MINISTRY OF HEALTH

Zambian Strategic Plan 2013-2016
NON-COMMUNICABLE DISEASES AND THEIR RISK FACTORS

Version 1

Ministry of Health
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LIST OF ACRONYMS

AIDS	Acquired Immuno Deficiency Syndrome
BP	Blood Pressure
CDH	Cancer Diseases Hospital
CHA	Community Health Assistant
CHAZ	Churches Health Association of Zambia
COPD	Chronic Obstructive Pulmonary Diseases
CPs	Cooperative Partners
CSO	Census Statistical Office
CVD	Cardiovascular diseases
DALYs	Disability Adjusted Life Years
DCMO	District Community Medical Officer
DHIS	District Health Information System
FCTC	Framework Convention on Tobacco Control
GDP	Gross Domestic Product
GSHS	Global Student Health Survey
GYTS	Global Youth Tobacco Survey
HF	Health Facility
HIV	Human Immuno-deficiency Virus
HMIS	Health Management Information Systems
HRH	Human Resources for Health
IEC	Information, Education Communication
IHD	Ischaemic Heart Disease
JAR	Joint Annual Reviews
KS	Kaposi Sarcoma
LCMS	Living Conditions Monitoring Survey
M&E	Monitoring and Evaluation
MCDMCH	Ministry of Community Development Mother and Child Health
MCH	Mother and Child Health
MDG	Millennium Development Goals
MoH	Ministry of Health
MoU	Memorandum of Understanding
MP	Member of Parliament
NCD	Non-Communicable Diseases
NDP	National Development Plan
NHL	Non Hodgkins Lymphoma
NHSP	National Health Strategic Plan
OPD	Out-patient department
PHC	Primary Health Care
PMOs	Provincial Medical Officer
RAAB	Rapid Assessment on Avoidable Blindness
RTA	Road Traffic Accident
SAG	Sector Advisory Group

SNDP	Six National Development Plan
SP	Strategic Plan
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Diseases
SWAps	Sector Wide Approaches
SWOT	Strengths Weakness Opportunity and Threats
TB	Tuberculosis
TWG	Technical Working Group
UN	United Nations
USD	United States Dollars
UTH	University Teaching Hospital
WHO	World Health Organisation
ZDHS	Zambia Demographic Health Survey

FOREWORD

Non-communicable Diseases (NCDs) are a major cause of disability and premature death and contributes substantially to the escalating costs of health care. Their onset is often insidious and in Zambia, patients often present themselves when the disease is advanced, and generally in middle age. Over 80% of mortality from NCDs is caused by four main NCDs- cardiovascular disorders, cancer, diabetes mellitus and chronic obstructive pulmonary disease. These four major NCDs share similar risk factors. Modification of risk factors has been shown to reduce mortality and morbidity in people with diagnosed or undiagnosed NCDs.

Recommendations have been made for the reduction of NCD risk factors through changes in lifestyles, primary prevention, screening and early diagnosis. This strategic plan provides guidance on the interventions needed to reduce the burden of NCDs in the country.

Given that many conditions are preventable, every health care interaction should include prevention support. When patients are systematically provided with information and skills to reduce health risks, they are more likely to reduce/stop alcohol and substance abuse, stop using tobacco products, practice safe sex, eat healthy foods, engage in physical activity, request for screening, and subsequently seek medical attention early. These risk reducing behaviours can dramatically reduce the long-term burden and health care demands of chronic conditions.

A collaborative management approach at the primary health care level with patients, their families and other health care actors is a must to effectively prevent many major contributors to the burden of disease. Screening for NCDs should be integrated with other existing clinical services at the primary health care (PHC) level such as HIV clinics, maternal and child health (MCH), out-patient departments and cervical cancer screening clinics.

In conclusion, this action plan is intended to be the basis of national response to burden of NCDs in line with the UN political declaration on NCDs and the Global Action Plan 2013-2020.

Hon. Dr. Joseph Kasonde, MP
MINISTER OF HEALTH

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1 EXECUTIVE SUMMARY

Introduction

Zambia is currently experiencing a high burden of non-communicable diseases (NCDs), with significant consequences on morbidity and mortality. This document presents the national NCDs Strategic Plan 2013-2016 (NCD-SP 2013-16). It presents the national strategic framework for the management and control of NCDs in Zambia, for the next four years, ending 2016, when it will be due for updating in line with subsequent National Development Plan (NDP). The plan is linked to, and will be implemented within the framework of the National Health Strategic Plan 2013-2016 (NHSP 2013-16) and the Sixth National Development Plan (SNDP) 2013-2016.

Process

The plan was developed through a highly consultative process, involving key stakeholders from both the public and private sectors. The process included the following phases: preliminary data collection and analysis, strategic planning workshop, preparation of the draft plan, review and approval.

Situation Analysis

The burden of NCDs in Zambia is increasing, with significant consequences on morbidity and mortality levels. The most common NCDs in the country include, chronic respiratory diseases, cardiovascular diseases (CVDs), diabetes mellitus (Type II), cancers, epilepsy, mental illnesses, oral health, eye diseases, injuries (mostly due to road traffic accidents and burns) and sickle cell anaemia. Most of these NCDs are associated with lifestyles, such as unhealthy diets, physical inactivity, alcohol and substance abuse and tobacco use.

Until recently, NCDs were not adequately prioritized and supported, as much of the attention was placed on the communicable diseases, particularly HIV and AIDS, malaria, tuberculosis (TB) and sexually transmitted infections (STIs). However, NCDs have now been prioritized in the NHSP 2013-16 and the Sixth National Development Plan (SNDP) 2013-2016. A needs assessment has been conducted, to establish the status and the gaps. A detailed analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) forms part of this plan.

Main Goal

To reduce mortality occasioned by NCDs in Zambia by 25% by 2025 and to attain the other 8 targets listed in the Global Action Plan 2013-20 for the prevention and control of NCDs (GAP, 2013-2020).

Strategic Directions

These strategic directions are based on a holistic system-wide approach, using the "Six Health System Building Blocks[1]" framework. Below is a summary of the key strategies.

S/N	Area of Focus/System Block	Key Strategies
1.	Health Service Delivery	• Scale up prevention of NCDs, through promotion of behaviour change and systems strengthening at all levels care.
		• Strengthen and scale up the early diagnosis, treatment, rehabilitation, care and support for people suffering from NCDs using a chronic diseases integrated approach.
2.	Health Workforce	• Ensure availability of adequate numbers and appropriately trained health workers, needed for the prevention and management of NCDs.
		• Decentralization of certain NCDs' health services to improve access to NCDs prevention, management and control.
3.	Medical Products, Infrastructure, Equipment and Transport	• Ensure availability of adequate, quality, efficacious, safe and affordable essential medicines and medical supplies for prevention, diagnosis and management of NCDs at all levels of the health system.
		• Ensure availability of appropriate essential infrastructure, equipment, technologies and transport needed for supporting the prevention and management of NCDs at all the levels
4.	Health Information	• Strengthen and scale up NCDs surveillance, information and research at all levels, and ensure evidence-based planning and decision making
5.	Healthcare Financing	• Ensure optimal and timely financing to NCDs programmes and effective allocation, utilization and tracking of the available resources, to achieve high impact and value-for-money.
6.	Leadership and Governance	• Establish and sustain appropriate leadership and governance systems and structures, in order to ensure efficiency, effectiveness and accountability in the management of the national response to NCDs, for higher impact.

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

2 INTRODUCTION

Non-Communicable Diseases (NCDs), particularly chronic respiratory diseases, hypertension, CVDs, diabetes, cancers, sickle-cell anaemia, mental health and injuries, have become a major public health problem across the world. In the past, NCDs were more associated with the developed countries, but this is no longer the case, as developing countries, including Zambia, are currently undergoing an epidemiological transition, from "Communicable or Infectious" to "Non-Communicable" diseases[2]. There is sufficient evidence that the burden of NCDs in the country is rapidly growing, with major consequences on morbidity and mortality levels (HMIS, Zambia). The main concern, however, is that NCDs are not receiving sufficient attention, particularly when compared to communicable diseases.

This document presents the national NCDs Strategic Plan 2013-2016 (NCD-SP 2013-16). It seeks to provide the strategic framework for the management, prevention and control of NCDs in Zambia, for the period 2013 to 2016. This plan has been developed, and will be implemented within the context of the National Health Strategic Plan 2013-2016 (NHSP 2013-16), which provides the overall strategic framework for health sector governance and development in Zambia. It has been developed through a broad-based consultative process, involving the key stakeholders, including other government line ministries, the Churches Health Association of Zambia (CHAZ), the civil society, associations of people living with NCDs, the private sector and the Cooperating Partners (CPs).

[2] http://www.prb.org/Articles/2006 /ChronicDiseases BeleaguerDevelopingCountries.aspx>p=1

3 BACKGROUND

Zambia is a landlocked country, with an area of 752,612 square kilometres. It shares borders with eight countries namely: the Democratic Republic of Congo, Angola, Botswana, Namibia, Zimbabwe, Malawi, Mozambique and Tanzania. The population of Zambia was estimated to be 13 092 666 with an annual growth rate of 2.8% (CSO, 2010). Out of the total population, 51% is that of females and 49% males. The population is relatively young, 45% per cent is that of persons below 15 years. Out of the total population, 60.5 per cent were residing in rural areas while 39.5 per cent were residing in urban areas, making Zambia one of the most urbanized countries in Africa. Although the population is relatively small, it is geographically scattered, making delivery of equitable health services close to the people a challenge

Table 1: Key health and demographic indicators

Indicator	Value	Year	Source	MDG target
Population	13 092 666	2010	CSO	-
Population Growth rate	2.8	2010	CSO	-
Total fertility rate (Females 15-49 Years)	6.2	2007	ZDHS	-
Maternal Mortality per 100,000 live births	591	2007	ZDHS	162.3
Infant Mortality per 1,000 live births	70	2007	ZDHS	35.7
Under Five Mortality per 1,000 live births	119	2007	ZDHS	63.6
Proportion of births attended by skilled health personnel	46.5	2007	ZDHS	-
Proportion of population without access to Safe Water (%)	36.9	2010	LCMS	25.5
Proportion of population without access to improved sanitation facilities (%)	67.3	2010	LCMS	13
HIV Prevalence (%)	14.3	2007	ZDHS	<15.6

Source: MoH, 2013

Health care delivery system:
The guiding principle of the health delivery system in Zambia is the provision of equity of access to cost effective quality health care as close to the family as possible. In its quest to attain the highest standard of health for the Zambian people, the health sector in Zambia strives to attain universal health coverage. The Ministry of Health and the Ministry of Community Development, Mother and Child Health (MCDMCH) are charged with the responsibility of delivering health care in Zambia. MoH is responsible for health policy formulation and oversees referral health services from

Level 2 provincial hospitals up to Level 3 tertiary hospitals, health training institutions and health statutory boards. MCDMCH is responsible for provision of Primary Health Care (PHC) services, from community, health posts, health centres and district hospitals.

Community ownership and participation are important pillars of the health system in the governance and delivery of health services in Zambia. In this respect MCDMCH has established structures to facilitate broad-based community ownership and participation. Health services in Zambia are delivered mainly through the public and private and are complimented by faith-based organizations under the coordination of the Churches Health Association of Zambia (CHAZ).

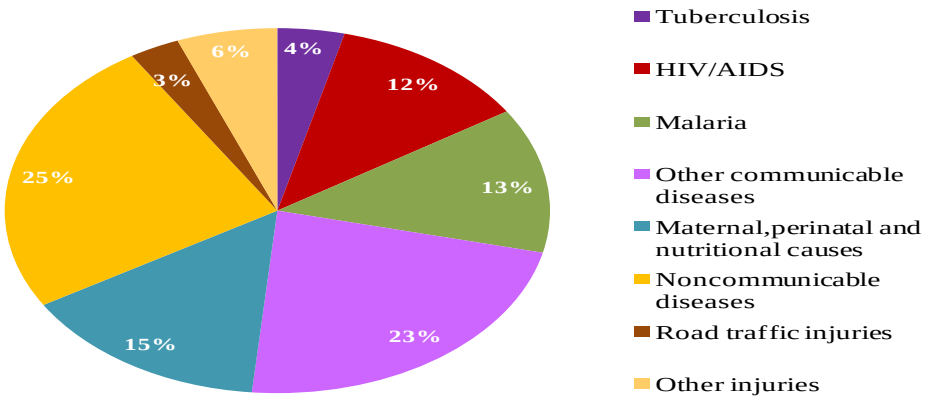
Justification

The global burden and threat of non-communicable diseases constitute a major challenge for the development in the 21st Century. It undermines social and economic development throughout the world and threatens the achievements of internationally agreed development goals in low and middle income counties. An estimated 36 million deaths or 63% of the 57 million deaths that occurred globally in 2008 were due to Non-Communicable Diseases, comprising mainly cardiovascular diseases (CVD) at 48%, cancers 21% , chronic respiratory disease at 12% and diabetes at 3.5% (WHO, 2012)[3]. In the same year, around 80% of all deaths (29 million) from NCDs in low income and middle income countries and a higher proportion (48%) of the deaths in latter countries were premature (under the age of 70) compared to high income countries (26%). The probability of dying from an NCD between 30 and 70 years is highest in sub-Saharan Africa, Eastern Europe and parts of Asia. It is estimated in sub-Saharan Africa that from 2008 to 2030 deaths due to NCDs will increase from a total of 28% to 46%[4]. According to WHO's projections, the total annual number of deaths from NCD will increase to 55 million by 2030, if the current trend is not reversed.

In the report by Marquez and Farrington (2013), for some time, much of the health focus in the Sub Saharan Africa (SSA) region has been understandably directed toward communicable diseases, maternal, perinatal and nutrition causes of mortality and morbidity. These all remain among the leading five causes of disability adjusted life yeas (DALYs) for the sub regions of SSA in 2010, accounting for 67% to 71% of DALYs in Eastern, Western, and Central SSA. TB, HIV/AIDS and Malaria were responsible for 22% of the all deaths in SSA in 2010, other communicable disease accounted for 23%. These figures are already slight exceeded by the 25% share of deaths caused by NCDs (figure 1)[5].

