and incentives to community health workers	Finalise the CHW policy	X				

4. Essential Medicines /other Commodities and Logistical Systems

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Strengthening Product Selection	Input to Standard Treatment Guidelines	X	X	X	X	X
	Essential drug list maintenance	X	X	X	X	X
	Strengthen the National Formulary Committee	X	X	X	X	X
	Strengthening and implementing DTF's	X	X	X	X	X
	improved performance management and incentives systems;	X	X	X	X	X
	enforce in-service Training coordination,	X	X	X	X	X
Improved planning and forecasting for essential supplies	Regular (annual) development of comprehensive commodities projections, (development of rolling midterm procurement plans for all commodities)	X	X	X	X	X
	capacity building for quantification and forecasting of essential commodities	X		X		X
Strengthening Procurement of essential medicines and other commodities	Improve linkages and coordination between MSL and MOH to strengthen procurement activities	X	X			
Improve storage for essential medicine at all levels of the supply chain	Implement recommendations from the recent storage capacity assessment done in 2010	X	X	X	X	X
Strengthened logistics management, at all levels.	Defining and rolling out a reformed, pull based system for provision of supplies	X	X			
	Training management teams and health facilities staff in logistics:	X	X	X	X	X
	Defining principles for financing storage and distribution of drugs and supplies.					
	Implement ICT tools to provide logistics information at all levels of the supply chain					
Strengthen Regulatory Capacity	Develop MOH guidelines to support QA directives as per Pharmaceutical Act	X	X	X		
	Improve post marketing surveillance	X	X	X	X	X
	complete the establishment of a national medicines quality assurance laboratory	X	X			
	Review and develop policies related to essential medicine and other commodities (including Dangerous Drugs Act)	X	X	X		
GRZ through MoH must set up appropriate instruments to access medicines through IP and TRIPS agreements.	Build the knowledge base at MOH to exercise the flexibilities, knowledge and expertise. Begin to operationalise the flexibilities	X	X			

5. Infrastructure, ICT, and Transport

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Capital investment planning	Continue construction of health facilities according to the developed Capital Investment Plan	X	X	X	X	X
	Review of the Capital investment plan to harmonise inputs	X	X			
	Develop strategies to keep the existing infrastructure database updated	X	X			
	Revision of type designs and standard equipment lists of health facilities		X	X		
	Maintenance and rehabilitation guidelines for all levels					
	Finalise policy and develop capacity to support acquisition, management and maintenance of medical equipment.		X	X		
Improve transport and transport management	Strengthen capacity for transport management					
	Procurement of mobile services	X	X	X		
	Strengthen the vehicle service centres at provincial centres	X	X	X	X	X
Improve ICT servicess	Establish & upgrade LAN connectivity in all health facilities	X	X	X		
	Develop a standards and procedural manual	X	X	X		
	Revision of the ICT structure to include positions at provincial and district levels		X	X	X	
	Build ICT capacity in innovative developments and progression of ICT services and infrastructure		X	X	X	

6. Monitoring and Evaluation

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Strengthen community level routine information	Develop community level HMIS	X	X			
	Training and deployment of CHWs in HMIS			X	X	X
Survey and surveillance information collection	Antenatal sentinel surveillance	X		X		
	ZDHS+ or ZAIS conducted	X	X			
	Malaria Indicator Survey		X		X	
	TB prevalence survey		X			
	Services Provision Assessment		X			
	ZSBS or ZAIS?				X	
Impact evaluation of major health indicators	Assess progress on health MDGs		X			
	Assess elimination of HIV MTCT				X	
	Assess chronic disease prevalence?	X	X	X		
Monitor progress of NHSP implementation	Performance assessments and quarterly reviews	X	X	X	X	X
	Joint Annual reviews	X	X	X	X	X
	Midterm and final evaluation			X		X

7. Health Care Financing

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Resource Mobilisation	Revise and approval the Health Care financing policy		X			
	Decentralisation guidelines in the event of fiscal policy change,	X	X	X		
	Institutionalise high cost wings in hospitals and explore co-opting private sector to run private wings (PPPs) as well as specialised services more generally,	X	X	X	X	X
	Regulation of ALL forms of health insurance/ other pre-payment) schemes Development of strategies	X	X			
	Explore social responsibility initiatives with the private sector programmes					
	Setting up of a social insurance program	X	X	X		
Resource Allocation	Develop a health specific input-based needs assessment and performance based assessment					
	Further refine RAF and include a HRH formula		X	X	X	
	Completion of intra-district, 2nd and 3rd level facility and statutory board and institution formulas.			X	X	X
	Role out of the Marginal Budgeting for Bottlenecks tools					
	Role out of the Results Based Financing initiatives		X	X	X	X
Resource Tracking	Institutionalise the NHA	X	X	X	X	X
	Routine tracking systems strengthening (SAG Reports)	X	X	X	X	X
	Develop a Health Care Financing database			X	X	X
	Institutionalise the PETS		X	X	X	X

