Government's Health Policy Response to Non-Communicable Diseases in Zambia

By

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Date: _________________________________

Head, Department of Public of Health

Signature: ___________________________ Date: _______________________________

ABSTRACT

Introduction

Non-communicable diseases (NCDs) are an emerging global health concern. Reports have shown that in Zambia NCDs are also an emerging problem and the government has begun initiating a policy response. The study explored the policy response to NCDs by the Ministry of Health in Zambia using the policy triangle framework of Walt and Gilson.

Methods

A qualitative approach was used for the study. Data collected through key informant interviews with stakeholders who were involved in the NCD health policy development process as well as review of key planning and policy documents were analysed using thematic analysis.

Results

The government's policy response was as a result of international pronouncements and resolutions from WHO on NCDs, evidence of increasing disease burden from NCDs and pressure from local interest groups. The government recently developed the NCD strategic plan based on the WHO Global Action Plan for NCDs 2013-2030 to provide direction on how the government intended to address these conditions. During the development of the NCD strategic plan, the government through the Ministry of Health set the agenda and adopted the final document. Stakeholders including government line ministries, cooperating partners and non-governmental organizations participated in the development of the first draft of the document. Analysis of the policy process for the development of the NCD strategic plan showed that the process had the recommended key elements of successful policy development such as stakeholder participation and consultation, strong political will from the government and use of international guidelines. On the other hand, a root cause analysis of the policy process revealed that inadequate domestication of international guidelines, weak inter-sector collaboration and political influence resulted in the NCD strategic plan having gaps in its contents which are possibly contributing to the current challenges in implementing the plan.

Conclusion

Contextual factors like international strategies and commitments are crucial catalysts to policy response. However there is need for adequate domestication of international guidelines according to available evidence to match the resources and capacities in the local context if policy measures are to be comprehensive, relevant and measurable.

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ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
CDH	Cancer Diseases Hospital
CVD	Cardiovascular Disease
FCTC	WHO Framework Convention on Tobacco Control
HIV	Human Immuno-deficiency Virus
KII	Key informant interview
LMICs	Low and Middle Income Countries
MCDMCH	Ministry of Community Development, Mother and Child Health
MDGs	Millennium Development Goals
MoH	Ministry of Health
MTR	Mid-Term Review
NCDs	Non Communicable Diseases
NHP	National Health Policy
NHSP	National Health Strategic Plan
OPD	Out Patient Department
R-SNDP	Revised Sixth National Development Plan
STEPS	STEPwise approach to non-communicable disease risk factor Surveillance
UNHLM	United Nations High Level Meeting
WHO	World Health Organization

KEY TERMS

Non communicable diseases

The term 'non communicable diseases' will refer to the four major health conditions as identified by WHO, namely: cancers, cardiovascular diseases, chronic respiratory diseases and diabetes. These diseases are grouped because of their strong relationship to four behavioural risk factors: use of tobacco, unhealthy diets, lack of physical exercise and harmful use of alcohol (WHO, 2011).

Health policy

Courses of action (and inaction) that affect the set of institutions, organizations, services and funding arrangements of the health system' (Buse et al. 2005, p. 6) cited in (Gilson, 2012)

Policy actors

At national level, these are individuals, groups or organizations that seek to influence the formal policy process such as civil society groups or interest groups (Gilson, 2012).

Policy analysis

The process of understanding the forces influencing why and how policies are initiated, developed or formulated, negotiated, communicated, implemented and evaluated, including how researchers influence policymaking (Gilson, 2012).

Policy content

Particular policy goal or set of goals and the particular actions planned to achieve those goals (Raney, 1968) cited in (Khan, 2006)

Policy context

Critical elements influencing the policy process and the overall health of a population directly and indirectly, within which health policy is embedded. These elements may be political, administrative, economic, socio-cultural, and demographic (Frenk, 1995; Gonzalez, 1997) cited in (Khan, 2006)

Policy process

The way policy reforms are planned, designed, implemented and evaluated (Khan, 2006)

CHAPTER 1: BACKGROUND

1.1 Introduction

1.1.1 Definition of NCDs

The term non-communicable diseases (NCDs) encompass a whole host of conditions that are non-infectious in nature. These conditions can either be of sudden onset (such as injuries and consequences of chronic conditions such as myocardial infarction)) or chronic (such as mental disorders, diabetes and cardiovascular conditions) in nature. As the name suggests, non-communicable diseases are non-infectious and cannot be transmitted from one person to the other.

For the purposes of this study, the term NCDs will refer to the four main conditions as identified by World Health Organization (WHO) namely: cancers, cardiovascular diseases, chronic respiratory diseases and diabetes. These conditions are so grouped because of their strong relationship to four behavioural risk factors which include use of tobacco, unhealthy diets, lack of physical exercise and harmful use of alcohol (WHO, 2011).

1.1.2 Prevalence of NCDs

The global prevalence of the NCDs has been steadily rising over the past few decades (WHO, 2011, Habib and Saha, 2010). Once considered diseases of the affluent (Wagner and Brath, 2012), NCDs are now a common occurrence in all regions of the world with the developing countries bearing the majority of the burden (Alwan, 2011). In such countries, there is evidence that a significant proportion of the prevalence of the common NCDs like diabetes and cardiovascular diseases is now occurring in the productive age group of between 30 and 60 years (WHO, 2014, Wagner and Brath, 2012). Studies conducted in sub-Saharan countries present a similar picture of increasing morbidity and mortality due to NCDs (Mensah, 2008).

According to the 2012 Annual Health Statistical Bulletin by Zambia's Ministry of Health, there was a 22% increase in the total number of NCDs cases between 2010 and 2012 in all age groups (MOH, 2014). In the same period, cases of hypertension seen in the out-patient department (OPD) increased by 39% for all age groups. Cancer cases seen at Cancer Diseases Hospital (CDH) also rose from 1282 in 2010 to 1828 in 2012, representing a 43% increase. The Zambian profile in the WHO (2014) NCD country profile reported that NCDs contributed to 23% of the total deaths in the country. Other studies that were conducted in Zambia found that the prevalence of hypertension in adults ranged between 25.8% to 32.8% in rural areas (Mulenga

et al., 2013, Siziya et al., 2012) and 34.8% in urban areas (Goma et al., 2011b). For diabetes, the prevalence was estimated at 4.6% for adult females and 5.35% for adult males in Lusaka (Nsakashalo-Senkwe et al., 2011).