[3] World Health Statistics 2012. Geneva, World Health Organization 2012
[4] World Bank. The Growing Danger of Non-Communicable Diseases. Washington D.C., World Bank
[5] The Challenges of Non-Communicable Diseases and Road Traffic Injuries in SSA, 2013 pp 11

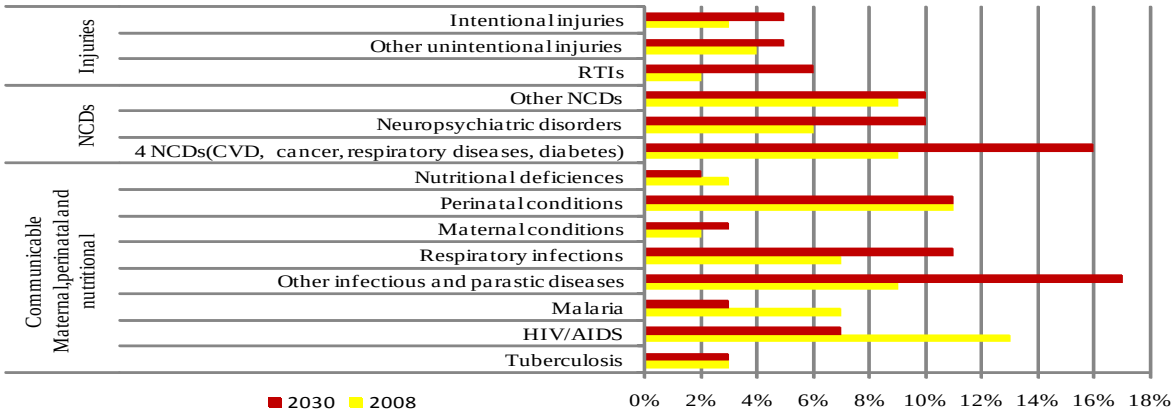
Figure 1: Proportion of deaths by cause in SSA, 2010



Source of data: Global Health Observatory Data Repository: http:/apps.who.int/ghodata/

By 2010, cerebrovascular diseases, diabetes and chronic pulmonary obstructive diseases (CORD) already existed as the 7th, 8th and 9th highest causes of DALYs in Southern SSA. A further shift in relative disease burden is expected: by 2030, the disease burden (in DALYs) for HIV/AIDS, malaria, and other infectious and parasitic conditions is expected to be significantly lower, with the four main NCDs becoming pre-eminent[6].

Figure 2: Projected Burden of Diseases (percentage of Total DALYs) by Groups of Disorders and Conditions, SSA, 2008 and 2030



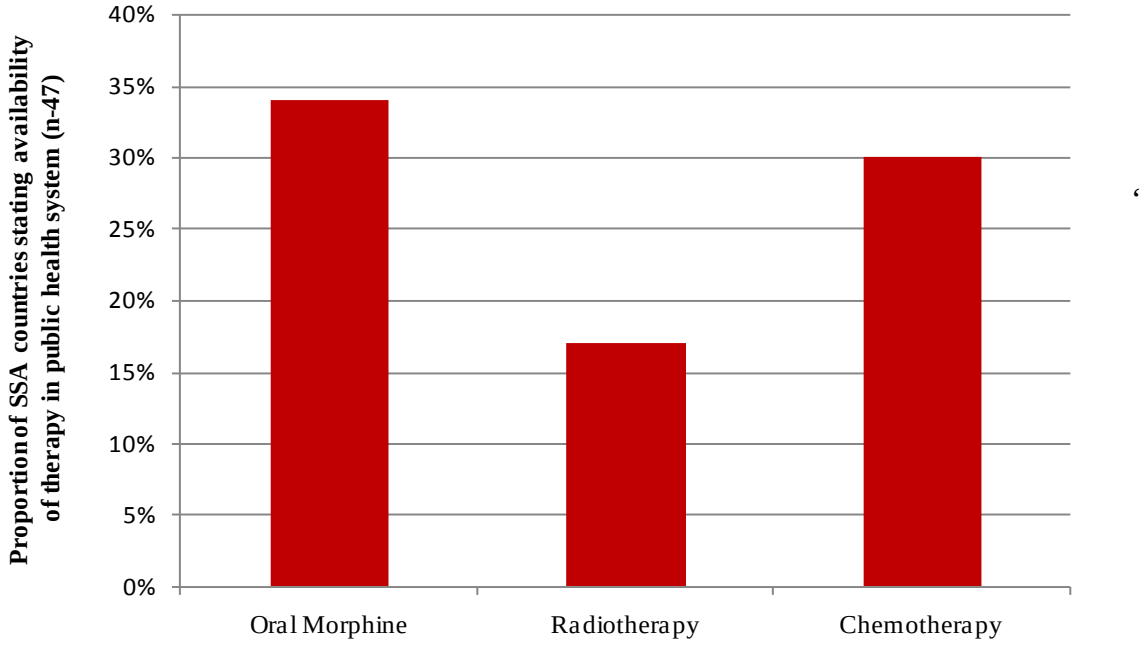
In low income countries such as Zambia, improvement in the quality and coverage of cancer treatment following standardized protocols is important, prioritizing which cancers to include in an early detection or screening program. There is limited availability of basic cancer therapies in

[6] The Challenges of Non-Communicable Diseases and Road Traffic Injuries in SSA, 2013 p.p. 12

SSA public health systems: even where stated to be available, this may only mean a few facilities in the whole country.

Access to pain relief and symptom control is poor in many developing countries. In SSA, an estimated 88 percent patients with cancer pain are without relief. Although some palliative care programs exist in Africa for cancer and other diseases such as AIDS, the general lack of awareness, policy, and provider skills add barriers to accessing pain medication[7].

Figure 3: General Availability of Cancer Therapies in the Public Health Systems in SSA, 2010-2011



However, not withstanding the growing burden of NCDs at national and global levels, these diseases have not been adequately prioritized, particularly in the developing countries. Globally, much of the focus has been directed at controlling communicable diseases, such as malaria, tuberculosis (TB), HIV and AIDS (HIV&AIDS), with minimal attention to NCDs. To this effect, NCDs were not even among the health related Millennium Development Goals (MDGs) (Horton, 2005), and there was no specific Global Health Initiative (GHI) targeted at NCDs.

Zambia is currently experiencing a rapid increase in the burden of NCDs. Although reliable and consistent country-level data on certain NCDs is a major challenge, there is sufficient evidence that NCDs are increasingly becoming a major public health problem in the country. According to HMIS data (2010-2013), it has been observed that Zambia has high prevalence of diabetes and

[7] The Challenges of Non-Communicable Diseases and Road Traffic Injuries in SSA, 2013 p.p. 46

hypertension mainly affecting provinces that have been conducting mining activities, namely, Copperbelt, Central and North-Western.

Whilst isolated efforts are being made to tackle specific NCDs and their risk factors, the country does not have a comprehensive and unified strategy to guide the fight against NCDs. This has led to fragmentation in the approach, and weak coordination and harmonization among the sectors and partners involved in the prevention, management and control of NCDs and their determinants. In view of the foregoing, Zambia has identified the need to develop and implement a national NCDs strategy, to provide a comprehensive and coordinated national response to the growing challenge of the prevention and management of NCDs.

Process

This plan has been developed by the health sector and its key partners in the prevention and management of NCDs. The process of developing this plan included the following main stages:

- Preliminary data collection and analysis.
- Strategic planning workshop.
- Preparation of the draft NCD-SP 2013-16.
- Review and approval of the plan.

The process involved broad consultations and active participation of the main stakeholders, including government line ministries, Church Health Association of Zambia (CHAZ), the private sector, the civil society, and CPs.

Structure of the Plan

The structure of this plan includes the following main components: the executive summary, presenting a brief summary of the plan; introduction, outlining the context of the plan; the background presents the justifications, process, structure and critical linkages; situation analysis, provides an analysis of the trends and status of NCDs; mission, vision, objectives and key principles, outlining the strategic focus; proposed strategic directions and key strategies, outlining the key directions and strategies planned for the next 5 years; and the proposed implementation framework. The full outline of the plan is represented by the table of contents.

Critical Linkages

This plan is closely linked to the health sector policy, regulatory and strategic frameworks, the national development agenda, and the global response to NCDs. At health sector level, the plan is linked to the NHSP 2011-15 and the specific policies and legislation relevant to NCDs. Through the NHSP 2013-16, the plan is linked to the Sixth National Development Plan 2013-2016 (SNDP) and the health chapter of the Zambia Vision 2030. The plan is also linked to the relevant regional and global policies and strategic frameworks on NCDs, particularly the World Health Assembly (WHA) resolutions and policy pronouncements on the control of NCDs.

4 SITUATION ANALYSIS - BURDEN OF NCDS IN ZAMBIA

4.1.1 Overview

NCDs have been traditionally defined as chronic diseases that are non-infectious by nature. Although, with recent advances, some of the NCDs have been linked with an infectious agent, it has not changed the definition.

Most of the NCD are chronic in nature, and cause progressive illness and debilitation. In this way, they reduce productivity of the individuals, draining away their resources, which aggravates poverty at household level, and affects the general economic and social wellbeing at household, community and country levels.

Currently, the burden of NCDs in Zambia is increasing, with significant consequences on the health of the general population. The most common NCDs in the country include hypertension, chronic respiratory diseases, CVDs, diabetes mellitus (Type II), cancers, epilepsy, mental illnesses, oral health, eye diseases, injuries (mostly due to road traffic accidents and burns) and sickle cell anaemia. Most of these health conditions are associated with lifestyles, such as unhealthy diets, physical inactivity, alcohol and substance abuse, and tobacco use, while others are associated with biological risk factors, such as heredity and old age. Table 1 below presents the trends in morbidity due to selected NCDs in Zambia over a three year period. Important to note is the increasing trend of more than ninety percent of all NCDs.

Table 1. Top eight (8) non communicable Diseases, for all ages combined, Zambia, 2009 to 2011

(All ages) - 2009		
Diseases	**No.**	**%**
Hypertension	101,181	44.9
Asthma	95,328	42.3
CVD	11,504	5.1
Epilepsy	9,364	4.2
Diabetes	5,632	2.5
Kaposi Sarcoma	1,827	0.8
Cervical cancer new	394	0.2
Breast Cancer	81	0.0
Total NCD cases	**225,311**	**100**

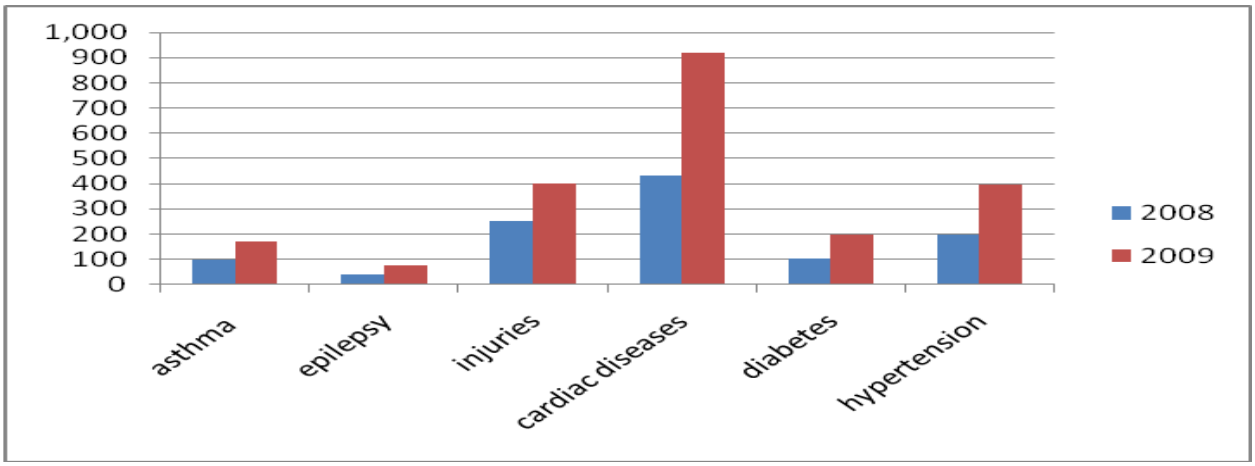
(All ages) - 2010		
Diseases	**No.**	**%**
Hypertension	118,549	37.5
Asthma	103,590	32.8
CVD	23,112	7.3
Epilepsy	36,422	11.5
Diabetes	21,048	6.7
Kaposi Sarcoma	9,493	3.0
Cervical cancer new	1,660	0.5
Breast cancer	2,131	0.7
Total NCD cases	**316,005**	100

(All ages) - 2011		
Diseases	**No.**	**%**
Hypertension	144,071	40.8
Asthma	109,932	31.1
CVD	24,350	6.9
Epilepsy	40,100	11.4
Diabetes	22,765	6.4
Kaposi Sarcoma	9,569	2.7
Cervical cancer new	1,545	0.4
Breast Cancer	645	0.2
Total NCD cases	**352,977**	100.0

***CVD**=cardio vascular diseases

Source: Ministry of Health, HMIS 2008, 2009

Figure 4: Trends in NCD Mortalities at Primary Health Care Level, 2008-2009



Source: Ministry of Health, HMIS 2008, 2009

4.1.2 Trauma

WHO has reported that Road Traffic Accidents (RTAs) kill up to 1,300,000 every year and maim 50 million worldwide. The figures have reached epidemic proportions, with RTAs being the leading cause of death in people between the ages of 15 and 29 years. It is also estimated that 8 out of the 15 leading causes of death for people aged 15-29 years are injury-related[8].

Trauma is among the leading NCDs in Zambia. Trauma is defined as injury to any part of the body. Trauma accounted for 55% of the surgical out-patient burden, 25% of surgical admissions and 37% of surgical mortalities (UTH Report, 2008)

In Zambia, the most common cause of injuries, are RTAs, assault cases, burns and other injuries. Fatal RTAs often occur along major roads. Prevention of RTAs is multi-sectoral, as the causes are broad, divided into human, structural and mechanical errors. Human errors account for approximately 90% of preventable accidents, while poor road infrastructure and faulty vehicles account for the remainder. Reduction of fatalities, following RTAs is also an important component of prevention and care. This however largely depends on access to emergency health services within the "golden hour", i.e. the first hour following an accident. Zambia has a district health facility at every 50 – 80 Kilometres of every point. This is good as it presents the opportunity to transport the casualties to the nearest facility within the golden hour. However, the challenge is usually the lack of the required capacities, equipment, medicines and consumables at these district health facilities to save the lives of the casualties. The other challenge is the poor condition of roads and availability of vehicles, which make it difficult to transport the casualties or indeed the health personnel within the golden hour. Further, even where some casualties are attended to, they end up suffering permanent disability. Of major

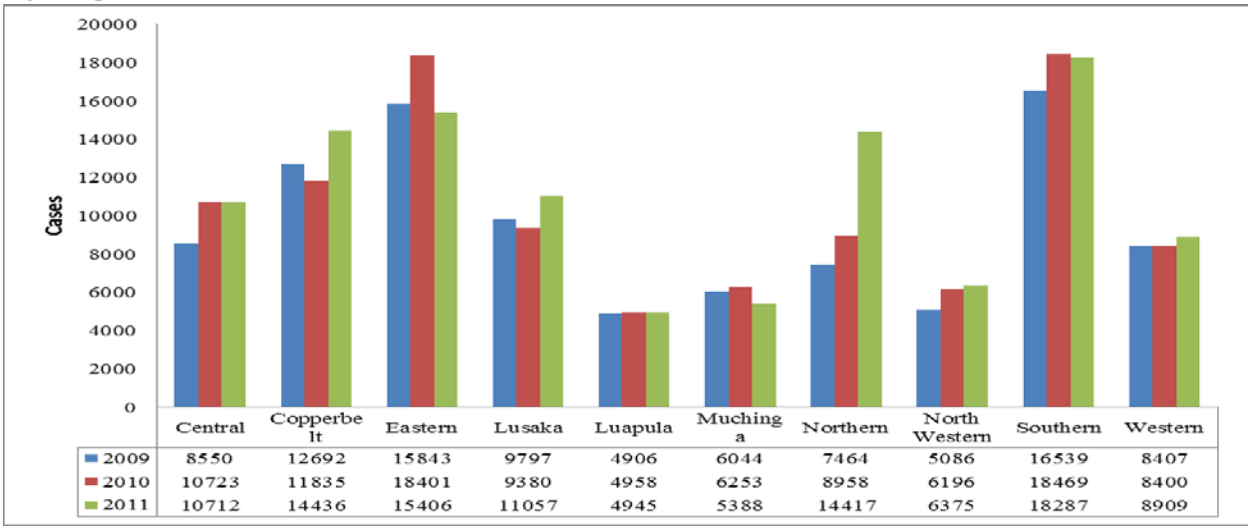
[8] **WHO**. Global Status Report on Road Safety. Geneva, World Health Organization, http://whqlibdoc.who.int/publications/2009/9789241563840_eng.pdf

concern is the fact that, though trauma is highly publicized in Zambia, it has been ignored as a major contributor to morbidity and mortality.