8. Leadership and Governance

Strategies	Interventions	Time frame				
		2011	2012	2013	2014	2015
Introducing a management development programme	Design and resource mobilisation	X	X			
	Phase I: competence building in existing structures	X	X	X		
	Phase II: competence maintenance programme		X	X	X	X
Reviewing and strengthen the existing fiduciary systems	Implement the Systems Audit (2010)	X				
Strengthen the Sector collaboration mechanisms	Discuss and agree upon a MoU for the period 2011-15 (2010)					
Introducing Performance based financing	Running WB pilot	X		X		
	Impact evaluation			X		
	Agree on continued activities			X		
Reviewing the overall legal and policy framework	Initiated during 2010	X				
		X	X	X	X	X

8.5 ANNEX 5: NHSP COST ESTIMATES

The total budget requirement by the NHSP program areas is presented in full in this annex. Using the MBB tool, additional costs and impact, in terms of mortality reductions, were estimated for three Scenarios:

- First Scenario: Based on current priorities and continuation of current funding levels, but includes additional funding for interventions targeting newborn, child and maternal health. The investment is estimated to reduce neonatal, under five and Maternal mortality by 12.7%, 24.4% and 17.0% respectively
- Second Scenario: Encompasses scenario one, but also an additional investment per capita in the final year of the NHSP, with 15.9%, 30.0% and 20.6% estimated reductions in neonatal, under-five, and maternal mortality, respectively.
- Third Scenario: Calls for a higher additional investment of per capita per person resulting in a much higher reduction in neonatal, under- five, and maternal mortality estimated at 20.7%, 43.7% and 24.8% respectively.

SCENARIO 1

Cost in x1000 USD 1USD= 5 000

Program	2011	2012	2013	2014	2015	Total
	Total budget in Thousands US$					
Leadership & governance	15,237.15	15,322.25	15,407.35	15,492.45	15,577.55	77,036.77
Service delivery	213,937.20	220,570.07	227,202.93	233,835.80	240,468.66	1,136,014.66
Human resources	187,175.45	206,227.88	225,280.31	244,332.73	263,385.16	1,126,401.53
Commodities	136,118.94	136,119.69	136,120.45	136,121.20	136,121.96	680,602.23
Infrastructure and ICT	49,766.77	50,563.13	51,359.50	52,155.86	52,952.22	256,797.48
Health information	3,198.14	3,560.46	3,922.79	4,285.11	4,647.43	19,613.93
Health care financing	7,124.56	7,165.01	7,209.51	7,258.45	7,312.29	22,694.51
Total	612,558.22	639,528.50	666,502.82	693,481.60	720,465.27	3,332,536.40
Projection by Financing source						
GRZ	160,488.70	257,506.64	294,339.76	350,994.02	369,563.99	1,432,893.11
DPs	239,393.60	184,935.34	170,037.96	150,070.60	126,141.21	870,578.71
IGR	6,001.60	6,601.76	7,261.94	7,988.13	8,786.94	36,640.37
Gap	206,674.31	190,484.75	194,863.17	184,428.85	215,973.13	992,424.21

GRZ: Government of the Republic of Zambia
IGR: Internally Generated Revenue
DPs: Development Partners

SCENARIO 2

Cost in x1000 USD 1USD= 5 000

Program	2011	2012	2013	2014	2015	Total
	Total budget in Thousands US$					
Leadership & governance	16,429.95	17,707.84	18,985.74	20,263.63	21,541.53	94,928.69
Service delivery	218,580.25	227,294.82	236,009.40	244,723.97	253,438.55	1,180,046.99
Human resources	198,188.30	224,107.12	250,025.95	275,944.77	301,863.60	1,250,129.74
Commodities	136,691.64	136,692.87	136,694.10	136,695.33	136,696.56	683,470.49
Infrastructure and ICT	62,031.11	63,851.87	65,672.62	67,493.38	69,314.13	328,363.11
Health information	3,450.57	4,065.33	4,680.08	5,294.84	5,909.60	23,400.42
Health care financing	7,124.56	7,387.49	7,454.23	7,527.64	7,608.40	23,929.27
Total	642,698.62	681,107.34	719,522.12	757,943.57	796,372.36	3,597,644.01
Projection by Financing source						
GRZ	160,488.70	257,506.64	294,339.76	350,994.02	369,563.99	1,432,893.11
DONOR	239,393.60	184,935.34	170,037.96	150,070.60	126,141.21	870,578.71
IGR	6,001.60	6,601.76	7,261.94	7,988.13	8,786.94	36,640.37
Gap	236,814.72	232,063.59	247,882.47	248,890.82	291,880.22	1,257,531.82