1.1.3 Risk Factors of NCDs

Despite the devastating effect of NCDs on patients, families and countries at large, most of the common NCDs are preventable through the control of the modifiable risk factors (Habib and Saha, 2010). The most recognized risk factors that have been associated with CVD, cancer and diabetes, and are preventable, include blood pressure, obesity, high blood cholesterol, tobacco use and alcohol consumption (Alwan, 2011). As a consequence, the WHO has prioritized control of physical inactivity; unhealthy diets; alcohol consumption; and tobacco use in addressing NCDs (WHO, 2014). Biological factors such as ageing and genetic predisposition also have a significant role to play in the development of NCDs (Hanson and Gluckman, 2011, Lloyd-Sherlock, 2008)

1.1.4 Global response to NCDs

The increasing burden of NCDs in recent times has received global attention, and NCDs have now been identified as a global health crisis (WHO, 2011). Consequently, there have been efforts by global institutions to mitigate this crisis. For instance, the WHO conducted a global country capacity survey to assess the capacity of countries to respond to NCDs in 2010 (WHO, 2012). In September 2011, world leaders adopted the Political Declaration on NCDs at the United Nations General Assembly in New York. Political leaders through this declaration committed to develop among other things national multisectoral plans to prevent and control NCDs (UN, 2011). The WHO in 2013 produced the second global action plan for the prevention and control of non-communicable diseases for the period 2013-2030 (WHO, 2013) to further provide guidelines for responding to NCDs. Other document from the WHO that address NCDs and their risk include the WHO Framework Convention for Tobacco Control (FCTC) of 2003, Global Strategy on Diet, Physical Activity and Health of 2004, Global Strategy to Reduce the Harmful Use of Alcohol of 2009 (WHO, 2016).

1.2 Literature review

1.2.1 Examples of country level policy responses to NCDs

Most countries have been reported to have put in place measures to address NCDs (WHO, 2012). Studies have shown that most countries have developed risk factor- and disease specific

strategies. According to the Health Nutrition and Population Sector Program (HNPSP), Bangladesh has identified CVD, diabetes and cancers as the major public health problems. Consequently, they aim to reduce the mortality from NCDs by 2% per annum, an objective adopted from the World Health Assembly guidelines (Islam and Biswas, 2014). In Western Pacific countries like Fiji and Malaysia, Rani et al. (2012) reported that these countries had developed policies in response to global or regional initiatives such as the Western Pacific Declaration on Diabetes of 2000 or the WHO FCTC of 2005.

Countries like Tanzania, Mozambique and Ghana have also ratified the WHO FCTC (Metta et al., 2014, Silva-Matos and Beran, 2012, Bosu, 2012). However, despite the ratification of the WHO FCTC, there is no overarching NCD policy in Ghana and Tanzania, which is supposed to guide the implementation of such regulations. In contrast, Mozambique has the National Strategic Plan, which aims to guide local action and create a positive environment to eliminate exposure to NCD risk factors (Silva-Matos and Beran, 2012). The national plan for NCDs in Mozambique includes strategies for the primary, secondary and tertiary prevention of NCDs (Silva-Matos and Beran, 2012). Ghana guided by local data has expanded its focus to include other NCDs like sickle cell anaemia. The strategies in Ghana are aimed at promoting good nutrition across all age groups and risk factor reduction targeting tobacco and alcohol use (Bosu, 2012).

Regulations have also been used in some LMICs in addressing NCDs. Countries like Cameroun have laws guiding food labelling (Echouffo-Tcheugui and Kengne, 2011). In Tanzania and South Africa, there are laws that restrict the consumption of alcohol and the operation hours of bars (Haregu et al., 2014). In Zambia, Statutory instrument number 39 of (2008) under the Ministry of Local Government prohibits smoking in public areas such hospitals, schools and bus stations. Additional measures that have been taken to address NCDs in Zambia include prioritizing of NCDs among the country's health concerns in the National Health Strategic Plan 2011 – 2015 (MOH 2011). The management of NCDs has also been incorporated in the training of medical professionals (Aantjes et al., 2014). The WHO (2014) country report further states that Zambia has in place an NCD unit, and operational policies/plans/strategies for the major risk factors of NCDs. Zambia being a member of the United Nations has also ratified a number of global declarations and strategies addressing NCDs such as the WHO FCTC and the Political declaration on NCDs.

Despite evidence of national level policy responses to NCDs in literature, little has been said of how these policies were developed. For instance, the study by Metta et al. (2014) in Tanzania noted that the formulation of NCD policies and guidelines was steered by the Ministry of Health and Social Welfare. However, in this and other similar studies there is little mentioned about the actual approach used in the formulation of these policies (Echouffo-Tcheugui and Kengne, 2011, Rani et al., 2012, Silva-Matos and Beran, 2012). The methodology used by Metta et al. (2014), similar to most studies reporting on the policy response in LMICs, is systematic review of published literature, which does not offer in-depth analysis of the policies. Information on the process and context of policy development, policy contents or the extent of actor involvement is necessary if best practises in policy response to NCDs in LMICs are to be identified.

1.2.2 Conceptual framework

In this study, the policy response to NCDs in Zambia was explored using the policy analysis framework (figure 1) from Walt and Gilson (Walt and Gilson, 1994). The Walt and Gilson framework which emphasizes that policy content, context, and processes as well as actors are all important components of policy development has been used widely in health policy analysis. Using this framework, studies have found vital lessons that can be used to improve policy development in different sectors. For example, Lunze and Migliorini (2013) in their study identified areas of potential conflict in the success of tobacco control bills and revealed that there was need to strengthen national leadership in tobacco control. El-Jardali et al. (2014) found that there was need to establish effective links between policy makers and stakeholders for policies such as the voluntary health insurance to be successfully implemented. Zulu et al. (2013) also used the policy triangle framework and found that the process of developing the community health worker strategy in Zambia was highly political with a lot of power imbalances. Faraji et al. (2015) also reported that the critical steps in developing the diabetes policies and strategies in Iran included setting the agenda, policy formulation and policy evaluation.