4.1.3 Asthma

Currently, the prevalence of Asthma in the country is not known. However, the public perceive it to be the second most important cause of morbidity and mortality amongst the NCDs[9]. Based on hospital records on morbidity, Asthma was ranked as the 10th cause of hospital admissions in children. Figure 6 below is the asthma cases reported from the ten provinces of Zambia over a period of three years. However, the challenge is usually the lack of the required capacities, equipment, medicines and consumables particularly at the district health facilities to save the lives of the casualties. There is also lack of information on the burden of asthma in the country as there has never been a baseline survey conducted; as such only facility based data exists.

Figure 6 provincial distribution of asthma 2009-2011.



	Central	Copperbelt	Eastern	Lusaka	Luapula	Muchinga	Northern	North Western	Southern	Western
2009	8550	12692	15843	9797	4906	6044	7464	5086	16539	8407
2010	10723	11835	18401	9380	4958	6253	8958	6196	18469	8400
2011	10712	14436	15406	11057	4945	5388	14417	6375	18287	8909

Source: HMIS, MoH

4.1.4 CVD and Hypertension

Raised blood pressure, hypertension, is one of the most common preventable causes of premature death with 7.1 million people dying every year as a result of raised blood pressure[10]. Studies have shown that excessive consumption of salt, African race, excessive alcohol consumption, tobacco use, diabetes, physical inactivity, overweight and obesity, age, being male

[9] NCD Needs Assessment 2009, Ministry of Health, Zambia
[10] **Mackay, J. & Mensah, G.** The Atlas of Heart Disease and Stroke. Geneva, World Health Organization

and elevated levels of blood glucose are all risk factors for hypertension[11]. In the WHO African Region, more than 20 million people suffer from hypertension[12].In sub-Saharan Africa the prevalence of hypertension ranged from 6 to 48% and was high in both urban and rural settings[13].

Approximately 15 million people have a stroke each year. Of these 5 million die and another 5 million are left with some form of permanent disability[14]. Sub-Saharan Africa has one of the highest rates of mortality due to stroke.[15]. The most effective way of preventing strokes is proper management of hypertension, however diagnosis and management of hypertension in the African Region is often problematic.[16] About half of those individuals aware of their condition were under treatment and control was found to be extremely low.

Hypertension is second to trauma amongst the NCDs in Zambia. This might be because while trauma is an outcome that is visible and has an acute onset, hypertension is often an insidious event and might be a reflection of low level of awareness of the condition. In 2009, a total of 100,700 new cases of hypertension were seen in Out-patient Departments (OPDs) at the primary and second level facilities across Zambia, while in 2010, 117,997 and 143,862 patients were attended to[17]. Copperbelt province followed by Lusaka province has the highest cases of hypertension in the country with the least cases seen in the northern (Luapula, Muchinga and Northern provinces) part of the country. According to the STEPS survey, conducted in 2008-11, 38% of the male adult urban population studied had abnormal blood pressure (BP), with 11% having moderate to severe hypertension, while 13% of females had moderate to severe hypertension and 20% had mild hypertension.

[11] **Olatunbosun, S.T. et al.** Hypertension in a black population: prevalence and biosocial determinants of high blood pressure in a group of urban Nigerians. *J Hum Hypertens. 14* (4): 249-57 (2000)
[12] **Lopes, A.A.** Hypertension in black people: pathophysiology and therapeutic aspects. *J Hum Hypertens. 16 Suppl 1*: S11-2 (2002)
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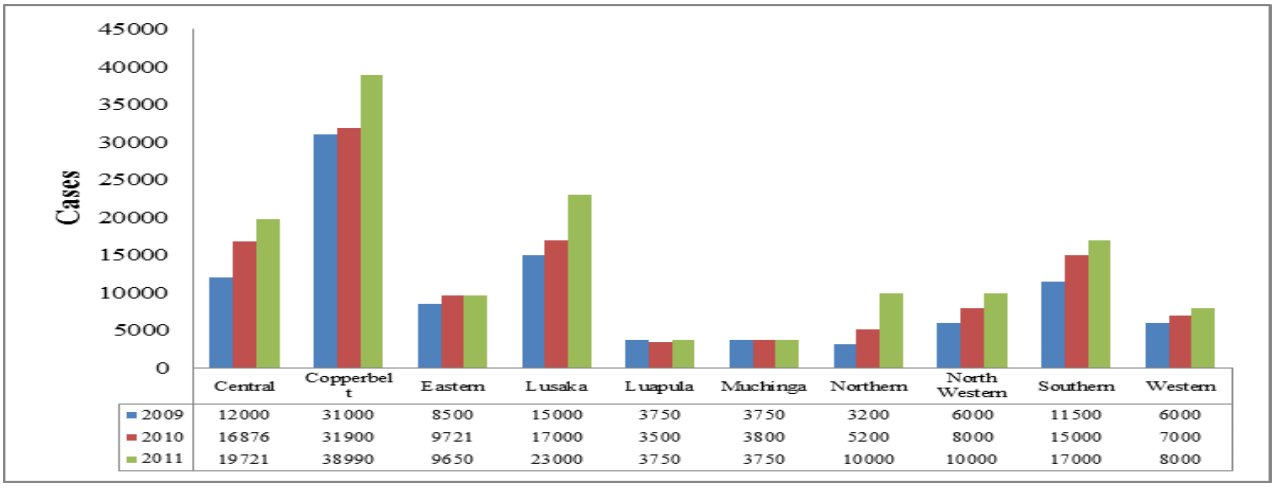
[16] **Damasceno, A. et al.** Hypertension prevalence, awareness, treatment, and control in mozambique: urban/rural gap during epidemiological transition. *Hypertension. 54* (1): 77-83 (2009)
[17] HMIS, 2009, 2010 &2011 Ministry of Health, Zambia

Figure 7: Hypertension distribution by province 2009-2011



Source: HMIS, MoH

4.1.5 Diabetes

Diabetes Mellitus (Diabetes), particularly Type II, is among the leading NCDs in Zambia. In 2009, a total of 5,632 (2.4%) new cases of diabetes were attended to in the OPD at primary and first level hospitals, with 805 admissions and a total of 72 (9%) deaths. However, the number increased to 21,048 (6.2) in 2010 and 22,765 (6.5%) in 2011, of all the NCD cases seen over the three year period (Table 1).

The STEPs (2008-2011 in Lusaka, Kaoma, Kasama and Kitwe) survey also reported that 8% of the studied population had raised blood sugars, with 3% diabetes prevalence in males and 4% in females. It is projected that, the number of people suffering from diabetes mellitus in the country, will increase from the estimated 70,000 in 2000 to 186,000 by 2030[18].

The NDC Needs Assessment, conducted by MOH in 2009, in 6 of the 9 provinces, highlighted a number of challenges faced in the prevention and control of diabetes in health facilities. The results showed that, despite 43% of the studied health facilities having glucometers, only 7.5% of them routinely checked the blood glucose. The other highlighted challenges included the lack of diagnostic capacities at health centres, inadequate training of health workers in the management of diabetes, and shortages of drugs for management of the disease.

[18] http://www.who.int/diabetes/facts/world_figures/en/index1.html

4.1.6 Cancers

The prevalence of cancer diseases has significantly increased in the country, becoming a major public health concern. The most prevalent type of cancer in women is cervical cancer, followed by breast cancer. The other types of cancer which are prevalent in Zambia include non-Hodgkin's Lymphoma (NHL), Hodgkins Lymphoma, prostate cancer, Kaposi Sarcoma (KS) and several others.

Since the establishment of the Cancer Diseases Hospital (CDH) in Lusaka in 2006, the number of new cancer cases reported at the hospital has consistently increased. Table 2 below shows this increasing trend for the different cancers commonly seen at the facility.

Table 2: Top ten (10) major cancers, for all ages combined, Zambia, 2009 to 2011

(All ages) - 2009		
Cancer Type	**No. of pts**	**%**
Cervical	305	45.2
Breast	79	11.7
Kaposi Sarcoma	66	9.8
Squamous Cell carcinoma	47	7.0
Lymphomas	42	6.2
Prostate	40	5.9
Esophageal	33	4.9
Stomach	23	3.4
Rectal	23	3.4
Malignant Melanoma	17	2.5
Total	675	100.0

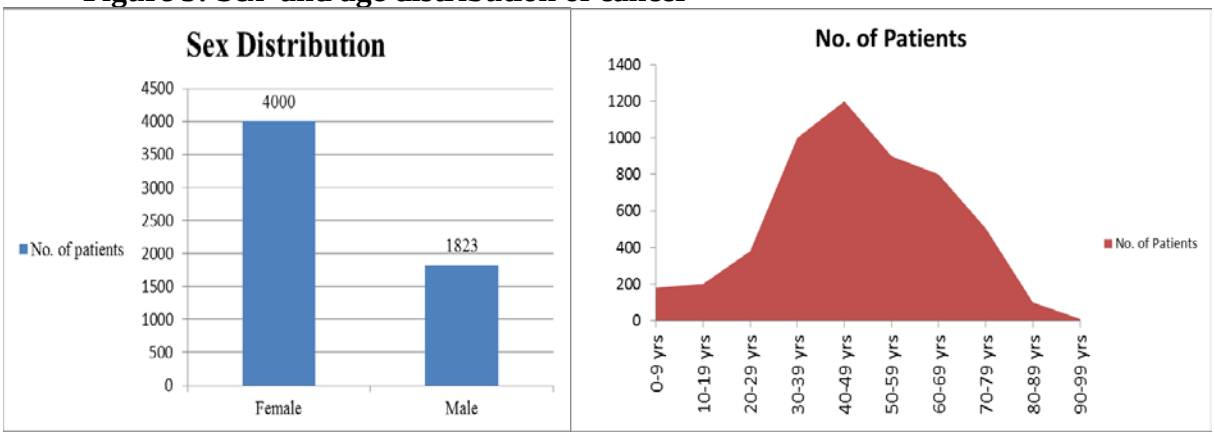
(All ages) - 2010		
Cancer Type	**No. of pts**	**%**
Cervical	484	52.8
Breast	131	14.3
Lymphomas	80	8.7
Kaposi Sarcoma	66	7.2
Prostate	54	5.9
Rectal	24	2.6
Stomach	21	2.3
Esophageal	20	2.2
Bladder	20	2.2
Eye	16	1.7
Total	916	100.0

(All ages) - 2011		
Cancer Type	**No. of pts**	**%**
Cervical	436	53.4
Breast	107	13.1
Kaposi Sarcoma	68	8.3
Prostate	51	6.2
Lymphomas	47	5.8
Esophageal	34	4.2
Stomach	26	3.2
Skin	16	2.0
Colon	16	2.0
Eye	16	2.0
Total	817	100.0

***Source**: HMIS, MoH*

Females are more affected by cancer, which could be attributed to the high prevalence of both cervical and breast cancers. Zambia is among the countries that are most affected by cervical cancer and is ranked number 2 in the region and number 6 in the world. The reproductive age group which is socially and economically active is the most affected by the diseases. Figure 5 below shows the sex and age distribution of cancer in Zambia.

Figure 5: Sex and age distribution of cancer



4.1.7 Sickle-cell anemia

Sickle-cell anaemia is also a major public health concern, and is not adequately managed in the country. The estimated gene prevalence of Haemoglobin-S in the country is 25%, although it is variable according to region, ranging from 40% in the North to 6% in the Southern Province (NHSP, 2013-2016).

4.1.8 Mental Health

There are no comprehensive epidemiological studies undertaken to determine the extent of psychiatric morbidity and mortality in Zambia, as well as to ascertain the incidence and prevalence, health care expenditure and loss of productive years of life. However, it is estimated that 20-30% of the general population has mental health related problems, especially anxiety and depression (NHSP 2013-2016). Individuals with mental health problems and mental disorders are particularly vulnerable to infringement of their civil and human rights. They are marginalized, stigmatized, and discriminated against.

4.1.9 Epilepsy

Epilepsy is another common NCD in Zambia. It is associated with a lot of stigma, discrimination and myths. No national epidemiological studies have been conducted, but health facilities have noted an increase in the incidence of epilepsy (HMIS).

4.1.10 Other NCDs:

Eye diseases:

No country-wide surveys on blindness have been conducted in Zambia. However, using the WHO data, the recommended calculation of blindness for Sub Saharan Africa, the estimated prevalence of blindness for Zambia is at 1% giving us a total of 105,000 people. However the RAAB conducted in Southern Province of Zambia showed that prevalence of blindness in persons over the age of 50 years was 2.29% (Lindfield et al, 2012).

Oral health:

The role of oral health has increased significantly with the advent of HIV/AIDS and its oral manifestation. Major activities carried out in oral health included: the development of guidelines on oral manifestations of HIV/AIDS; pamphlets on cancrum oris (noma); review of oral health Guidelines for levels 2 and 3; strengthening of school oral health programmes in 30 districts; capacity building for dental therapists in the use of lower technologies, such as atraumatic restorative technique; and the introduction a dentist degree programme at the University of Zambia.