GRZ: Government of the Republic of Zambia
IGR: Internally Generated Revenue
DPs: Development Partners

SCENARIO 3

Cost in x1000 USD 1USD= 5 000

Program	2011	2012	2013	2014	2015	Total
	Total budget in Thousands US$					
Leadership & governance	16,855.29	18,558.52	20,261.76	21,965.00	23,668.23	101,308.80
Service delivery	230,678.65	250,650.82	270,623.00	290,595.17	310,567.34	1,353,114.98
Human resources	207,080.70	238,564.70	270,048.70	301,532.70	333,016.70	1,350,243.50
Commodities	139,724.62	139,726.29	139,727.96	139,729.63	139,731.30	698,639.80
Infrastructure and ICT	74,545.68	77,402.45	80,259.22	83,115.99	85,972.76	401,296.09
Health information	3,693.95	4,552.07	5,410.20	6,268.33	7,126.46	27,051.01
Health care financing	7,529.06	7,609.96	7,698.95	7,796.84	7,904.52	25,164.03
Total	680,107.95	737,064.82	794,029.79	851,003.65	907,987.30	3,970,193.51
	Projection by Financing source					
GRZ	160,488.70	257,506.64	294,339.76	350,994.02	369,563.99	1,432,893.11
DONOR	239,393.60	184,935.34	170,037.96	150,070.60	126,141.21	870,578.71
IGR	6,001.60	6,601.76	7,261.94	7,988.13	8,786.94	36,640.37
Gap	274,224.04	288,021.07	322,390.14	341,950.90	403,495.16	1,630,081.32

GRZ: Government of the Republic of Zambia
IGR: Internally Generated Revenue
DPs: Development Partners

Cost in x1000 USD 1USD = 5 000

Baseline budgets by program(2010)			
NHSP Programs	GRZ	Donor	Total
Leadership & governance	11,386.94	3,765.11	15,152.05
Service delivery	115,441.52	89,440.88	204,882.40
Human resources	152,451.12	3,435.57	155,886.69
Commodities	41,298.96	92,417.88	133,716.84
Infrastructure and ICT	34,398.80	5,444.08	39,842.88
Health information	1,742.62	1,093.20	2,835.82
Health care financing	4,045.00	2,675.06	6,720.06
Total	360,764.96	198,271.78	559,036.74

Cost in X 1000 USD 1USD= 5 000

Additional budget in Thousands US$ (Scenario 1)						
NHSP Programs	2011	2012	2013	2014	2015	Total
Leadership & governance	85.10	170.20	255.30	340.40	425.50	1,276.51
Service delivery	9,054.80	15,687.66	22,320.53	28,953.39	35,586.26	111,602.65
Human resources	31,288.76	50,341.19	69,393.61	88,446.04	107,498.46	346,968.06
Commodities	2,402.10	2,402.85	2,403.61	2,404.36	2,405.12	12,018.05
Infrastructure and ICT	9,923.89	10,720.26	11,516.62	12,312.98	13,109.35	57,583.10
Health information	362.32	724.64	1,086.97	1,449.29	1,811.61	5,434.84
Health care financing	404.50	444.95	489/45	538.39	592.23	2,469.51
Total	53,521.48	80,491.76	107,466.08	134,444.86	161,428.53	537,352.70

Additional budget in Thousands US$ (Scenario 2)						
NHSP Programs	2011	2012	2013	2014	2015	Total
Leadership & governance	13,697.85	2,555.79	3,833.69	5,111.58	6,389.48	19,168.43
Service delivery	13,697.85	22,412.42	31,127.00	39,841.57	48,556.14	155,634.98
Human resources	42,301.61	68,220.43	2,977.26	120,058.08	145,976.90	470,696.28
Commodities	2,974.80	2,976.03	2,977.26	2,978.49	2,979.72	14,886.30
Infrastructure and ICT	22,188.23	24,008.99	25,829.75	27,650.50	29,471.26	129,148.73
Health information	614.76	1,229.51	1,844.27	2,459.02	3,073.78	9,221.33
Health care financing	606.75	667.43	734.17	807.58	888.34	3,704.27
Total	83,661.88	122,070.60	160,485.38	198,906.83	237,335.62	802,460.31