Because of its usefulness in the study of health policies, the policy analysis triangle framework was also used in this study to guide the analysis of the NCD policy development process in Zambia. Using the policy triangle framework, this study attempted to bridge the knowledge gap identified in literature by in depth exploration and describing of the policy development process for NCDs in Zambia.

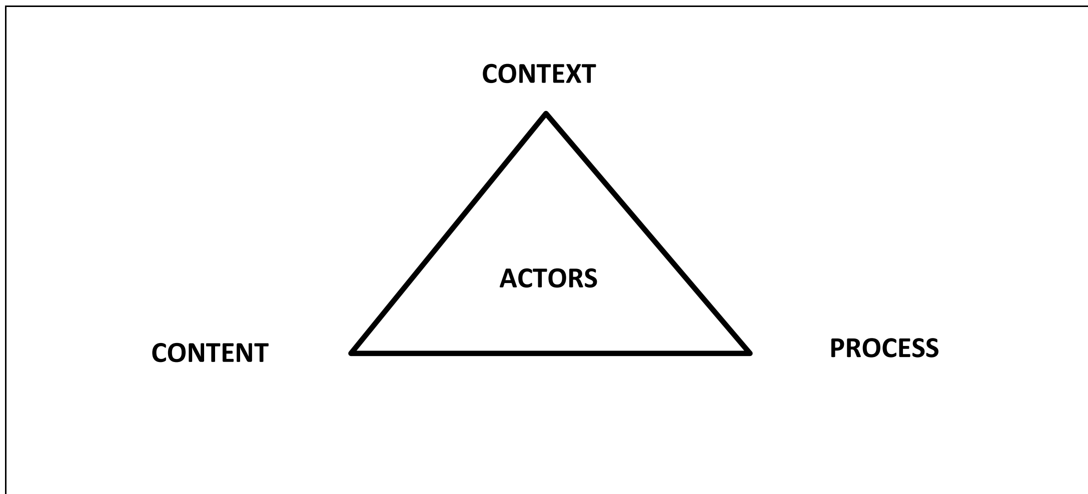

Figure 1: Conceptual framework for policy analysis adopted from Walt and Gilson (1994)

CHAPTER 2: STUDY FOCUS

2.1 Statement of the problem

For a long time, the majority of the disease burden was due to infectious diseases such as Tuberculosis, HIV/AIDS and Malaria (Kirigia and Barry, 2008). As a result, the health system in Zambia was adapted to responding to acute infections, with little place for control and prevention of chronic diseases (Aantjes et al., 2014). However, recent reports show that chronic NCDs like cardiovascular diseases, cancers and diabetes have been steadily adding to the disease burden of the countries' health system (WHO, 2014, MOH, 2014).

The majority of studies that have been conducted in Zambia on NCDs have largely focused on quantifying the disease burden and the associated risk factors (Goma et al., 2011a, Mulenga et al., 2013, Nsakashalo-Senkwe et al., 2011, Nzala et al., 2011, Rudatsikira et al., 2012, Siziya et al., 2011, Siziya et al., 2012). There is limited information in literature on how Zambia has responded to the increasing burden of NCDs which has been demonstrated in such studies. Although Aantjes et al. (2014) reported of shifts in the health system in response to NCDs, it is imperative to understand the health policies that are driving the response, hence this study.

2.2. Justification

The findings from this study showed that policy analysis is an essential and effective tool in understanding why and how policies are developed and why some policies are successfully implemented and others are not. From this study, we established that the consultative workshop improved stakeholder participation in the policy development process. However, international contextual factors influenced the development of the policies and limited domestication of international guidelines resulted in the policy which was developed not adequately covering some local NCDs in the overall goal.

This study has thus provided information that is useful for advocating and improving policy development in the health sector. This study has also laid ground for areas of further exploration or evaluating the extent of implementation and the effectiveness of the NCD policy in achieving the goal of reducing the incidence and prevalence of NCDs in Zambia. In addition, the findings from this study can contribute to the development of best practices for policy response to emerging health threats in developing countries.

2.3 Research question

How has the Zambian government responded to the threat of NCDs at a national level?

2.4 Objectives

2.4.1 General

To analyse the policy response to non-communicable diseases by the Ministry of Health in Zambia using the policy triangle framework.

2.4.2 Specific

1. To identify and document contextual factors that shaped the available government policy provisions and strategies addressing NCDs;
2. To analyse the policy processes and actor involvement in the available government policy provisions and strategies currently addressing NCDs;
3. To identify and analyse the content of the available government policy provisions and strategies addressing NCDs.

CHAPTER 3: METHODS

3.1 Study design

A qualitative case study design was used for the study, with Ministry of Health headquarters as the primary unit of analysis. The 'case' was the national level health policy response to NCDs from 2008, when the Action Plan on the Global Strategy for the Prevention and Control of NCDs was produced by WHO, to 2015.

A case study design was appropriate because it offered an in-depth exploration of the different aspects of the response to NCDs. In addition, case study designs have been recommended when 'doing' policy analysis (Walt et al., 2008) and similar studies that have tried to explore the response of countries to NCDs have used this study design (Haregu et al., 2014, El-Jardali et al., 2014).

3.2 Study setting

The study was primarily conducted at the Ministry of Health (MoH) Headquarters because it provides the leadership and governance in the Zambian health system and is the source of policy direction for both the private and public health sector (WHO-AHO, 2014). Additional information was obtained from the Ministry of Community Development, Mother and Child Health (MCDMCH) and World Health Organization Zambia country office because these are also key players in the Zambian health sector.

3.3 Participants

3.3.1 Study population

This study targeted government's health related planning and policy documents; and policy makers who participated in the government NCD policy development.

3.3.2 Inclusion criteria

The study only analysed national level policies and strategies addressing NCDs that were developed from 2008 onwards by the government, as well as those identified as relevant by the key informants. Key informants included in the study were directly involved in the NCD policy development process in their organization at present or in the past. Where more than one person within the organization fit this criteria, the informant to be interviewed was chosen based on seniority

3.3.3 Exclusion criteria

The document analysis in this study did not include policies and strategies addressing NCDs that were developed before 2011 and those outside the scope of the study. Officials involved in the policy development of NCDs outside the scope of the study were also not included.