The key indicators for oral health include proportion of health facilities with physical space and equipment for basic oral health care; proportion of districts with at least one dentist or dental therapist; proportion of children with noma identified during IMCI; and incidences of oral diseases

NCD Needs Assessment

In 2009, a needs assessment for the NCDs Programme was carried out. Through this assessment, key findings were made and the gaps were identified. Table 1 below, summarizes the identified gaps.

Table 3: Zambia: Summary of Identified Gaps - Needs Assessment on NCD in Zambia Report, 2009

Disease	Inadequate drugs and lab reagents (%)	Inadequate diagnostic facilities (%)	Inadequate expertise (%)	Inadequacy 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

Source: Ministry of Health, Directorate of Public Health and Research.

Based on the findings of the needs assessment and the recommendations of the NCDs symposium (MOH, NCD Symposium 2009), the health sector has embarked on a number of interventions aimed at strengthening NCDs prevention and early detection. These include:

- Development of treatment protocols for second level hospitals, where specialized clinics for NCDs are being established;
- Development of clinical nutrition and dietary guidelines;
- Training of health workers in the management of NCDs;
- Raising awareness on NCDs, through Information Education and Communication (IEC) materials, including TV documentaries, posters, brochures and media discussions;
- Collaboration with various associations, to carryout NCDs screening, such as BP checks, nutritional assessments, prostate and breast cancer inspections; and
- Advocating for healthy lifestyles.

However, these interventions are yet to be extended to all districts and institutions. The other interventions that have been identified, but are not yet being implemented, include:

- Development and implementation of the NCDs Policy
- Introduction and strengthening of physical activities in all schools
- Community physical/sporting activities
- Promotion of healthy diets
- Strengthen and enforce legislation on tobacco use and harmful use of alcohol and drugs
- Strengthen operational research, and monitoring and evaluation of NCDs programmes and activities.
- Strengthen screening for refractive errors in school children and/or at the child health/growth monitoring clinics.

Common NCDs' Risk Factors

NCDs have an insidious onset and are associated with several risk factors, which include lifestyles, physiological, biological, as well as exposure to certain infections. Lifestyle-related risk factors include unhealthy diets, physical inactivity, tobacco use, as well as alcohol and substance abuse. Physiological risk factors include high cholesterol, obesity, high blood pressure and high glucose levels in the blood. NCDs are also associated with biological risk factors which are hereditary by nature, running in families, and physical risk factors, which include the living and working conditions, violence and accidents. In some cases, certain NCDs could be related to the impact of certain infections.

Most of these risk factors are measurable and highly modifiable by individuals and communities. In this respect, it is prudent for any government to strengthen prevention and control efforts, with the objective of averting NCDs and ensuring quick and effective control, where they have

already occurred. The basis for prevention is the identification of the major common risk factors and their prevention and control programmes. Table 4 presents the common risk factors associated with various NCDs.

Table 3: Risk Factors of Common NCDs

Risk Factor	Eye Diseases	Mental Illness	Cardio-Vascular	Diabetes	Cancers	Trauma/ Injuries	Chronic Respiratory Diseases	Epilepsy	Asthma
Tobacco Smoking	√		√	√	√		√		√
Drug and Substance Abuse		√	√	√	√	√		√	
Excess Alcohol Use	√	√	√	√	√	√		√	
Unhealthy Diets	√	√	√	√	√		√	√	√
Physical Inactivity		√	√	√	√		√		√
Obesity	√	√	√	√	√		√		√
Raised Blood Pressure	√	√	√	√				√	
Raised Blood Glucose	√		√	√	√			√	
Raised Blood Lipids	√		√	√	√			√	
Genetic/ Family History	√	√	√	√	√		√	√	√
Infections	√	√	√	√	√		√	√	√
Hormones	√		√		√				
Carcinogens					√			√	
Occupational Health	√				√	√	√		√
Road Safety	√					√			
Violence	√					√			

Below are summarised updates on the status of selected risk factors, which are considered to be of high concern in Zambia.

4.1.10 Tobacco smoking:

Tobacco is a risk factor for six of the eight leading causes of death in the world including ischaemic heart disease (IHD), cerebrovascular disease, COPD, lower respiratory infections, TB and cancers of the trachea, bronchus and lungs. The prevalence of smoking among adults in Zambia is currently estimated at 6.5%; (17% males and 1.3%) females (STEPs 2008). According to a study conducted in the town of Kafue, in Zambia in 1999, overall 8.2% of the adolescents were current cigarette smokers, while 10.4% males and 6.2% females were current smokers[19]. The current cigarette smokers in Lusaka district in the age group 13-15 years comprised 9.2% (GYTS, 2002) and 6.8% (GYTS, 2007) with an overall rate of 7.4%.[20] Zambia has been controlling tobacco use in terms of legislative interventions and acceded to WHO Framework Convention for Tobacco Control (FCTC) but has not yet ratified it.

[19] Malawi Medical Journal; 19(**2**):75 - 78, June 2007
[20] Medical Journal of Zambia, Vol 35(**3**); 100-104

The most common mode of tobacco use is smoking of cigarettes. Smoking is one of the most important risk factors linked to the wider risk factor of tobacco use. Other forms of usage of tobacco are chewing and snuff.

4.1.11 Alcohol and Substance Abuse

Evidence suggests that there is a widespread consumption of alcohol in Zambia. More men (76%) than women (23%) consume alcohol in Zambia (ZDHS 2001/02) According to the STEPs survey conducted in 2008 in Lusaka district, the prevalence of current alcohol drinking is 21% (males 38, females 12). Furthermore 22% (males 24%, females 20%) of the respondents drank for four or more days during past week prior to the survey. The prevalence of binge drinking is 49% for male drinkers and 45% for female drinkers.

The challenge in the WHO Africa Region is that actual alcohol consumption is hard to determine as it is estimated that 50% of consumption is unrecorded and involves non-commercially produced drinks.[21]

The Zambia Global School Health Survey (GSHS) conducted in 2004 among students in grades 7-10, in 47 schools, in all the 9 provinces revealed that 42.6% of the 2,257 students who participated in the survey had taken alcohol on one or more occasions during the previous 30 days. According to the survey children as young as 13 years had indulged in drinking alcohol, grade 7's abused alcohol more than students in grades 8 and 9. The survey reported that consumption was higher among females (45.5%) than among males (38.9%). In the age group of 16+, females (49.9%) drank alcohol one or more times than males (35.9%).

Diet:

In the current study fruits were rarely eaten. Only 23.6% of the respondents ate fruits 5-7 days in a typical week. Most (94.8%) of the respondents reported eating vegetables 5-7 days in a typical week. Vegetables are a part of one of the cheapest meals. Many families are not able to afford the cost of fruits; as a result they may eat seasonal fruits that are grown in their backyards (mangoes or guavas), or can be bought from markets at a cheap price when they are in season. Temperate fruits such as apples and grapes are out of reach for most families.

The mean number of fruit servings per day was 0.7 and for vegetables servings was 1.9 in Lusaka District in 2008.

[21] **WHO AFRO**. Technical Consultation on the Public Health problems caused by the Harmful Use of Alcohol in the African Region. Brazzaville, World Health Organization Regional Office for Africa, http://www.afro.who.int/index.php?option=com_docman&task=doc_download&gid=3801

Physical activity:

Overall, physical activity levels are relatively high in Africa mainly either work-related or transport related. This is especially so in rural areas, but levels of physical inactivity have been shown to rise with urbanization.[22]

Overall, one in five (29.2% males, 14.1% females) of the respondents was engaged in work that involved vigorous-intensity activity. Meanwhile, 15.6% of the respondents (29.7% males, and 8.7% females) were engaged in fitness or recreational sport that involved vigorous-intensity activity. About two thirds of the respondents (58.4% males, and 75.5% females) were engaged in work that involved moderate-intensity activity, while one third of the respondents were engaged in fitness or recreational sport that involved moderate-intensity activity. Over 90% of the respondents were either walked or used a bicycle to get to and from places, and about one third of the respondents spent at least 3.5 hours sitting or reclining on a typical day.

The percentage of respondents involved in high level physical activity was 48% and those involved in low level was 14.7% in Lusaka District.

Over-weight or obese:

In several countries in Sub-Saharan Africa, over-weight and obesity have reached substantial proportions with levels of 30-50 per cent amongst adults and higher in women [11, page 21]

Zambia is experiencing a nutrition transition as a result of lifestyle changes and exposure to risk factors.

While a higher proportion of urban respondents (40.5%) than rural (10.1%) were over-weight. On the other hand 15.6% urban and 2.5% rural respondents were obese. Our prevalence rates of over-weight or obesity showed obvious gender difference. We found that older respondents were more likely to be over-weight or obese, and that female respondents and none cigarette smokers were associated with being over-weight or obese[23].

Blood pressure:

The prevalence of raised blood pressure in the WHO African Region (WHO/AFRO) in 2008 was estimated at 36.8% (34.0 – 39.7) making it one of the highest of any Region of WHO.[24]

[22] The Challenges of Non-Communicable Diseases and Road Traffic Injuries in SSA, 2013 pp 25
[23] Ministry of Health/World Health Organization, Prevalence rates of the common non-communicable diseases and their risk factors in Lusaka District, Zambia
[24] The Challenges of Non-Communicable Diseases and Road Traffic Injuries in SSA, 2013 pp 21

We found 33.3% of urban and 28.1% of rural respondents to have raised blood pressure of 140/90mmHg or more. The prevalence was slightly higher in males than females (33.8% vs 28.3% in urban and 29.4% vs 27.1% in the two rural districts respectively). Overall, the prevalence of hypertension was observed to be high in the general population in both urban and rural populations. Siziya et al also observed that obese, raised cholesterol, and older age group were associated with moderate or severe hypertension.

Impaired glucose tolerance or diabetes:

The prevalence of impaired glucose or diabetes (=/> 5.5mmol/L) was 4.0% among urban population and 3.0% in the rural respondents in the present study. Diabetes or impaired glucose tolerance was associated with older age groups, obesity, elevated waist-hip ratio and severe hypertension. The prevalence rates of impaired glucose/diabetes were more in the in females than males in urban areas and the vice-versa is true for rural districts.

Cholesterol:

Whereas measured cholesterol levels are generally low except for wealthier countries such as Mauritius where elevated cholesterol levels have been seen in 30 per cent of the population.[25]

Overall, 15.8% of urban and 3.1% of rural respondents had raised cholesterol levels. There is observed gender disparity in the prevalence of cholesterol levels with higher rates being observed in females than males in both urban and rural areas (17.3% vs 12.8% in Lusaka District only and 4.0% vs 1.9% rural districts respectively).

Age and over-weight or obesity were significantly associated with raised cholesterol levels.

Stakeholder Analysis

The main stakeholders for NCDs include patients with NCDs and associations of people living with NCDs, the central government particularly MOH and relevant government line ministries and departments, CHAZ, the private sector, civil society organizations, local communities, and the international community. Table 4 presents a summary of the key stakeholders and their primary interests.

[25] The Challenges of Non-Communicable Diseases and Road Traffic Injuries in SSA, 2013 pp 21

Table 4: Analysis of key stakeholders of NCDs

STAKEHOLDERS	ROLE OF STAKEHOLDER	CURRENT STATUS
General population and communities	• Accessing equitable delivery of quality NCDs prevention and management, as close to the communities as possible. • Involvement in the fight against the NCDs.	• NCDs burden increasing within the communities. • NCDs related health services are inadequate and not equitably distributed. • Inadequate community involvement and participation in NCD prevention and control
Patients with NCDs (including associations of people living with NCD)	• Receiving quality, efficient and effective curative, care and support services, for their respective NCDs, as close to their families as possible and at an affordable cost. • Being involved in community education regarding NCDs prevention and management.	• Morbidity due to NCDs has significantly increased. • NCDs treatment, care and support services are inadequate and not equitably distributed. • The cost of accessing NCDs' management is high. • Is there a cost to access NCD health care? i.e are NCD services free at point of access
Civil Society Organisations (CSOs)	Advocating for: • Delivery of quality NCDs health services to communities. • Transparency and accountability. • Community participation in NCDs prevention and control programmes.	• Several CSOs implementing programmes relevant to NCDs prevention and management. • Weak coordination and harmonization of CSOs. • Inadequate involvement and participation of CSOs in NCDs prevention and control programmes.
Health Workers	• To have appropriate training, exposure and support in the prevention and management of NCDs. • To have good working conditions • To have a Community health worker package that includes prevention and control of NCDs	There have been improvements in the numbers of health workers. However, there are still challenges, including: • Shortages of specialists in NCDs, particularly in rural areas. • Inadequate training of health workers in NCDs. • Inequitable distribution of health workers. • Shortage of community health workers
Suppliers of goods and services.	To supply, in a fair and transparent manner, goods and services to MoH and MCDMCH for the control and management of NCDs.	• A comprehensive and transparent procurement system is in place, based on international best practice. • Lack of reliable local suppliers of specialized medical equipment for respective NCDs.
Central government	• Ensuring the health and productivity of the population. • Providing overall policy direction on health. • Prioritisation of NCDs and resource mobilization.	• High political will towards NCDs as prioritized in the SNDP. • Funding to the health sector, particularly to NCDs is inadequate.
Ministry of Community Development Mother and Child Health	• Directing and coordinating the national health agenda. • Development and enforcement of health policies, regulations and implementation frameworks.	• NCDs prioritized in the NHSP 2011-15. • NCDs organizational structure strengthened. • Challenges in respect of coordination, availability of health

	• Coordination and management of the NCDs at community level.	workers, specialized infrastructure and equipment, essential drugs and medical supplies, and transport.
Other government line ministries and departments	Government ministries and departments have specific roles in combating NCDs risk factors. These include: • Ministry of Local Government and Housing (MLGH) – implementation of the Public Health Services Act. • Ministry of education (health education and promotion of healthy lifestyle as well as capacity building for health care) • Ministry of Youth, Sport and Child Development (MOYSCD) – Promotion of sport/physical activity. • Ministry of Agriculture, Food and Fisheries (MAFF) – Food security and nutrition. • Ministry of Home Affairs (MOHA), especially the Zambia Police Victim Support Unit, and the Drug Enforcement Commission (DEC) - Enforcement of specific legislation and regulations relevant to NCDs prevention. • Selected government departments, including the National Food and Nutrition Commission (NFNC), Environmental Council of Zambia (ECZ) and the Pharmacy Regulatory Authority (PRA). • What of ministry of finance to ensure that taxes accruing from tobacco alcohol and unhealthy foods are disbursed directly to the health sector for prevention and control of the resultant health effects from these commodities • Custom and excise department to prevent smuggling and collect taxes • Police to enforce laws relating to alcohol use etc. • Ministry of Planning for poverty eradication programmes • Ministry of Agriculture to support alternative livelihoods particularly for tobacco farmers.	• These are formally established government ministries and departments. The work being done is supported with appropriate policies and legislation. • Inter-sector coordination regarding work related to the control of NCDs risk factors is weak.
The faith-based health sector/ CHAZ	Provision of affordable health services to the general public, including NCDs prevention, treatment and care, within the national health policy, regulatory and strategic framework.	• Extensive coverage, particularly in rural areas. • Good coordination and harmonization with MCDMCH, based on a Memorandum of Understanding (MoU). • Challenges: inadequate appropriate infrastructure and equipment, health workers and supplies of drugs and

		medical supplies for NCDs.
Private health institutions	Provision of private commercial health services to the general public, including NCDs prevention, treatment and care, within the national health policy, regulatory and strategic framework.	• The private health sector is growing. • Systems for broader private sector participation are weak.
Traditional health practitioners	Provision of traditional health services for the management of NCDs.	The policy and regulatory frameworks for traditional health are inadequate and need strengthening, to safeguard lives.
The international community	Provision of financial and technical support to the sector, within the established policy, strategic framework and priorities.	Inadequate support to NCDs prevention and management.