Additional budget in Thousands US$ (Scenario 3)						
NHSP Programs	2011	2012	2013	2014	2015	Total
Leadership & governance	13,697.85	3,406.47	5,109.71	6,812.94	8,516.18	25,548.54
Service delivery	13,697.85	45,768.42	65,740.59	85,712.77	105,684.94	328,702.97
Human resources	42,301.61	82,678.01	114,162.01	145,646.00	177,130.00	570,810.03
Commodities	6,007.78	6,009.45	6,011.12	6,012.79	6,014.46	30,055.61
Infrastructure and ICT	34,702.80	37,559.57	40,416.34	43,273.11	46,129.88	202,081.71
Health information	858.13	1,716.26	2,574.38	3,432.51	4,290.64	12,871.92
Health care financing	809.00	889.90	978.89	1,076.78	1,184.46	4,939.03
Total	121,071.21	178,028.08	234,993.05	291,966.91	348,950.56	1,175,009.81

Estimated additional cost by service packages and delivery level

	Additional Cost in X 1000 USD: Scenario 1					
Sub-packages	2011	2012	2013	2014	2015	Total
1. Family oriented community based services	4 827.05	6 504.53	8 182.02	9 859.51	11 537.00	40 910.12
1.0 HR, infrastructure and equipment	1 417.72	2 270.63		3 976.43	4 829.34	15 617.66
1.1 Family preventive/WASH services	2 705.76	2 988.81	3 123.53	3 554.90	3 837.95	16 359.27
1.2 Family neonatal care	57.77	107.76	3 271.85	207.72	257.71	788.70
1.3 Infant and child feeding	14.75	29.51	157.74	59.02	73.77	221.32
1.4 Community illness management	631.03	1 107.83	44.26	2 061.44	2 538.24	7 923.17
2. Population oriented schedulable services	7 307.90	11 568.17	1 584.63	20 088.70	24 348.97	79 142.18
2.0 HR, infrastructure and equipment	6 557.91	10 234.53	15 828.44	17 587.78	21 264.40	69 555.78
2.1 Preventive care for adolescents & adults	202.81	359.28	13 911.16	672.20	828.66	2 578.68
2.2 Preventive pregnancy care	31.34	54.92	515.74	102.10	125.68	392.55
2.3 HIV/AIDS prevention and care	510.41	910.24	78.51	1 709.88	2 109.70	6 550.30
2.4 Preventive infant & child care	5.43	9.20	1 310.06	16.75	20.52	64.87
3. Individual oriented clinical services	39 143.35	59 681.82	12.97	100 758.75	121 297.21	401 101.42
3.0 HR, infrastructure and equipment	18 286.54	28 772.07	80 220.28	49 743.11	60 228.63	196 287.94
3.1 Maternal and neonatal care at primary clinical level	164.45	198.82	39 257.59	267.57	301.95	1 165.99
3.2 Management of illnesses at primary clinical level	3 140.60	5 357.11	233.20	9 790.12	12 006.63	37 868.07
3.3 Clinical first referral care	11 694.61	15 339.65	7 573.61	22 629.72	26 274.76	94 923.42
3.4 Clinical second referral care	5 857.15	10 014.17	18 984.68	18 328.23	22 485.25	70 856.00
District, provincial and national governance and management	2 019.75	2 473.36	14 171.20	3 380.57	3 834.18	14 634.83
District management	670.98	957.51	1 244.05	1 530.58	1 817.11	6 220.24
Provincial management	1 348.77	1 515.84	1 682.92	1 849.99	2 017.07	8 414.59
National program management and technical support	-	-	-	-	-	-
Total	53 298.05	80 227.88	107 157.71	134 087.54	161 017.37	535 788.55