3.3.4 Sampling and Recruitment plans for key informants

Purposive sampling was used to select the key informants for the study. The basis for the selection was the individual's official capacity in the organization that they represented in relation to NCDs policy development. Snowballing was used to identify further key informants for the study, by asking the key informants if there was anyone else they thought would provide more information for the study. This was done until no more new information was obtained from additional interviews.

3.4 Data collection

3.4.1 Methods

Data collection for the study was done between September and October 2015. The first step in data collection involved the review of policy documents (Table 1). The documents reviewed were identified with help from MoH directorate of policy and planning and directorate of disease surveillance, control and research. The second step involved conducting key informants interviews. The key informants targeted in this study were those that participated in the governments' NCD policy development process. The first key informant was identified with assistance from the research unit at MoH. Snowballing was then utilized, asking each informant after the interview if they knew anyone else who would have information for the study. The key informants identified were then contacted either physically at their office or electronically through email or phone call and asked to participate in the study, and if they agreed an appointment was set. A total of 8 key informants participated in the study while 2 informants declined (Table 2).

Table 1: Documents reviewed in the study

	Document/Report	Year/Period	Relevance to the study
		Zambia across sector documents	
1.	Vision 2030	2006	This document serves as a guide for all the development efforts of the country. As such, the goals and targets set in the vision determines the strategic focus in all economic sectors including health
2.	Revised Sixth National Development Plan (R-SNDP)	2013-2016	This document is the main instrument for implementation of Government programs in the medium term in Zambia.
		Zambia health sector specific documents	
3.	National Health Policy (NHP)	2013	This document states clear directions for the development of the Health Sector in Zambia. It sets out policy measures that are supposed to guide strategies and programs in the health sector
4.	National Health Strategic Plan (NHSP)	2011-2016	It operationalizes the national health policy in the medium term
5.	Mid-term Review Report	2014	This document details the performance of the health sector according to the targets of the NHSP
		NCD specific Documents	
6.	National NCD strategic plan	2013-2016	It gives the strategic direction for NCDs, in the context of the broader health sector plans
7.	Cancer strategic plan	2015-2016	It gives the expanded strategic direction for the prioritized cancer disease with the context of the NCD strategic plan

Table 2: Key informants interviewed in the study

	Organization	Involvement in NCD policy
Key informant #1	MoH	Policy development
Key informant #2	MoH	Policy development and implementation, Health promotion
Key informant #3	MoH	Specialist, policy implementation, cancer registry
Key informant #4	MCDMCH	Policy development and implementation
Key informant #5	WHO	Policy development, research
Key informant #6	WHO	Policy development, implementation
Key informant #7	ZHSF	Advocacy, research
Key informant #8		Consultant, policy development

3.4.2 Tools

A data extraction matrix (see appendix 6) was used for the document review and analysis while a topic guide was used for the KIIs (see appendix 5). The development of these tools was guided by the policy analysis framework adopted for the study. The topics explored during the KIIs were drawn from the findings from the policy document review and analysis as well the review of literature on national policy responses to NCDs in LMICs.

3.5. Data analysis

Thematic analysis approach using a concept-driven and data-driven coding approach (Peirson et al., 2012) was used for the study. Firstly, all the documents were read for familiarization. Special attention was paid to the section in the documents that were addressing health at large and NCDs (if included) to establish the relevance of that document to the study. A brief summary (annotation) of the document was then made. After this, the document was read more critically to identify the key concepts (codes) in the documents. The key concepts identified were then categorized according to the broad idea that they represented. These categories were then analysed and grouped according to the predetermined themes from the policy analysis framework (see Table 3 below). The categories that were developed from the document analysis were the ones that were applied to the data from the KIIs. However, if new concepts

arose during the analysis of the transcripts, these were also noted and added to the existing categories. If they were not covered in the existing categories, new categories were established. The major themes were also analysed for commonality across the key informants (see Table 4 below)

3.6. Ethical considerations

Official permission was sought from the organizations prior to interviewing informants. For the MoH and MCDMCH, written consent was provided through the office of the Permanent Secretary to enable the informants to participate freely in the study (See appendix 8 and appendix 9). However, the letter of clearance from the Permanent Secretary's office was not used to coerce the informants into participation in the study, they still had the right not to participate in the study if they so wished.

Although some negative perception of the study by government employees were anticipated, no ethical issues were encountered with the study participants. The identity of the informants was kept confidential even though some informants indicated that they did not mind there identity being revealed. All the informants also readily provided consent to participate in the study and no one expressed fears that participating in the study was putting them or their employment at risk. In addition, all informants voluntarily participated in the study and none demanded or expected benefits. All the interviews were conducted in private, and all hard and soft copies of the data were kept securely by the Principal Investigator.

The study proposal was reviewed and cleared by University of Zambia Biomedical Research Ethics Committee before data collection commenced (see appendix 6).

CHAPTER 4: KEY FINDINGS

According to the results of the thematic analysis guided by the components of the Walt and Gilson policy triangle framework (see Table 3 below) and the analysis of commonality of these themes across the key informants (see Table 4 below), the following are the key findings from the study:

4.1 CONTEXT

4.1.1 Contextual factors

The global agenda drove the need to develop the NCD policy with a buy in from the government and other stakeholders in light of the local evidence of an emerging problem. Majority of informants (see table 4) explained that certain happenings in the international arena dictate what direction the government takes and what health priorities it will address. As such, the NCD policy was developed in response to global strategies mainly from the WHO. For example, the NCD strategic plan was based on the guidelines from the WHO Global Action Plan for NCDs 2013-2030. Some informants further added that following global strategies was necessary as the country would then be able to compare its performance on NCDs with other countries around the globe, and not operate in a silo. One informant explained