Strengths, Weaknesses, Opportunities and Threats

Table 5: Analysis of the Strengths, Weaknesses, Opportunities and Threats

1. HEALTH SERVICE DELIVERY			
STRENGTHS	**WEAKNESSES**	**OPPORTUNITIES**	**THREATS**
1.1 Prevention			
• NCD prevention has been prioritised in the NHSP 2013-16. • Documentation (policy) on prevention of NCD is available. • Structures for prevention of NCD are available at national, provincial, district and community level.	• To date, there has been lack of prioritization of prevention of NCD – focus has been more on communicable diseases. • Inadequate awareness on the causes and prevalence of NCD. • Weak health promotion and education on NCD in general, particularly on prevention. • Inadequate policies and legislation on control of key risk factors of NCD.	• NCD prevention has been prioritised in the SNDP. • Existence of government institutions dealing with specific determinants of NCD. • Global linkages on prevention of NCD, including global instruments and WHO policies and resolutions.	• Resistance to policy and legislation by the relevant industries selling products that are risk factors for NCDs (tobacco, alcohol, fast foods etc). • High burden of risk factors of NCD in the country, including smoking, alcohol, substance abuse, and unhealthy lifestyles. • Cultural and traditional influences on risk factors and prevention of NCD. • Rapid and unplanned urbanization.
1.2 Case Management			
• Prioritized in the NHSP 2013-16. • Structures for management of NCD	• Until recently, was not prioritised. • Lack of guidelines and protocols	• Private sector participation. • Access to international best	• Growing burden of NCD. • Weak community involvement.

available at national, provincial, district and community levels.	on the prevention and management of NCD. • Weak referral systems for NCD.	practices on NCD prevention and management. • International initiatives on the prevention and management of NCDs.	• Inadequate global support towards prioritisation of NCD, particularly in developing countries. • High cost of treatment of NCDs.
2. HEALTH WORKFORCE/HUMAN RESOURCES			
STRENGTHS	**WEAKNESSES**	**OPPORTUNITIES**	**THREATS**
• Introduction of the position of NCD specialist at the centre. • Availability of skilled personnel in prevention and management of NCD. • Existence of training capacity in prevention and management of NCD, within the health sector. • Health workers retention scheme.	• Inadequate staffing at the NCD unit at the centre. • Inadequate skilled personnel in prevention and management of NCD, e.g. specialists at facilities. • Misplacement and inequitable distribution of health workers. • Lack of NCD training plan. • Unattractive conditions of service. • Community health workers not trained in NCDs prevention and control	• Opportunities for engagement of foreign retired specialists on contract or volunteer basis. • Opportunities for specialised training abroad. • Comprehensive health care package for community health workers	• Migration of qualified health workers to the private sector, NGOs, international bodies and abroad. • High attritions of health workers due to HIV/AIDS. • limited decentralisation of certain health services

3. MEDICAL PRODUCTS, INFRASTRUCTURE, EQUIPMENT AND TRANSPORT			
STRENGTHS	**WEAKNESSES**	**OPPORTUNITIES**	**THREATS**
3.1 Drugs and Medical Supplies			
• Drugs and medical supplies for NCD included on essential medicines list. • Guidelines for rational use of drugs and medical supplies.	• Erratic supply of essential supplies of drugs and medical supplies for NCD. • Weak logistics systems.	• Drugs and medical supplies exempt from import taxes. • Advances in research and development in respect of in NCD drugs and supplies.	• Drugs and medical supplies exempt from import taxes. • Lack of reliable local suppliers. • High cost of drugs and medical supplies for NCD.
3.2 Infrastructure, equipment and transport			
• Establishment of the CDH. • Availability of basic infrastructure for NCD prevention and management at all levels. • Availability of diagnostic and rehabilitative tools. • Strengthening of outreach health	• Inadequate infrastructure and equipment for NCD, including diagnostic tools. • Shortages of transport for outreach NCD programmes/activities.	• Health equipment and accessories exempt from import taxes. • Private sector and PPP health projects with capacity for NCD. • Advances in science and	• Inadequate sporting and recreation infrastructure in communities and schools. • High cost of specialised equipment. • Poor transport infrastructure - challenge to mobile services. • Inadequate communication facilities

services/mobile hospitals.		technologies and ICTs for health, including telemedicine.	to support mobile and referral health services.
4 HEALTH INFORMATION			
4.1 Surveillance and Information			
• Establishment of cancer registry at the CDH in Lusaka. • Production of the NCD Info-Pack. • Separate reporting for NCD since 2009. • NCD indicators included in the HMIS/DHIS at district level. • Training for health workers in the use of the NCD reporting tools.	• Lack of standardized reporting guidelines for NCD. • Lack of functional integration of the facility-based NCD surveillance with communicable diseases surveillance. • Lack of clarity for some NCD indicators in HMIS e.g. Mental illness. • Lack of disaggregation of data by age gender and socio-economic groups. • NCD not included in the Annual Statistics Bulletins. • General weaknesses in HMIS/DHIS.	• Support from stake holders/ partners towards NCD surveillance. • Existence of information on injuries from RTAs. • Sharing of information on NCD with partners dealing with NCD/ determinants of NCD. • Access to regional and international data on NCD and modern approaches to surveillance.	• Weak coordination and harmonisation of NGOs involved in surveillance. • Lack of coverage of NCD in the Demographic Health Survey. • Lack of goodwill ambassadors for NCD in Zambia.
4.2 Research			
• Draft Law/Bill on health research developed. • Existence of epidemiology and research directorate. • Cervical cancer survey conducted. • Survey on RTA injuries conducted. • School health survey conducted. • NCD needs assessment conducted. • NCD operational research included in MOH annual action plan (2011)	• Lack of clear research agenda for NCD. • Inadequate research on the burden due to NCD. • No system to audit types of health research going on in the country • Weak coordination of health research activities at national level. • Inadequate use and translation of study findings into policy and action.	• UN decade of….inclusion of research. • International support to NCD research. • WHO STEPS survey conducted. • WHO tobacco youth survey. • Local research institutions. • International NGOs/research institutions interested in NCD research in Africa. • Private sector and civil society involvement in NCD research.	• Uncoordinated research activities by institutions and civil society involved in NCD-related research. •
5. HEALTHCARE FINANCING			
• NCD included in the health sector action plans and budgets. • Separate budget line for NCD Unit in the health sector budget.	• Inadequate funding allocated to NCD.	• Favourable fiscal scheme towards medical equipment, medicines and supplies.	• Inadequate government funding to the health sector. • Inadequate Donor support to NCD – Not covered by GFATM, PEPFAR etc.

			• Global economic recession.
6. LEADERSHIP AND GOVERNANCE			
STRENGTHS	**WEAKNESSES**	**OPPORTUNITIES**	**THREATS**
• Draft NCD Policy developed. • Development of the NCD Strategic Plan 2012-2015. • Development of NCD Guidelines. • Organisational structure strengthened - NCD unit established at the centre. • Structures for prevention and management of NCD established at all levels.	• Lack of appropriate policy on NCD. • Weak internal coordination structures for departments dealing with NCD.	• Good political will to NCD. • Individual policies and legislation relevant to NCD – DEC, ZP Victim Support, etc. • Existence of partners and PPPs interested in NCD. • Associations of people living with chronic NCD. • WHO global policy leadership and guidance on NCD. • NCD Heads of State summit in New York September 2011.	• Inadequate prioritisation at national level. • Inadequate and weak enforcement of existing NCD related Laws and regulations. • Inadequate multi-sectoral collaboration. • Insufficient partners and international support to NCD. • Weak involvement and participation of communities.

5 VISION, MISSION, GOAL AND OBJECTIVES

Health Sector Mission, Vision and Goal

Mission: To provide equitable access to cost effective, quality health services, as close to the family as possible.

Vision: Equitable access to cost-effective and quality health care by 2030.

Overall Goal: To improve the health status of the people of Zambia, in order to contribute to socio-economic development of the nation.

Key Principles: Primary Health Care (PHC) approach; Equity of access; Affordability; Cost-effectiveness; Accountability; Partnerships; Decentralisation and Leadership

NCD Goal and Objectives

Vision: A long and healthy life for all through prevention and control of non-communicable diseases and their risk factors?

Goal: To reduce the burden of preventable morbidity, disability and premature mortality occasioned by NCDs in Zambia.

Objectives:

1.	To raise priority accorded to the prevention and control of NCDs in the national agenda through advocacy and Multi-sectoral partnership
2	To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environment.
3	To strengthen and scale up the treatment, rehabilitation, care and support for people suffering from NCDs, in order to reduce morbidity and mortality due to NCDs.
4	To strengthen and orient health systems to address the prevention and control of NCDs and the underlying social determinants through people centred primary health care and universal coverage
5	To strengthen logistics management and ensure availability and rational distribution of essential drugs and medical supplies for common NCDs
6	To ensure availability of essential infrastructure, equipment, technologies and transport needed to support the prevention and management of NCDs at all the levels of health facilities, in order to facilitate efficient and effective prevention and management of NCDs.
7	To promote and support national capacity for high quality research, surveillance and development for the prevention and control of non-communicable diseases
8	To ensure optimal and timely financing to NCDs and effective allocation, utilization and tracking of the available resources, in order to achieve high impact and value-for-money
9.	To strengthen national capacity, leadership, governance, multi sectorial action and partnerships to accelerate countries response for the prevention and control of NCDs

6 STRATEGIC DIRECTIONS AND KEY STRATEGIES

In order to provide for a comprehensive and holistic system-wide strengthening of the national response to NCDs, this strategic plan has adopted the "Six Health System Building Blocks[26]", as the appropriate framework for analyzing and structuring the proposed strategic directions, objectives, key strategies and activities. This framework, which was also adopted for the NHSP 2013-16, analyses the health system at 6 levels, as follows:

- Health Service Delivery;
- Health Workforce;
- Medical Products, Infrastructure, Equipment and Transport;
- Health Information;
- Healthcare Financing; and
- Leadership and Governance.

This approach assumes that, for any health system to operate efficiently and effectively, it should ensure that all the six health system building blocks are performing well. In this respect, the strategic directions, key strategies and activities proposed in this strategic plan are analysed according to this framework.

Health Service Delivery

Health service delivery for NCDs is analysed at 2 levels, namely: health promotion and prevention services; and case management, rehabilitation, care and support.

6.1.1 Health Promotion and Prevention of NCDs

6.1.1.1 Overview

Prevention is the most effective way of controlling NCDs as 80% of CVDs, Type 2 diabetes and chronic respiratory diseases and 40% of common cancers are preventable. Prevention of NCDs could mainly be achieved through behaviour change, including promotion of healthy lifestyles, and promotion and enforcement of appropriate policies and legislation, aimed at controlling the key determinants of NCDs. Health promotion for NCDs focuses on both the healthy population and population at-risk, while at the same time taking care of those who have contracted the disease.

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

The key to the control of NCDs is primary prevention, to avoid the onset of the disease, which is based on the following two main approaches:

1. The high risk approach to primary prevention, which targets subjects with acknowledged risk factors for NCDs
2. The population approach, which attempts to modify the levels of risk factors in the community as a whole.

In this respect, the basis for prevention of NCDs is the identification, prevention and control of the major risk factors, at individual, family, community and country levels. However, it should be noted that, though the list of risk factors responsible for NCDs is long, a relatively limited set of risk factors (including physical inactivity, unhealthy diets, harmful use of alcohol and tobacco use and substance abuse is responsible for a large proportion of NCDs in the population. Control of these risk factors, which are behavioral in nature, are well addressed in the WHO's "Global Strategy on Diet, Physical Activity and Health", the "Framework Convention on Tobacco Control" and the "Global strategy for the prevention of harmful use of alcohol".

Promotion of healthy lifestyles and scaling up of screening in the population, are the key strategies for prevention of NCDs. In this respect, at national level, efforts will continue to be directed towards strengthening the policies and supportive legislation. At district level, the focus will be directed towards community empowerment, including the scaling up of health education and promotion, strengthening IEC, and influencing cultural and religious practices towards promotion of healthy lifestyles and prevention of NCDs.

6.1.1.2 Objective

To raise priority accorded to the prevention and control of NCDs in the national agenda through advocacy and multi sectorial partnerships

6.1.1.3 Key Strategies

1. Strengthen collaboration networks among stakeholders involved in promotional activities and potential partners for NCDs prevention.

2. Strengthen control of tobacco use, through advocacy and enforcement of appropriate policies, guidelines and legislation aimed at discouraging, restricting and controlling tobacco use.

3. Strengthen control of alcohol through advocacy and facilitation of the development and enforcement of appropriate policies, guidelines and legislation aimed at discouraging, restricting and controlling alcohol, particularly among the youths.

6.1.1.4 Objective

To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environment.

6.1.1.5 Key Strategies

1. Scale up health promotion and education on the risk factors and prevention of NCDs, at national, provincial, district, facility and community levels.

2. Scale up promotion of healthy diets among the population, including promotion of exclusive breast feeding for babies in their first six months, promotion of traditional diets that are proven to be healthy, control of the inflow and consumption of genetically modified foods and establishment of mechanisms for nutrition counseling.

3. Scale up promotion and support for active involvement in physical activity among the population, including promotion of physical activity in schools, workplaces and communities.

4. Strengthen promotion, awareness and education on mental health in schools, work places, and communities, in order to reduce on stigmatization and ensure effective access to mental health services.

5. Scale up efforts towards prevention of injuries and trauma, through information, education and public awareness, and enforcement of relevant policies and legislation aimed at reducing various forms of violence, injuries and trauma, including RTAs, industrial accidents, domestic violence, and gender-based violence.

6. Scale up infection prevention among the population at all levels, through promotion of awareness and education on infections linked to NCDs.

7. Strengthen the prevention of epilepsy and other seizure disorders, through scaling up of awareness and education on the causes of these health problems.