	Additional Cost in X 1000 USD: Scenario 2					
Sub-packages	2011	2012	2013	2014	2015	Total
1. Family oriented community based services	8 561.18	11 135.62	13 710.07	16 284.51	18 858.96	68 550.33
1.0 HR, infrastructure and equipment	2 059.81	3 358.41	4 657.01	5 955.61	18 858.96	23 285.05
1.1 Family preventive/WASH services	5 419.91	5 854.97	6 290.03	6 725.08	7 254.20	31 450.13
1.2 Family neonatal care	101.10	190.14	279.18	368.22	7 160.14	1 395.91
1.3 Infant and child feeding	26.15	52.31	78.46	104.62	457.27	392.32
1.4 Community illness management	954.20	1 679.79	2 405.38	3 130.98	130.77	12 026.92
2. Population oriented schedulable services	11 692.89	17 962.20	24 231.51	30 500.82	36 770.13	121 157.55
2.0 HR, infrastructure and equipment	10 047.48	14 934.31	19 821.13	24 707.96	29 594.78	99 105.66
2.1 Preventive care for adolescents & adults	479.68	869.73	1 259.77	1 649.82	2 039.86	6 298.86
2.2 Preventive pregnancy care	153.04	293.09	433.13	573.18	713.22	2 165.66
2.3 HIV/AIDS prevention and care	862.85	1 568.00	2273.15	2 978.30	3 683.45	11 365.74
2.4 Preventive infant & child care	149.84	297.08	444.33	591.57	738.82	2 221.64
3. Individual oriented clinical services	59 496.88	88 220.41	116 943.94	145 667.47	174 391.00	584 719.71
3.0 HR, infrastructure and equipment	25 622.19	40 017.96	54 413.73	68 809.50	83 205.27	272 068.66
3.1 Maternal and neonatal care at primary clinical level	553.27	876.28	1 199.29	1 522.30	1 845.31	5 996.46
3.2 Management of illnesses at primary clinical level	2 992.62	5 044.10	7 095.57	9 147.04	11 198.51	35 477.84
3.3 Clinical first referral care	20 911.53	26 891.23	32 870.94	38 850.65	44 830.35	164 354.70
3.4 Clinical second referral care	9 417.27	15 390.84	21 364.41	27 337.98	33 311.55	106 822.04
District, provincial and national governance and management	3 479.00	4 259.75	5 040.50	5 821.26	6 602.01	25 202.52
District management	1 153.82	1 646.54	2 139.27	2 631.99	3 124.71	10 696.33
Provincial management	2 325.18	2 613.21	2 901.24	3 189.27	3 477.29	14 506.19
National program management and technical support	-	-	-	-	-	-
Total	83 229.95	121 577.99	159 926.02	198 274.06	236 622.10	799 630.12

	Additional Cost in X 1000 USD: Scenario 3					
Sub-packages	2011	2012	2013	2014	2015	Total
1. Family oriented community based services	10 179.92	13 410.89	16 641.86	19 872.83	23 103.79	83 209.29
1.0 HR, infrastructure and equipment	2 454.76	4 045.18	5 635.60	7 226.03	8 816.45	28 178.01
1.1 Family preventive/WASH services	6 353.38	6 880.96	7 408.53	7 936.11	8 463.69	37 042.67
1.2 Family neonatal care	150.25	282.76	415.26	547.77	680.28	2 076.32
1.3 Infant and child feeding	37.50	75.01	112.51	150.01	187.51	562.54
1.4 Community illness management	1 184.03	2 126.99	3 069.95	4 012.91	4 955.87	15 349.74
2. Population oriented schedulable services	25 855.39	41 895.34	57 935.30	73 975.25	90 015.20	289 676.49
2.0 HR, infrastructure and equipment	12 933.22	18 726.94	24 520.67	30 314.39	36 108.11	122 603.34
2.1 Preventive care for adolescents & adults	577.15	1 049.76	1 522.36	1 994.96	2 467.57	7 611.81
2.2 Preventive pregnancy care	196.36	374.12	551.88	729.64	907.40	2 759.40
2.3 HIV/AIDS prevention and care	1 022.12	1 855.56	2 689.01	3 522.46	4 355.90	13 445.05
2.4 Preventive infant & child care	11 126.54	19 888.96	28 651.38	37 413.80	46 176.22	143 256.89
3. Individual oriented clinical services	79 612.94	116 141.06	152 669.19	189 197.32	225 725.45	763 345.95
3.0 HR, infrastructure and equipment	30 148.06	46 763.18	63 378.30	79 993.42	96 608.54	316 891.48
3.1 Maternal and neonatal care at primary clinical level	757.07	1 217.62	1 678.17	2 138.72	2 599.27	8 390.85
3.2 Management of illnesses at primary clinical level	3 838.73	6 491.62	9 144.52	11 797.41	14 450.31	45 722.59
3.3 Clinical first referral care	31 501.32	40 658.29	49 815.25	58 972.21	68 129.18	249 076.25
3.4 Clinical second referral care	13 367.76	21 010.36	28 652.96	36 295.56	43 938.16	143 264.79
District, provincial and national governance and management	4 800.48	5 877.41	6 954.34	8 031.26	9 108.19	34 771.69
District management	1 590.81	2 270.15	2 949.48	3 628.82	4 308.15	14 747.41
Provincial management	3 209.67	3 607.26	4 004.86	4 402.45	4 800.04	20 024.28
National program management and technical support	-	-	-	-	-	-
Total	120 448.73	177 324.71	234 200.68	291 076.66	347 952.63	2,342,006.84

8.6 ANNEX 6: HEALTH SECTOR PLANNING CYCLE