> *"…Let me take you back a bit. In the year 2000, the UN met and came up with the global strategy for prevention and control of NCDs. Knowing very well that Zambia is part of the global village, so we had to do something about it…So after that global strategy was developed, the world again met in 2011, to make a political declaration on NCDs and Zambia was a signatory to that political declaration. Culminating out of that was the global NCD action plan 2013-2030 where a set of targets were set out. There are actually 9 voluntary targets. So based on those 9 voluntary targets, Zambia also had to act and come up with a strategic plan to sort of work out the activities on how to implement and meet those 9 voluntary targets" [Key Informant 5].*

Table 3: Selected codes, categories and themes from the data analysis

Codes	Categories	Themes
• **Findings from local studies** • **Information from health facility** • **International reports**	Presence of evidence	Context
• **Responding to International resolutions** • **Being part of global community**	Global health agenda	
• **Need for development**	National vision	
• **Stakeholders involvement** • **Developing the draft policy** • **Policy adoption** • **Political will**	Policy formulation process	Process: Policy development
• **Lengthy policy development process** • **Lack of funding stalling the process** • **Influence from political powers**	Challenges in the process	
• **Utilize available facilities and resources**	Integration	Process: Policy Implementation
• **Health worker training** • **Treatment guidelines for common NCDs** • **Information/surveillance system strengthening** • **Strengthen 6 health system building blocks**	Capacity building	
• **Government to develop/enforce regulation** • **Government to engage other sectors/partners** • **Evidence based resource prioritization** • **Funding for NCD activities** • **Raising public awareness on NCDs**	Government leadership/commitment	
• **Contribution of stakeholder**	Role of the stakeholders	Actors
• **Drivers of the agenda**	Influencers of policy	
• **Situation analysis** • **Prioritization of NCDs** • **Strategies to tackle NCDs**	Scope of the NCD policy	Content
• **Health education not emphasized** • **NCD activities not budgeted** • **Lack of baseline data** • **Domestication of guidelines** • **Lack of adequate legal framework**	Gaps in NCD policies	

Table 4: Commonality of major themes among key informants

Themes	Key informant							
	1	2	3	4	5	6	7	8
CONTEXT								
Findings from local studies	√	√						
Information from health facility	√	√		√	√			√
Responding to International resolutions	√	√	√		√	√	√	
Pressure from interest groups		√	√		√			
PROCESS: Policy development								
Consultative and participatory process	√	√	√	√	√	√		√
Presence of political support/will	√				√			
Lengthy policy development process	√				√	√	√	
Lack of funding stalling the process	√		√		√	√		
PROCES: Policy implementation								
Utilize available facilities and resources	√	√			√		√	√
Health worker training		√			√		√	√
Strengthen 6 health system building blocks	√	√				√	√	√
Funding for NCD activities	√	√			√	√		
Information/surveillance system strengthening			√	√		√		√
Treatment guidelines for common NCDs		√				√		
Government to develop/enforce regulation							√	√
Government to engage other sectors/partners		√		√		√		√
Evidence based resource prioritization		√	√	√			√	√
Raising awareness on NCDs	√			√		√	√	
Influence of political powers						√	√	
ACTORS								
Government driven agenda	√	√	√		√	√		√
CONTENTS								
Policy based on international guidelines	√	√	√	√	√	√		
Lack of representative baseline data	√	√		√		√	√	
Health education not emphasized	√	√		√		√		
Lack of adequate legal framework						√	√	
Inadequate domesticating of guidelines		√					√	
NCD activities not costed		√						
Implementation plan inadequate	√						√	

In addition to the international commitments, the availability of local data on the disease burden due to NCDs and the eminent epidemiological transition further compounded the need to start addressing these conditions on a national level. There also was a push from some interest groups such as the Diabetic Association of Zambia that wanted to work with the government on NCDs, and thus need policy direction on how to do so. The then First Lady also added to the pressure by raising the profile of cancers especially cervical cancer. Therefore, the government needed to guide the utilization of the support it was likely to receive. An informant remarked

> *"I think we also had the figures ourselves. We saw that the cases were going up. In 2011, we had 144,000 cases of high blood pressure showing a 40% share of the NCDs. So now 144,000 cases that's a lot. It would motivate you to do something about it… So that in itself prompted the government to act based on the statistics from hospitals and health facilities..."* [Key Informant 5]

4.2 PROCESS

4.2.1 Policy formulation process

The key step in the policy process for the NCD strategic plan was the consultative workshop with some key stakeholders. Informants reported that the process was initiated by the MoH who conducted the needs assessment, conceptualization and review of critical literature especially health facility data. This initial step provided information for the agenda of the consultative workshop. The aim of the consultative workshop was to develop a draft proposal with input from a wide range of stakeholders. Participants in this workshop included cooperating partners like Swedish International Development agency (SIDA), the WHO Zambia office, Churches Health Association of Zambia (CHAZ) and clinical experts. After the workshop and further consultations with other government line ministries, the draft was submitted to the cabinet office for approval. An informant added on the adoption process

> *"After the approval, cabinet always writes us , a specific letter to say that policy proposal so, so, so was approved and you required to take action like this and this. So when that happens, the Minister of Health had to call a meeting where he launched this policy just to signify that we have started implementing that policy"* [Key Informant 1]

4.2.1.1 Lengthy policy process a challenge

Informants noted that generally the policy development process was too long, averaging about 2 years. This lengthy policy process resulted changes in the group dynamics because of shifts in the composition of the stakeholders potentially leading to loss of momentum, missing the window of opportunity and development of new policies when similar ones are still in draft awaiting approval. One informant felt that the political actors also had potential influence on the length of the policy development process. They cited an example where the Minister of Local Government helped push for the development of the policy banning smoking in public places. However, after the change of government, the process stalled resulting in the policy not being fully implemented. The policy process was also sometimes delayed by the lack of funds. Respondent remarked

> *"…the long process of consultation whereby you hold this meeting, the next time you find there are different stakeholders and they have different expectations also…"*[Key Informant 4]

> *"At the same time, there must be time lines given. You can have a policy in draft form for 20 years and sometimes you start formulating a policy not knowing that another policy was already formulated a few years ago, it happens!"* [Key Informant 7]