8. Scale up activities on health promotion for prevention and control of sickle-cell disease

9. Protect policies and other measures for the prevention and control of NCDs from the interference by the affected industries and their affiliates.

10. Strengthen legislation/regulation on the use of tobacco in public places and alcohol misuse.

6.1.2 Case Management, Rehabilitation, Care and Support

6.1.2.1 Overview

According to the available data, the prevalence of NCDs in Zambia is high and increasing rapidly. Even with the proposed strengthening of prevention, this will not eliminate NCDs, but only help to reduce their incidence. It is therefore important that, alongside the scaling up of prevention, management of NCDs is strengthened, in order to assist those who are already affected by these diseases. In this respect, WHO has already undertaken a "Global Initiative for Scaling up Management of Chronic Diseases" (WHO 2006).

In Zambia, until recently, management of NCDs was to a large extent not prioritized and adequately supported. However, over the past five years, there have been some positive trends towards recognizing NCDs as a major public health problem, and taking some critical measures towards supporting NCDs case management and support. In this respect, the most significant steps included the establishment of the CDH in Lusaka, which has already made a significant impact, and the strengthening of organizational structures for NCDs.

The focus during the duration of this strategic plan will be on prioritization of NCDs and scaling up of efforts towards strengthening of NCDs case management, rehabilitation, care and support, at all the levels of care. This will include, scaling up of promotion of early diagnosis, and strengthening of treatment and care at all the levels.

6.1.2.2 Objective

To strengthen and scale up the treatment, rehabilitation, care and support for people suffering from NCDs, in order to reduce morbidity and mortality due to NCDs.

6.1.2.3 Key Strategies

1. Strengthen and promote active screening for NCDs at all levels, including within health facilities, schools and communities, so as to generate demand for such services.
2. Scale up early diagnosis of NCDs at primary, secondary and tertiary levels.
3. Strengthen case management of NCDs.
4. Strengthen rehabilitation, care and support systems and services for people suffering from chronic NCDs.

Health Workforce/ Human Resources for Health (HRH)

6.1.3 Overview

Availability of adequate numbers and skills-mix of qualified health workers is a major factor in ensuring the delivery of quality healthcare services in the country. However, Zambia has continued to experience severe shortages of health workers. 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. The situation is even more complicated when it comes to the NCDs, as this area requires the availability of specialists.

Since 2006, MOH has been implementing a comprehensive Human Resource for Health Strategic Plan (HRH-SP 2006-10). Implementation of this plan has led to positive trends in the numbers, skills-mix and distribution of health workers. The total number of staff increased from 23,176 in 2005 to 29,533 in 2009, representing 57% of the approved establishment of 51,414. However, notwithstanding these improvements, there are still shortages of health workers at all levels. The shortages cut across all cadres, especially the professional health cadres, which include: specialist doctors, clinicians, nurses, laboratory technologists, optic technicians, radiographers, physiotherapists', environmental health technologists, and pharmacy technologists. As at December 2009, there were less than 50% of clinical health workers available, against the approved establishment, leading to high workloads. At community level, only 19% of Community Health Workers (CHWs) are active in providing services within their communities. This has implications on the capacities to promote and scale up community awareness and participation in the scaling up of NCDs activities within the communities.

There will be need for a cross section of skills and numbers, to provide quality health services. In this respect, the focus of this strategic plan will be towards scaling up of production and recruitment of health workers, equitable distribution of appropriate skills and numbers, scaling up of training and capacity building among the existing health workers, efficient and effective utilization of health workers, and retention of the available specialized health workers, to provide quality NCDs services at all the levels of healthcare.

6.1.4 Objective

To strengthen and orient health systems to address the prevention and control of NCDs and the underlying key determinants through people centred primary health care and universal coverage

6.1.5 Key Strategies

1. Scale up the production of appropriately skilled health workers, by prioritising NCD in the curricula for training of all health workers, in health training institutions, at different levels.
2. Determine the critical skills-mix and numbers of health workers required for efficient and effective delivery of NCDs services at different levels of care, and ensure that this is taken into account in the recruitment and distribution of health workers.
3. Strengthen skills and capacities of health workers in the prevention, management and care for NCDs, by scaling up targeted in-service training general practitioners and nurses.
4. Strengthen the retention and management of the available critical staff, particularly specialists in NCDs, in order to ensure efficient and effective utilization of critical staff.
5. Promote task shifting among the available health workers and community health partners, in order to mitigate the impact of the shortages of skilled health workers.
6. Strengthen outreach mobile NCDs services, by integrating and prioritizing NCDs in the existing mobile health services, including the Zambia Flying Doctor Services, mobile hospitals and outreach services, and introduction of specific programmes.
7. Scale up training of CHWs in NCDs education and prevention, and in care and support for people suffering from chronic NCD in the communities.

Medical Products, Infrastructure, Equipment and Transport

6.1.6 Drugs and Medical Supplies

6.1.6.1 Overview

The National Drug Policy (NDP) reflects government's commitment to addressing the issues affecting the Pharmaceutical Sector in a comprehensive manner. Currently, this policy is under review, to respond to emerging issues and challenges in the pharmaceutical sector.

Over the past 5 years, availability of some drugs, improved to over 80%. This was largely attributed to the major efforts undertaken, at strengthening the drugs and logistics systems, structures and capacities at all the levels. This included: the establishment of the Drug Supply Budgetline (DSBL) department; introduction of framework contracts for essential medicines, health centre kits and community health worker kits; and upgrading of the Medical Stores Limited (MSL) infrastructure and drugs logistics systems.

However, though these improvements were recorded, there are still a number of challenges in this area. These include the fact that funding for drugs and medical supplies is insufficient, and that most NCDs require specific types of drugs and supplies, which are not always prioritized. The focus will therefore be at ensuring the availability and equitable distribution of essential drugs and medical supplies for diagnosis and management of NCDs.

6.1.6.2 Objective

To strengthen logistics management and ensure availability and rational distribution of essential drugs and medical supplies for common NCDs

6.1.6.3 Key Strategies

1. Encourage public private partnerships in improving the affordability of medicines for NCDs.
2. Strengthen quantification of essential drugs and diagnostic supplies for NCDs, for different levels of care, and ensure their inclusion in the procurement plans and budgets.
3. Strengthen the composition of the health centre drug kit and community health worker kit, and ensure that essential drugs and diagnostic supplies for NCDs are included.
4. Strengthen procurement and logistics for NCDs essential drugs and diagnostic supplies, including the use of framework contracts.
5. Strengthen monitoring of the availability of essential drugs and diagnostic supplies for NCDs, at all the levels.
6. Engage with the international community, including CPs, pharmaceuticals manufacturers and suppliers, and civil society, on the need for favourable terms for the supply of NCD drugs and diagnostics to Zambia.

6.1.7 Infrastructure, Equipment and Transport

6.1.7.1 Overview

Availability and equitable distribution of appropriate infrastructure, equipment and transport are important factors in ensuring access to quality health services, as close to the family as possible.

Infrastructure: The policy objective for Zambia, in respect of health infrastructure, is to ensure that all the population has access to health facilities within a 5 km radius. However, due to financing constraints, meeting this objective has remained a major challenge, particularly for the rural areas. A list of existing health facilities in Zambia is provided at Appendix 1. There are several challenges associated with health infrastructure, including: inequitable distribution; inappropriateness of some facilities, particularly for specialized medical services required by most NCDs; and poor maintenance of existing infrastructure.

There are also other infrastructure related challenges, which are not directly under the control of the health sector, but significantly impact on health service delivery. These include the state and condition of transport and communication infrastructure, particularly in rural areas, where such infrastructure is a challenge. The health sector has since developed an infrastructure database and a comprehensive capital investment plan for infrastructure and equipment. Based on this plan, the sector has embarked on large scale construction and rehabilitation of health infrastructure across the country, with priority being given to underserved areas.

Medical Equipment: The list of essential medical equipment and accessories has been defined for the health posts, health centres, Level 1, 2 and 3 referral hospitals. Equipment Database was established in 2007, through the Health Facilities Census (HFC). However, currently, there is a critical shortage of essential medical equipment in most of the hospitals, particularly Level 2 and 3 hospitals, which adversely affects the delivery of some specialized services. Theatre and Anaesthesia, maternity, CSSD and general bedside nursing equipment in most of Zambia's hospitals require replacement. Maintenance of medical equipment has been a major challenge, though recently, the position of equipment maintenance officer has been introduced at provincial level in the new MOH staff establishment. The challenge is to ensure that appropriate equipment and technologies for the management of NCDs are made available at all the levels of care.

Transport: Currently, the transport system within the health sector is considerably weak. The maintenance system is poor and there is inadequate air, marine and land transport for outreach and referral services. Capacity for vehicle transport management and maintenance is very limited. This has led the sector to embark on strengthening the transport system, through the procurement of vehicles, motorbikes and boats for districts, hospitals and training institution, procurement of the mobile hospitals, and strengthening maintenance workshops at provincial level.

6.1.7.2 Objective

To ensure availability of essential infrastructure, equipment, technologies and transport needed to support the prevention and management of NCDs at all the levels of health facilities, in order to facilitate efficient and effective prevention and management of NCDs.

6.1.7.3 Key Strategies

1. Strengthen infrastructure base for the prevention and management of NCDs in health facilities and communities;
2. Strengthen the medical equipment and technologies for the prevention and management of NCDs in health facilities and communities;
3. Strengthen transport services at all levels to support prevention and referral services for NCDs;
4. Designs for hospitals should include infrastructure for diabetes and cardiovascular diseases.

Health Information - Surveillance, Information and Research

6.1.8 Overview

Efficient and effective surveillance, information and research, provide the necessary evidence base for the development and implementation of efficient and effective NCDs prevention and management programmes.

Surveillance and information: A number of achievements have been made in strengthening NCDs surveillance and information. These include the establishment of the cancer registry at the CDH in Lusaka, production of the NCD information pack, training of health workers in the use of the NCD reporting tools, introduction of separate reporting for NCD and inclusion of NCD indicators in the HMIS/DHIS at district level. The challenges include the weaknesses in the coordination and harmonization of information/data from different partners, lack of functional integration of the facility-based NCD surveillance with the communicable diseases surveillance systems and unclear indicators on some NCDs. There is also need to include NCD indicators in in future ZDHS.

The focus will be on further strengthening of NCDs surveillance and information, to form a strong evidence base for effective planning, monitoring and evaluation of the NCDs programme. In this respect, surveillance and reporting on NCDs will be strengthened at all levels, including national, provincial, district and community levels. Significant efforts will go towards strengthening coordination and harmonization of NCDs surveillance with communicable diseases surveillance, as well as strengthening of coordination and harmonization of the various partners. The health sector will work with all stakeholders to improve the networking, provision of standards and strengthening institutionalization of NCD surveillance at all levels. The integrated approach to surveillance would allow for greater efficiencies, more effective and sustainable capacity building and improved use of data at national and sub-national levels, while taking into account program specific needs. This will ensure availability of high quality information in a cost-effective manner.

Research: Research and development forms the foundation for successful formulation and implementation of any programme. Whilst internationally, significant investment has been made in advancing research and development in NCDs, locally the efforts are inadequate and lack appropriate coordination, prioritization and use of research findings in policy formulation and action planning. However, in the recent past, notable efforts were made in health research in general, and NCDs research in particular. Strengthening of the institutional framework for research, within the health sector is critical to support programming of interventions. The needs assessment for NCDs, conducted in 2010, will provide guidance in future surveys on specific NCDs.

6.1.9 Objective

To promote and support national capacity for high quality research, surveillance and development for the prevention and control of non-communicable diseases.

6.1.10 Key Strategies

1. In collaboration with academic and research institutions, monitor and evaluate the impact of interventions and policies on non-communicable-disease-related research

2. Increase investment in research, innovation and development and its governance as an integral part of the national response to non-communicable diseases

3. Strengthen institutional capacity for research and development, including research infrastructure, equipment and supplies in research institutions, and the competence of researchers to conduct quality research.

4. Make more effective use of academic institutions and multidisciplinary agencies to promote research, retain research workforce, provide incentives for innovation and encourage the establishment of national reference centres and networks to conduct policy-relevant research.

5. Strengthen the scientific basis for decision-making through non-communicable-disease-related research and surveillance and its translation to enhance the knowledge base for ongoing action.

6. Track local and international resource flows for research and national research output and impact applicable to the prevention and control of non-communicable diseases.

Healthcare Financing

6.1.11 Overview

Generally, the total funding to the health sector has continued to be inadequate and far below the required levels. This is despite the significant and consistent increases in funding recorded over the past 5 years, from both domestic and international sources. As a percentage of the Gross Domestic Product (GDP), health care spending represents between 5.4% and 6.6%, which translates to approximately US$ 28 per capita.

The major concern is that both internal and external funding to health has mainly been directed at combating priority communicable diseases, particularly HIV and AIDS, malaria, TB and STIs, with little or no significant improvements in the funding to NCDs. The projected budgetary allocation for NCDs constitutes 0.00148% of the allocation to the health sector in 2014 This clearly shows that though, funding to NCDs is included in the health sector's plans and budgets, the levels remain far below the needs. Partner financial support is also insignificant and contributes to approximately X% of funding on NCDs.

Government will focus at significantly scaling up funding to the health sector, towards the Abuja target of 15% of the discretionary budget. Efforts will be made towards significantly increasing funding for NCDs at all the levels of care. This will be achieved through prioritization of NCDs, increasing Government funding to the sector, encouraging private sector participation, including for- and not-for profit initiatives, PPPs, introducing Social Health Insurance (SHI) and strengthening health insurance, and earmarked taxation e.g. on products considered as the main causes of NCDs such as tobacco and alcohol. Efforts will also be intensified towards engaging the international community to prioritise and scale up support to NCDs and strengthening the coordination and harmonization of such support, for higher impact. Significant efforts will also be made in strengthening the financial management systems and capacities, in order to ensure high standards of transparency and accountability.

6.1.12 Objective

To ensure optimal and timely financing to NCDs and effective allocation, utilization and tracking of the available resources, in order to achieve high impact and value-for-money.

6.1.13 Key Strategies

1. Prioritise NCDs funding at all levels, including national, provincial, district, facility and community levels.
2. Scale up funding for NCDs prevention, case management and support, surveillance and reporting, and research programmes and activities.
3. Strengthen financial management and control, in order to ensure high standards of accountability.

Leadership and Governance

6.1.14 Overview

Since 1991, Zambia has been implementing comprehensive and wide-ranging health sector reforms, aimed at strengthening the governance of the health sector, in order to achieve the stated goal of improving the health status of the people of Zambia. The Government of Zambia has continued to provide appropriate leadership in the implementation of these reforms and the overall governance of the health sector. In this respect, strong systems and structures for overall sector leadership and governance have been established, including: the policy and regulatory framework, institutional framework, partnerships for health, and monitoring and evaluation frameworks.