4.2.2 Policy implementation process

4.2.2.1 Implementation plan

Some informants felt that the implementation for NCD policies had not been adequately planned for despite the documents having an implantation and results framework. The NHSP states that the MOH Head Office takes full responsibility for the successful implementation of its policies, through successive medium term expenditure frameworks (MTEFs), annual action plans and budgets. In the same line, the MoH would also be responsible for policy leadership, management decision-making, standards setting and enforcement, and the overall coordination of implementation through the existing health sector organisational and management structures. The NCD strategic plan has the results and implementation framework containing the activities to undertaken. These activities however were not budgeted. An informant illustrated on the inadequacy in the implementation plans

"Policy implementation is actually a big issue on its own. Sometimes we bring out policy and we don't know how it's going to be implemented. The best example of course is the policy on tobacco control…This is supposed to be policed by the general citizenry. It's not a law that requires police. So Masebo (former Minister of Local Government who championed the Statutory Instrument banning public smoking) brought out a Statutory Instrument saying that there should be no smoking in public places. But she didn't say how that was going to be implemented. And so everyone was waiting. Are there going to be police men coming to the bars? They were no policy men coming to the bar. And so what happened, people continued smoking." [Key Informant 7]

4.2.2.2 Achievements and challenge of implementing NCD policy

Achievements from the NCD policy noted during the document review of the midterm review of the health sector performance report included the development of an NCD strategic plan, commemoration of key events such as World Cancer Day and distribution of IEC materials. Some informants further added that the MoH had also conducted training of health workers in the management of NCDs in at least 4 provinces. In addition, guidelines for management of some prioritized NCDs like diabetes had been produced with assistance from the WHO. On the other hand, the biggest challenge in the implementation of the NCD policy noted during the midterm review was unreliable data on the burden of these conditions in the population. Other reported challenges included weak resource mobilization, lack of treatment guidelines and/or algorithms for some conditions and weak multisectoral collaboration and partnerships in managing NCDs**.**

4.2.2.3 Proposed approaches to successful implementation

To ensure successful implementation of the NCD policy, key informants proposed utilization of existing structures in the health system, strengthening of the health system, government showing leadership and securing partner support.

- Integration and capacity building

Most informants saw the integration of NCD activities into routine structure of the health care system as the best approach because of the limited financial and human resources. Waiting to have separate vehicles, budget and specialists for NCDs would simply cause the activities not

to move forward. Therefore, informants saw the need to building synergies and let the NCD activities ride on the funded programs like malaria, HIV, TB. One informant pointed out

> *"…I mentioned integration. What causes these NCDs there are various factors, the drivers and then you find that you need a multisectoral approach and you need also to integrate various programs so that same resources can also sort out a number of things. I have in mind things like HIV/AIDS, that is also understood to be one of the causes of various cancers…under the same programme of HIV/AIDS you have clearly defined funding and process of identifying the people, testing, counselling when testing someone for HIV, you can check for some other common NCDs…"*
> [Key Informant 8]

Some informant were however cautious and said health facilities had to be equipped with the necessary tools before such integration could be successful. They argued that the system was unprepared to handle chronic condition due to challenges such as the system being heavily weighted towards treatment and poor on prevention; the lack of baseline information on the disease burden due to NCDs and lack of diagnostic tools like BP machines, adult weighing scales and treatment protocols in clinics to support the integration. Overcoming these challenges requires capacity building which in turn requires funds to be made available. It was noted that although the government has started allocating specific moneys to address NCDs, funding to the health sector usually is never adequate, and so there was need to mobilize more partners and ensure prudent usage of available resources. An informant elaborated on how the capacity of the health system could be built

> *"…capacity building of the health workers at all levels especially primary health care level because that's our mandate. Our health workers out there need to be able to for example check BP and should be able to interpret it, know how to treat mild or moderate hypertension and know when to refer…we need to ensure the logistics are there in terms of drugs and have the reagents and so on. And we need to be able to have a vibrant monitoring system even surveillance; we need to know what is actually happening in terms of the number then we can plan adequately."*
> [Key Informant 6]

- Leadership by government

Other informants felt that the government should provide the necessary leadership to push forward the implementation of the policies. It was thought that the Ministry of Health must address all aspects of NCDs and this had to be expedited. In doing so, the government has to ensure that the available regulations on NCDs such as the prohibition of smoking in public places are adequately enforced. Additional regulations could also be introduced and enforced such as the amount of sugar to be added in any food; mandatory fortification of food; building of accompanying walkways when a new road is built and ensuring adequate outdoor play areas in schools. These regulations are necessary as policies are implemented through legal frame works and legal frameworks are operationalised through regulations. Such commitment from the government could help them advocate for support for their NCD activities from partners.

Some informants however reported that the government has already shown leadership by having a dedicated unit to NCDs at the MoH headquarters and had conducted training of health workers in at least four provinces.

> *"'The government will spearhead the implementation and the issue that is there that the activities are outlined. It's now up to the parties that are interested now to work with government to implement, to buy in and say well we are interested in this one, and we are going to fund this one and we are going to work with this one. So government has to take leadership and the government has taken leadership"*
> [Key informant 5]

- Inter-sector collaboration

There was also a call for the government to engage partners and other sectors outside the MoH in the implementation of the policies from some informants because they felt everybody is a key player when it comes to NCDs. They noted a need to strengthen linkages with partners, such as the media who would ensure that awareness is raised concerning NCDs. The Ministry of Education was also identified as having a major role to contribute through the education of school age children because if the battle against NCDs is to be won, children needed to be equipped at an early stage to make healthy choices. One informant further noted the need to bring on board the private sector

> *"The need for inter sector collaboration; they need to bring in the private sector. We keep talking about it; we keep talking private public partnerships. But what are doing about it? But these are things which can work. When you say private public*

partnerships, you need to look at engaging the private sector meaning fully to see what it is that can attract them. You need to do some incentives for them to go into that sector" [Key informant 8].

4.3 ACTORS

The major actors in the development of the NCD strategic plan was the government through the Ministry of Health. The MoH set the agenda and adopted the final document. Actors drawn from among the stakeholders in the health sector were mainly involved during the consultative workshop where the draft policy was developed. Majority of the respondent described the stakeholder participation in the consultative workshops as being active:

> *"They broke into groups, thematic group each one of them looking at a certain theme and then and they came up with proposals. They will come, identify the problem and then propose what strategies/objectives. From the group work we came back to plenary, people present and then its discussed, until the draft was done, which again through further workshop and also through circulation of the draft to identified key players institutional as well as individuals who are known to be key then they came back and did a feedback"* [Key Informant 8]

The major actors who were identified in the NCD policy process included government ministries like Ministry of Community Development, Mother and Child Health, the civil society organizations like WHO, NGOs like the Diabetic Association of Zambia, representative from the general population, Academia, subject experts and consultants. However, some informants reported that they were still some key actors who did not participate in the policy development a situation they feared may have implications on the policy implementation process.

> *"…in this country we have so many partners who are also actors. We have our own institutions that are actors e.g. UTH, is a major actor, UNZA, so the actors are many, I see the list to be endless. The only problem we have, I think we have underutilization of these actors"* [Key Informant 4].

4.3.1 Roles of actors in the policy development process

The main roles of the actors that were identified by the informants included advocacy, evidence generation, consultancy, expertise and funding. The WHO for instance was reported to have

assisted with the consultants on how this strategic plan can be designed, developed and be made useful to the country. The Diabetic Association was identified to be working with the Ministry of Health beyond policy development to implementation of activities such as training of health workers and awareness campaigns

> *"Yeah, for the government, government was the leading agency. Then we had advisors like the WHO were playing an advisory role. Then we had other people like these I have mentioned the subject specialists, they brought a lot of knowledge to the table because they had first-hand experience of these things, yeah. Of course we had people from NGOs who were also very influential, especially….Zambia Heart foundation and these people dealing with diabetes….because they were always present and they used to come with ideas, how we can move about, go around this issue. So each one played their role"* [Key Informant 1]

Most of the informants noted that the Ministry itself exerted the most influence in the process. An informant from the government said this was because the government was eager to have a document in place to provide vision and to be used for comparison with other countries in the region and the world at large. Others whom some informants felt had strong influence on the process were the clinicians who had hands on experience of the impact of NCDs from the clinical setting and the WHO. Commenting on policy actors, one informant explained

> *"…Everybody is an actor... So we are talking about MOH…the MCDMCH... We are talking about private sector: the private sector from the pharmaceutical side, from the clinical medical side. You are talking about civil society and when you say civil society it does not mean they sit on the round table maybe it may be pressure group. For instance, you have PLWHA they may advocate for a certain product and they have evidence and everything, they are also actors. You have the politicians, they are also actors. So in a nut shell also the academia they are also actors. So in terms of actors it's a multi-disciplinary approach."* [Key Informant 6]

4.4 CONTENT

From the document review, it was observed that the interventions in the NCD strategic plan aimed at reducing NCDs occasioned mortality in Zambia by 25% by 2025. In addition, the

interventions also aimed at attaining the other 8 targets listed in the Global Action Plan 2013-20 for the prevention and control of NCDs. The common NCDs in Zambia listed in the NCD strategic plan included chronic respiratory diseases, CVD, Type 2 diabetes mellitus, cancers, epilepsy, mental illnesses, oral health, eye diseases, injuries (mostly due to road traffic accidents and burns) and sickle cell anaemia. These contributed significantly to the morbidity and mortality arising from NCDs.

4.4.1 Key policy direction

The content in the policy documents reviewed were oriented towards the prevention and control of NCDs. The key policy measures included strengthening the evidence base to inform the appropriate design of programs addressing NCDs; strengthening prevention, treatment, care and support services for NCDs; strengthening and scale-up of public awareness on NCDs at all levels; and strengthening ambulatory and referral systems. Building on the key policy measures, the strategic direction was system oriented with focus on prevention of NCDs and capacity building of the six building blocks of the health system to increase the access and quality of services of emerging and existing NCDs. The NCD strategic plan also recommended interventions for the reduction of the four common behavioural risk factors with focus on healthy lifestyles, primary prevention, screening and early diagnosis.

4.4.2 Identified gaps in the NCD policies

4.4.2.1 Lack of representative and baseline data

The mid-term review of the health sector performance revealed that there was lack of reliable data on NCDs and the prevalence of the NCDs that have been prioritized was uncertain. Most of the informants also felt that there was inadequate local data to better guide the policy content. This lack of data was reflected in the results framework of the NCD strategic plan where some activities like reducing salt intake and increasing physical activity had no baseline data. The lack of data further meant that the situation analysis provided in the policy documents was poor, making it difficult to set the measurable indicators and targets as pointed out by some informants. Informants further added that studies which have been conducted to generate data on NCDs and associated risk factors like the WHO STEPs were not representative for the country. Review of the NCD strategic plan also showed that NCDs like epilepsy, sickle cell disease, asthma and mental conditions which according to health facility data are common had no population or health facility prevalence data available.

Informants proposed that one way of addressing the problem of lack of baseline data on NCDs was proper utilization of the available data collected routinely. This data could then be analysed for evidence to guide decision making.

> *"But also in general, I think you look at for example if you look at HMIS data which is what we did some time back, evidence is there. If one wants to look at HMIS data like what we did, we looked at HMIS data for hypertension and diabetes and the finding were very interesting and they can actually guide in general where you want to put your resources"* [Key Informant 2]

4.4.2.2 Domesticating of guidelines

Informants stated that the 4x4 approach of focusing on CVDs, cancers, diabetes and chronic respiratory conditions as the four main diseases and unhealthy diets, alcohol abuse, use of tobacco products and physical inactivity as the four main preventable risk factors was not adequate in an African setting. They explained that there is still a large component of NCDs in the African context which are minors in the Western World and hence not prioritized. The informants added that conditions like mental health, and sickle cell disease which are also prevalent in Africa ought to be prioritized in national policies through domestication of guidelines on which policies are based. An informant explained on the need for domestication of guidelines:

> *"But like we are saying even in the current strategic plan, what we have tried to do with those indicators is really to see what is the reality of Zambia based on what we are doing and the prevalence and then give targets, different targets for the indicators and time frame based on what is on the ground and borrowing from the generic ones. Because the ones that we borrow from WHO are generic, we can try and adapt to look at what is the reality and what can we do"* [Key Informant 2].