Currently, the health sector framework is being guided by the NHSP 2013-16, which is anchored into the SNDP and the Zambia Vision 2030 Strategy. The NHSP 2013-16 has articulated the vision, mission, objectives and key strategies for the health sector for the next 4 years ending 2016. The country has in place an overarching national health policy and legal framework, to provide a solid foundation for further development of the sector.

Governance structures have also been established and strengthened, including: the sector coordination structures under the SWAPs; Health sector, organizational structures at national, provincial, district, facility and community levels; and inter-sector collaboration structures. Major strides have also been made in strengthening monitoring and evaluation, including the establishment of strong and well-defined routine and non-routine reporting systems, and the introduction and institutionalization of the Joint Annual Reviews (JARs). However, there are still significant weaknesses and gaps in the NCDs policy, regulatory, institutional and organizational frameworks, partnerships, and monitoring and evaluation frameworks, which have all contributed to the weak national response to NCDs.

The Health sector will focus at strengthening the leadership and governance systems, structures for NCDs management and control. In this respect, efforts will be directed at ensuring prioritisation of NCDs in the national health policy and strategic framework by strengthening policy and legislation aimed at promoting prevention, treatment, care and support. Surveillance information and research will enhance evidence based planning and stakeholder participation and further form a basis for monitoring and evaluation.

6.1.15 Objective

To strengthen national capacity, leadership, governance, multi sectoral action and partnerships to accelerate response for the prevention and control of NCDs.

6.1.16 Key Strategies

1. Strengthen the policy and legal frameworks for promoting NCDs prevention, management and support.
2. Strengthen advocacy for prioritization of NCDs in the national health agenda.
3. Strengthen the national unit on NCDs in the health sector with suitable expertise, resources, and responsibility for needs assessment, planning, policy and multi-sectoral coordination.
4. Strengthen organization and management of NCDs at all the levels.
5. Strengthen transparency and stakeholders' participation in the management of NCDs.
6. Promote strong partnerships at international, national, district and community levels.
7. Strengthen monitoring and evaluation of implementation of the NCD programmes.

7 IMPLEMENTATION FRAMEWORK

The implementation framework for this plan will include the policy and regulatory, institutional and coordination, and monitoring and evaluation frameworks, as discussed below.

Policy and Regulatory Framework

This strategic plan will be implemented within the overall national and strategic development frameworks. It is aligned and seeks to contribute to the NHSP 2013-16, which aims at contributing to the attainment of the SNDP and the Vision 2030. The policy and regulatory frameworks under which this plan will be implemented will be guided by the National Constitution, relevant local and global policies and strategic frameworks, and applicable legislation.

During the course of this strategic plan, efforts will be directed at reviewing and strengthening the existing policy and regulatory framework, so as to provide for smooth implementation of the plan. Specific reviews and improvements are provided among the recommended key strategies, under leadership and governance.

Institutional and Coordination Frameworks

The plan will be implemented within the existing sector and multi-sector institutional and coordination frameworks. The existing coordination structures for the sector performance such as the Sector Advisory Group (SAG), at the Provincial Medical Offices (PMOs), District Community Medical Offices (DCMOs) and health facilities will facilitate coordination of the NCDs services.

Considering that NCDs control requires broad and strong partnerships, the health sector will seek to strengthen multi-sector coordination by establishing the NCDs Technical Working Group (NCD-TWG), which will include representatives from relevant sectors and government departments, communities, civil society, associations of people living with NCD, and CPs, at national level. Coordination of partnerships at provincial and district levels will be achieved by either incorporating NCDs into the scope of the existing relevant TWGs, which are currently active, or establishing NCD-TWGs at these levels. In this respect, the district TWGs would be feeding into the provincial TWGs, and the provincial TWGs into the national level TWG. The specific terms of reference for these TWGs, including the roles and responsibilities, composition, organisation and coordination would be developed by the national level NCD-TWG.

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 the SAG will be responsible for providing advice on all matters concerning monitoring and evaluation. The following describe the M&E framework that will be applied.

7.1.1 Monitoring

The health sector will be responsible for monitoring of the implementation of this plan. The instruments that will be applied will include the HMIS and surveillance reports, established routine management reporting, performance assessments, and Joint Annual Reviews (JARs). JARs will be planned and conducted jointly with the sector partners, including relevant line ministries and government departments, private sector, civil society, and CPs. The information and analyses obtained, through the various monitoring instruments, will be used for policy and management decision making, particularly in the programming and management of NCDs services.

7.1.2 Evaluation

This plan will not be evaluated separately, but as part of the NHSP 2013-16 evaluation. This is considered necessary for purposes of cutting down on costs. In this respect, the review of this plan will be appropriately included in the Terms of Reference for the Mid-Term and End of Term reviews of the implementation of the NHSP 2013-16.

The mid-term evaluation will focus on progress made in plan implementation and assess the appropriateness of the overall strategic direction. It will therefore be designed to inform the remaining period of the plan and recommend adjustments where need be. The end of term evaluation will focus on evaluating the impact/outcome of the plan and assist in providing the contextual framework for the subsequent planning period.

8 BUDGET SUMMARY (USD)

	ACTIVITY	2013	2014	2015	2016	TOTAL
1	Prevention And Health Promotion	870,000	900,000	1, 000,000	500,000	2,270,000
2	Case Management	50,000,000	50,000,000	60,000,000	50, 000,000	160,000,000
3	Information And Research	2,450,000	3,000,000	1,000,000	3,000,000	9,450,000
4	Monitoring And Evaluation	416,000	416,000	416,000	416,000	1,664,000
	TOTAL					**173,384,000**

9 APPENDICES

Appendix 1: Zambia: List of Health Facilities
Appendix 2: NCDs Results Framework
Appendix 3: Implementation and Results Framework
Appendix 4: Initial division of labour for UN Funds, Programmes and Agencies besides WHO
Appendix 5: Cross-sectoral engagement to reduce risk factors and potential health effects

Appendix I: Zambia: List of Health Facilities

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 Hospital	2	9	2	1	0	2	2	2	1	**21**
Level 1 Hospital	7	8	8	5	15	6	10	14	13	**85**
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	**189**	**235**	**227**	**142**	**279**	**216**	**167**	**254**	**174**	**1,883**
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	15	61	0	3	155	13	8	13	4	**271**
Total	**189**	**235**	**227**	**142**	**279**	**216**	**167**	**254**	**174**	**1,883**

Source: Heath Institutions in Zambia, Ministry of Health, 2011

Appendix 2: NCDs Results Framework

1. Health Service Delivery

KEY RESULT AREA	INDICATOR(S)	BASELINE 2013	TARGET 2016	Data Source
A) Prevention of NCDs and Health Promotion				
1. Obesity:	Halt the rise in prevalence of obesity amongst persons aged 15 – 64 years	14.1%	Zero Increase	National Survey
2. Promoting physical activity	Prevalence of insufficiently physically active persons aged 15-64 years defined as less than 150 minutes of moderate-intensity activity per week, or equivalent.		10% reduction	National Survey
3. Tobacco control	Prevalence of current tobacco smoking amongst persons aged 15 – 64 years	6.1%	5.7%	National Survey
	Prevalence of tobacco smoking among persons aged 13-15 years	13%	12%	National Survey
4. Reducing the Harmful use of Alcohol	Prevalence of alcohol consumption amongst persons aged 15 – 64 years	21.2%	19.10%	National Survey
	Prevalence of alcohol misuse amongst aged 13-15 years	42%	39%	National Survey
5. Reduction in violence and injuries	Prevalence of violence and injuries among persons aged 5-44 years			National Survey
6. Reduction in Road traffic injuries	Prevalence of road traffic injuries among persons aged 5-44 years			National Survey
7. Salt/sodium intake	Prevalence of salt intake among persons aged 15-64 years			National Survey
8.Raised total cholesterol	Prevalence of raised cholesterol among persons aged 15-64 years	23.1%	21.9%	National Survey
9.Cervical cancer screening	Prevalence of women between ages 30-49 years screened for cervical cancer at least once	52.3 per 100,000		National Survey

B) NCD Case Management				Data Source
1. Promotion and strengthening of regular active screening for NCD	% of target population screened		50%	HMIS
2. Early diagnosis of NCD	# of patients diagnosed		60%	HMIS
3. Provision of optimal treatment	% of HF utilising NCDs guidelines		80%	HMIS
	Stock out rate of NCD drugs in health facilities	<35%*	<10%	HMIS
4. Rehabilitation and Social support structures	# of patients on rehabilitation		70%	HMIS
	% of HFs offering social support services		80%	HMIS

*SSA report, June 2013 (2010 data)

2. Health Workforce/HRH

KEY RESULT AREA	INDICATOR(S)	BASELINE 2013	TARGET 2016	Data Source
1. Recruitment and management	Percentage of NCDs staff establishment filled at central level.	20%	100%	HRH
2. Staff training and development	% of HFs with trained health workers in NCDs prevention and management.	10%	60%	Prog reports
2. Community Health Assistants working in NCDs	% of HFs with CHA working in NCDs at community level	0%	50%	Prog reports

3. Medical Products, Infrastructure, Equipment and Transport

KEY RESULT AREA	INDICATOR(S)	BASELINE 2013	TARGET 2016	Data Source
1 Drugs therapy	% of eligible persons receive drug therapy to prevent heart attack and stroke, and counseling	<35*	50%	HMIS
2 Essential NCD medicines and basic technologies	% of availability of basic technologies and generic essential medicines to treat major NCDs in both private and public health facilities.		80%	HMIS
3 Infrastructure	% of hospitals (tertiary, second and first level) with infrastructure	0	At least 1 in each province	HMIS

*SSA report, June 2013 (2010 data)

4. Health Information

KEY RESULT AREA	INDICATOR(S)	BASELINE 2012	TARGET 2016	Data Source
1. NCDs Information System	Revised key NCDs indicators incorporated into HMIS data base	0	1	Prog reports
	% of districts submitting reports completely and timely (weekly reports)	80%*	100%	HMIS
2. Include the NCD agenda into Interagency Coordinating Committee	NCD agenda developed and included at ICC meetings	0	1	Prog reports
3. Operational research	Established and functional research framework on NCD	0	1	Prog reports

*proxy IDSR weekly reports (recently included on disease notification list)

5. Healthcare Financing

KEY RESULT AREA	INDICATOR(S)	BASELINE 2013	TARGET 2016	Data Source
1. Local funding	% funding of the NCDs annual budget by GRZ/health sector	0.00148%	0.1%	Yellow Book
2. External funding	% funding of the NCDs annual budget by CPs/Partners	0%	50%	SAG report

6. Leadership and Governance

KEY RESULT AREA	INDICATOR(S)	BASELINE 2013	TARGET 2016	Data Source
1. Policy and Legislation	Policies to reduce the impact on children of marketing foods high in saturated fats, trans-fatty acids, free sugars or salt in place	**0**	**At least 1**	Prog reports
	National policies that virtually eliminate hydrogenated vegetable oils in the food supply with polyunsaturated fatty acids in place	**0**	**At least 1**	Prog reports
2. Partnerships and participation	Number of partners actively involved in NCDs activities			Prog reports
3. Transparency and accountability	Annual NCD Audits conducted	**0**	**4**	Prog reports
4. Monitoring and evaluation	Mid-term and End of term evaluation of the Health sector NCDs Strategic Plan conducted	**0**	**At least 1**	Prog reports

Appendix 3: Implementation and Results Framework

Objective 1: To raise priority accorded to the prevention and control of NCDs in the national agenda through advocacy and Multi-sectoral partnership

Interventions	2013	2014	2015	2016
Raise public and political awareness and understanding about prevention and control NCDs	√	√	√	√
Integrate NCDs into social and development agenda and poverty alleviation strategies.	√	√	√	√
Strengthen international cooperation for resource mobilization, capacity-building, health workforce training and exchange of information on lessons learned and best practices.	√	√	√	√
Engage and mobilize civil society and the private sector as appropriate and strengthen partnership to support implementation of the action plan.	√	√	√	√
Involvement of other government departments and agencies (appendix 4 and 5)	√	√	√	√

Objective 2: To reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environment.

Interventions	2013	2014	2015	2016
Tobacco use	√	√	√	√
Implement WHO Framework Convention on Tobacco Control (FCTC) including through comprehensive legislation	√	√	√	√
Reduce affordability of tobacco products by increasing tobacco excise taxes	√	√	√	√
Enforcement of the by-law of the smoke free environments in all indoor workplaces, public places and public transport	√	√	√	√
Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns.	√	√	√	√
Ban all forms of tobacco advertising , promotion and sponsorship	√	√	√	√
Harmful use of Alcohol				
Advocate for leadership and political commitment to reduce harmful use of alcohol	√	√	√	√
Establish prevention and treatment interventions for those at risk of or affected by alcohol use disorders and associated conditions	√	√	√	√
Develop community based effective prevention and treatment interventions.	√	√	√	√
Strengthen policies on drink -drive counter measures.	√	√	√	√

Enforce access restriction to retailed alcohol for under age (18 years)	√	√	√	√
Enforce bans to alcohol advertising and promotion	√	√	√	√
Raise prices by raising taxes on alcohol	√	√	√	√
Unhealthy diet	√	√	√	√
Promote reduced salt intake	√	√	√	√
Promote replacing of trans-fats with polyunsaturated fats	√	√	√	√
Promote public awareness about healthy diet esp. increase intake of fruits and vegetables	√	√	√	√
Encourage exclusive breastfeeding in the first 6 months	√	√	√	√
Develop guidelines and recommendations or policy measures for food producers and processors.	√	√	√	√
Promote mandatory nutrition labeling for all prepackaged foods	√	√	√	√
Promote the provision and availability of healthy foods in all public and private institutions including schools, other education institutions and work places.	√	√	√	√
Establish mechanisms for nutritional counseling and BMI monitoring at workplaces, schools etc.	√	√	√	√
Promote traditional diets, proven to be healthy and nutritious	√	√	√	√

Physical inactivity	√	√	√	√
Adopt and implement national guidelines on physical activity for health	√	√	√	√
Integrate the promotion of physical activity in the national health policy	√	√	√	√
Establish a multisectoral task force on physical activity for health (? We need to say what it will do – e.g. to address physical inactivity using a multi-sectoral approach)	√	√	√	√
Introducing transport policies that promote active and safe methods of traveling, such as walking and cycling	√	√	√	√
Develop and implement national guidelines on physical activity for health in Schools	√	√	√	√
Promote physical activities in schools, workplaces, communities, and villages, and among specific target groups	√	√	√	√
Improve sports, recreation and leisure facilities in public places and communities, and increase safe spaces available for active play	√	√	√	√
Monitor implementation of policies, programmes and guidelines on physical activity	√	√	√	√

Objective 3: To strengthen and scale up the treatment, rehabilitation, care and support for people suffering from NCDs, in order to reduce morbidity and mortality due to NCDs.

Interventions	**2013**	**2014**	**2015**	**2016**
Integrate very cost-effective non-communicable disease interventions into the basic primary health care package to advance the universal health coverage agenda	√	√	√	√

Explore viable health financing mechanisms and innovative economic tools supported by evidence	√	√	√	√
Improve availability of affordable basic technologies and essential medicines, including generics, required to treat major non-communicable disease, in both public and private facilities	√	√	√	√
Develop and implement a palliative care policy	√	√	√	√
Cardiovascular disease and diabetes	√	√	√	√
Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) to individuals who have had a heart attack or stroke and to persons with high risk (≥ 30%) of a fatal and nonfatal cardiovascular event in the next 10 years	√	√	√	√
Acetylsalicylic acid for acute myocardial infarction	√	√	√	√
Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) to individuals who have a heart attack or stroke and to persons with moderate risk (≥20%) of a fatal and non fatal cardiovascular event in the next 10 years	√	√	√	√
Acetylsalicylic acid, atenolol and thrombolytic therapy (streptokinase) for acute myocardial infarction	√	√	√	√
Treatment of congestive cardiac failure with ACE inhibitor, beta-blocker and diuretic	√	√	√	√
Cardiac rehabilitation post myocardial infarction	√	√	√	√
Anticoagulation for medium-and high-risk non-valvular atrial fibrillation and for mitral stenosis and atrial fibrillation	√	√	√	√
Low-dose acetylsalicylic acid for ischemic stroke	√	√	√	√
Care of acute stroke and rehabilitation in stroke units	√	√	√	√

Diabetes	√	√	√	√
Preconception care among women of reproductive age including patient education and intensive glucose management	√	√	√	√
Detection of diabetic retinopathy by dilated eye examination followed by appropriate laser photocoagulation therapy to prevent blindness	√	√	√	√
Effective angiotensin-converting enzyme inhibitor drug therapy to prevent progression of renal disease	√	√	√	√
Interventions for foot care: educational programs, access to appropriate footwear; multidisciplinary clinics	√	√	√	√
Cancer	√	√	√	√
Prevention of cervical cancer through screening (visual inspection with acetic acid [VIA] & linked with timely treatment of pre-cancerous lesions	√	√	√	√
Vaccination against human papillomavirus, as appropriate if cost-effective and affordable, according to national programmes and policies Note: Screening is meaningful only if the capacity for diagnosis, referral and treatment is simultaneously improved.	√	√	√	√
Oral cancer screening in high-risk groups (e.g. tobacco users, betel-nut chewers) linked with timely treatment	√	√	√	√
Chronic respiratory disease	√	√	√	√
Cost-effective interventions to prevent occupational lung diseases, e.g from exposure to silica, asbestos	√	√	√	√
Treatment of asthma based on WHO guidelines	√	√	√	√
Eye Care:				

Undertake population based survey on the prevalence of visual impairment and its causes	√	√	√	√
Assess capacities to provide comprehensive eye care services and identify gaps	√	√	√	√
Document, and use for advocacy, examples of best practices in enhancing universal access to eye care	√	√	√	√
Make available and accessible essential medicines, diagnostics and health technologies of assured quality with particular focus on vulnerable groups and underserved communities, and explore mechanisms to increase affordability of new evidence-based technologies	√	√	√	√
Enhance effective partnerships and alliances	√	√	√	√

Objective 4: To strengthen and orient health systems to address the prevention and control of NCDs and the underlying social determinants through people centred primary health care and universal coverage

Interventions	**2013**	**2014**	**2015**	**2016**
Scale up early detection and coverage, prioritizing very cost-effective high impact interventions	√	√	√	√
Train health workforce and strengthen capacity of health system particularly at primary care level	√	√	√	√
Population-based breast cancer and mammography screening (50-70 years) linked with timely treatment	√	√	√	√
Detection, treatment and control of hypertension	√	√	√	√
Lifestyle interventions for preventing NCDs	√	√	√	√
Population-based cervical cancer screening linked with timely treatment	√	√	√	√

Secondary prevention of rheumatic fever and rheumatic heart disease	√	√	√	√
Prevention of liver and cervical cancer through hepatitis B and HPV immunization	√	√	√	√
Capacity building of health workers and community health assistants	√	√	√	√
Early detection of the four main NCDs	√	√	√	√
Outreach mobile activities to include screening, early detection and management of NCDs	√	√	√	√
Strengthen school and MCH eye diseases screening, to achieve the target of 25% reduction of avoidable visual impairment by 2019	√	√	√	√

Objective 5: To strengthen logistics management and ensure availability and rational distribution of essential drugs and medical supplies for common NCDs

Interventions	2013	2014	2015	2016
Promote public private partnerships in improving the affordability of medicines for NCDs.	√	√	√	√
Capacity building for officers handling NCD drugs in quantification of essential drugs and diagnostic supplies for NCDs, for different levels of care, and ensure their inclusion in the procurement plans and budgets.	√	√	√	√
Ensure health centre dug kit and community health worker kit, have essential drugs and diagnostic supplies for NCDs.	√	√	√	√
Procurement and logistics for NCDs essential drugs and diagnostic supplies to include the use of framework contracts.	√	√	√	√
Supervisory visits to monitor the availability of essential drugs and diagnostic supplies for NCDs, at all the levels.	√	√	√	√
Engage with the international community, including CPs, pharmaceuticals manufacturers and suppliers, and civil society, on the need for favourable terms for the supply of NCD drugs and diagnostics to Zambia	√	√	√	√

Objective 6: To ensure availability of essential infrastructure, equipment, technologies and transport needed for supporting the prevention and management of NCDs at all the levels of health facilities, in order to facilitate efficient and effective prevention and management of NCDs

Interventions	2013	2014	2015	2016
Infrastructure base for the prevention and management of NCDs in health facilities and communities:	√	√	√	√
Procurement of medical equipment and technologies for the prevention and management of NCDs in health facilities and communities:	√	√	√	√
Ensure availability or procurement of transport services at all levels to support prevention and referral services for NCDs.	√	√	√	√
Designs for hospitals should include infrastructure for diabetes and cardiovascular diseases.	√	√	√	√

Objective 7: To promote and support national capacity for high quality research, surveillance and development for the prevention and control of non-communicable diseases.

Interventions	2013	2014	2015	2016
Develop and implement a prioritized national agenda for non-communicable diseases research	√	√	√	√
Prioritize budgetary allocation for research on non-communicable disease prevention and control	√	√	√	√
Strengthen human resources and institutional capacity for research	√	√	√	√
Strengthen research capacity through cooperation with foreign and domestic research institutes	√	√	√	√
Develop national targets and indicators based on national monitoring framework and linked with a	√	√	√	√

multisectoral policy and plan				
Strengthen human resources and institutional capacity for surveillance and monitoring and evaluation	√	√	√	√
Establish and/or strengthen a comprehensive non-communicable disease surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response.	√	√	√	√
Integrate non-communicable disease surveillance and monitoring into national health information systems	√	√	√	√

Objective 8: To ensure optimal and timely financing to NCDs and effective allocation, utilization and tracking of the available resources, in order to achieve high impact and value-for-money

Interventions	**2013**	**2014**	**2015**	**2016**
Priotize and increase , as needed, budgetary allocations for prevention and control of NCDs, without prejudice to the sovereign right of nations to determine and other policies - Explore innovative financing mechanisms (e.g special tax/levy on alcohol, tobacco, fuel, unhealthy foods) to finance prevention and control measures	√	√	√	√
Assess national capacity for prevention and control of NCDs	√	√	√	√
Develop and implement a national multisectoral policy and plan for the prevention and control of NCDs through multistakeholder engagement	√	√	√	√
Implement other policy options in objective	√	√	√	√

Objective 9: To strengthen national capacity, leadership, governance, multi sectorial action and partnerships to accelerate countries response for the prevention and control of NCDs

Interventions	2013	2014	2015	2016
Mobilization of sustained resources for the prevention and control of NCDs for universal coverage through an increase in domestic budgetary allocation and other sources of funds (NGO and bilateral sources and private sector)	√	√	√	√
Hold steering committee meetings to ensure multi-sectoral action, integrated approach intervention and dissemination of the action plan to other sectors	√	√	√	√
Strengthen institutional capacity, the community workforce and the orientation of personnel in other sectors	√	√	√	√
Establish a National NCD Task Force to deal with the complexity of NCDs (trade. commerce and advertisings, human behavior, health economics, food and agriculture systems, unhealthy commodities to children and limitation of industry self-regulation)	√	√	√	√
Empower communities through social mobilization, empowering and engaging them to catalyse societal change and shape a systematic society-wide response to address NCDs.	√	√	√	√
Hold meetings with human rights activists, faith based organization, communities, NGOs, academia, civil society, media and private sector so that they empowered and get involved in the prevention and control of NCDs.	√	√	√	√
Hold meeting with partners to address NCD implementation gaps	√	√	√	√

Appendix 4: Initial division of labour for UN Funds, Programmes and Agencies besides WHO

UNDP	• Support non-health government departments in their efforts to engage in a multisectoral whole-of-government approach to non-communicable diseases • Support ministries of planning in integrating non-communicable diseases in the development agenda of each Member State • Support ministries of planning in integrating non-communicable diseases explicitly into poverty-reduction strategies • Support national AIDS commissions in integrating interventions to address the harmful use of alcohol into existing national HIV programme
UNECE	• Support the Transport, Health and Environment Pan-European Programme
UN-ENERGY	• Support global tracking of access to clean energy and its health impacts for the United Nations Sustainable Energy for All Initiative • Support the Global Alliance for Clean Cookstoves and the dissemination/tracking of clean energy solutions to households
UNEP	• Support the implementation of international environmental conventions
UNFPA	• Support health ministries in integrating non-communicable diseases into existing reproductive health programmes, with a particular focus on (1) cervical cancer and (2) promoting healthy lifestyles among adolescents
UNICEF	• Strengthen the capacities of health ministries to reduce risk factors for non-communicable diseases among children and adolescents • Strengthen the capacities of health ministries to tackle malnutrition and childhood obesity
UN-WOMEN	• Support ministries of women or social affairs in promoting gender-based approaches for the prevention and control of non-communicable diseases
UNAIDS	• Support national AIDS commissions in integrating interventions for non-communicable diseases into existing national HIV programmes • Support health ministries in strengthening chronic care for HIV and non-communicable diseases (within the context of overall health system strengthening) • Support health ministries in integrating HIV and non-communicable disease programmes, with a particular focus on primary care
UNSCN	• Facilitate United Nations harmonization of action at country and global levels for the reduction of dietary risk of non-communicable diseases • Disseminate data, information and good practices on the reduction of dietary risk of non-communicable diseases • Integration of the action plan into food and nutrition-related plans, programmes and initiatives (for example, UNSCN's Scaling Up Nutrition, FAO's Committee on World Food Security, and the maternal, infant and young child nutrition

	programme of the Global Alliance for Improved Nutrition)
IAEA	• Expand support to health ministries to strengthen treatment components within national cancer control strategies, alongside reviews and projects of IAEA's Programme of Action for Cancer Therapy that promote comprehensive cancer control approaches to the implementation of radiation medicine programmes
ILO	• Support WHO's action plan on workers' health, Global Occupational Health Network and the Workplace Wellness Alliance of the World Economic Forum • Promote the implementation of international labour standards for occupational safety and health, particularly those regarding occupational cancer, asbestos, respiratory diseases and occupational health services
UNRWA	• Strengthen preventive measures, screening, treatment and care for Palestine refugees living with non-communicable diseases • Improve access to affordable essential medicines for non-communicable diseases through partnerships with pharmaceutical companies
WFP	• Prevent nutrition-related non-communicable diseases, including in crisis situations
ITU	• Support ministries of information in including non-communicable diseases in initiatives on information, communications and technology • Support ministries of information in including non-communicable diseases in girls' and women's initiatives • Support ministries of information in the use of mobile phones to encourage healthy choices and warn people about tobacco use

Appendix 5: Cross-sectoral engagement to reduce risk factors and potential health effects*

Sector	Tobacco	Physical inactivity	Harmful use of alcohol	Unhealthy diet
Agriculture	√		√	√
Communication	√	√	√	√
Education	√	√	√	√
Employment	√	√	√	√
Energy	√	√	√	√
Environment	√	√	√	√
Finance	√	√	√	√
Food/catering	√	√	√	√
Foreign affairs	√	√	√	√
Health	√	√	√	√
Housing	√	√	√	√
Justice/security	√	√	√	√
Legislature	√	√	√	√
Social welfare	√	√	√	√
Social and economic development	√	√	√	√
Sports	√	√	√	√
Tax and revenue	√	√	√	√
Trade and industry (excluding tobacco industry)	√	√	√	√
Transport	√	√	√	√
Urban planning	√	√	√	√
Youth affairs	√	√	√	√

Examples of potential health effects of multisectoral action**

	Tobacco	Physical inactivity	Harmful use of alcohol	Unhealthy diet
Sectors involved (examples)	• Legislature • Stakeholder ministries across government, including ministries of agriculture customs/revenue economy, education, finance, health, foreign affairs, labour planning, social welfare, state media, statistics and trade	• Ministries of education, finance, planning, sports, and youth • Local government	• Legislature • Ministries of trade, industry, education, finance and justice • Local government	• Legislature • Ministries of trade agriculture, industry, education, urban planning, energy, transport, social welfare and environment • Local government
Examples of multi-sectoral action	• Full implementation of WHO Framework Convention on Tobacco Control obligations through coordination committees at the national and subnational levels	• Urban planning/re-engineering for active transport and walkable cities • School-based programmes to support physical activity • Incentives for workplace healthy-lifestyle programmes • Increased availability of safe environments and recreational spaces • Mass media campaigns • Economic interventions to	• Full implementation of the WHO global strategy to reduce the harmful use of alcohol	• Reduced amounts of salt, saturated fat and sugars in processed foods • Limit saturated fatty acids and eliminate industrially produced trans fats in foods • Control/regulate advertising of unhealthy foods and beverages to children • Increase availability and affordability of fruit and vegetables to promote intake • Offer more healthy food in schools and other public institutions and through social support programmes • Economic interventions to promote healthy food

		promote physical activity (taxes on motorized transport, subsidies on bicycles and sports equipment)		consumption (taxes, subsidies) • Improve food security
Desired Outcome	• Reduced tobacco use and consumption, including secondhand smoke exposure and reduced production of tobacco and tobacco products	• Decreased physical inactivity in the whole population	• Reduced harmful use of alcohol	• Increased availability and consumption of foods low in calories, salt, sugar and fats increased • Substitution of healthy foods for energy-dense micronutrient-poor foods

(Available at http://www.who.int/nmh/events/2012/20121128.pdf)