It was observed from the review of the NCD strategic plan that although Zambia had gone beyond the 4x4 approach to include mental illness, sickle cell disease and eye conditions in the situation analysis, the interventions in the results framework focused on combating the four 'traditional NCDs'. The main goal of the policy of reducing NCD mortality by 25% by 2025 also remained in its generic form.

4.4.2.3 Health education underutilized

Some of the informants felt that the contents of NCD policies should be weighted toward health promotion, education and sensitization. It was thought that the bulk of the resources were being spent on the curative aspect even though the benefits from prevention through risk factor reduction were well known. Some informants added that health promotion and legislation approach were good preventive strategies for NCDs, but funding for these activities still remained low. It was felt that the health promotion if utilized would raise the awareness of NCDs, and people would be empowered to make better health choices. Health education was seen as cardinal in improving the health seeking behaviour of the people which was still low. An informant further identified an opportunity of including health education for NCDs like sickle cell disease in premarital counselling during Voluntary Counselling and Testing. On the importance of education, one informant added

> *"…This is why education is such a vaccine to a lot of problem which predisposes society to disease. People need to be educated; this is the reason for this policy; adhering or implementing this policy is for your own good. They adhere to that policy, they see the good, then they'll accelerate its implementation"* [Key Informant 7]

4.2.3.4 Conflict in risk factor reduction policies

Some informants felt that there was no agreement between the NCD policy content and other government pronouncements. They felt that recent government pronouncements were undoing that which the same government had put in place to address NCDs. Despite risk factor reduction being one of the goals of the NCD policies, the government in the 2016 budget announced that it had reduced the tax on the importation of clear alcohol which is a known risk factor for NCDs. This reduction in tax was also against the evidence that increasing taxes on alcohol and tobacco have been effective in the prevention and control of NCDs in other countries. An informant explained

> *"So it's very tricky and complex and we really have to involve all the stakeholders so that we are really agreeing on what we want as a country, we have to speak in the same language, we can't be talking about NCD control and then on the other hand we are supporting the same risk factors that we are supposed to be trying to mitigate"* [Key Informant 6].

4.2.3.5 Inadequate legislative framework

Some informants were of the view that the legislation that was supposed to be used to implement the policies for NCDs was still weak. They thought what was needed were not necessarily new policies but strong legal framework which would be used to implement the overarching policy measures such as those in the national health policy of 2013. They added that regulations for the levels of sugar that can be in any food or for mandatory fortification of food for children for example needed to be developed and enforced. An informant explained

> *"…there was too much proliferation of policies. Everyday people are developing policies, some of them stepping on each other. They* (MoH) *said let's do one policy framework and from there what you need to do is not necessarily a policy. What you need to do is to develop specific acts for each; you draw from that policy NHP 2013 which is frame work. If you want to do a policy for NCDs, you can develop an act, maybe even a main one and subsidiary ones and then you develop regulations which will know work more or less like a policy because the regulation will have more meat to talk about the things that you mention in your act"* [Key Informant 8]

4.2.3.6 Budgeting of activities in the NCD strategic plan

One of the gaps noted by some informants was the lack of a budget for the activities in NCD strategic plan. The document review showed that the strategic plan only had a budget summary for four activities namely health promotion, case management, information and research and monitoring and evaluation. Informants felt that implementation of the strategic plan was dependent on the availability of resources and therefore a detailed budget was necessary to secure financial support from the government itself and supporting partners.

> *"I think when you look at the strategic plan the only probably gap that we have now which is major which I know they will look at as time goes on is the costing of the activities. There will be need to cost those activities that we put in the strategic plan and identify that this is what the country needs to do over the years and that is important because in that also becomes a document that can be used to mobilise resources from partners that are interested in addressing issues of health and NCDs"* [Key Informant 2].

CHAPTER 5: DISCUSSION

Globalization has resulted in the world having similar health problems. Evidence shows that most of the LMICs are grappling with the double burden of both communicable and non-communicable disease (Oni et al., 2014, Wagner and Brath, 2012, Habib and Saha, 2010). Now more than ever, there is a need to have a global approach in addressing health concerns that are not bound by boundaries (McKee et al., 2014). In the case of NCDs, the WHO has developed strategies and action plans to provide a framework on how countries should structure their response to these conditions (WHO, 2016). In response to such strategies, this study showed that NCDs are a health priority in Zambia with policy measures present in both the national health policy of 2013 and the NHSP. In addition, the country developed the NCD strategic plan to provide direction on how the government intended to address these conditions (see Table 1). Findings from this study further reveal that the policy process for the development of this NCD strategic plan had successes (facilitating factors) and challenges (inhibiting factors).

5.1 Strengths of the policy process

The key elements that contributed to the successful development of the NCD strategic plan were stakeholder participation and consultation, strong political will from the government and use of international guidelines. These factors which have been reported in other studies (Etiaba et al., 2015) are essential in the development of policies for NCDs because they may improve adoption and implementation of policies (Beaglehole et al., 2011, Alwan, 2010). This strong political will exhibited for the development of the NCD strategic plan could have been as a result of the international commitments that Zambia signed to such as the Political Declaration of 2011 and local evidence of an emerging problem similar to what has been observed in other countries (Bhandari et al., 2014, Bosu, 2012, Rani et al., 2012). While some countries have had lack of stakeholder participation in NCD policy development process (Faraji et al., 2015), this was not a problem in Zambia. The stakeholder engagement during the process took the form of a consultative workshop where key players in the health sector developed the draft of the NCD strategic plan to ensure that the resulting document was comprehensive. Studies in other countries have stressed the importance of such key implementing partners' support in policy development (Chimeddamba et al., 2015, Odoch et al., 2015, Al-Bahlani and Mabry, 2014).

5.2 Weaknesses of the policy process

Despite the policy process having the above mentioned strengths, the NCD strategic plan has gaps in the content. A root cause analysis of the policy process revealed that the main problems that could have led to these gaps include inadequate contextualization of guidelines, weak inter-sector collaboration and excessive political influence (see figure 2).

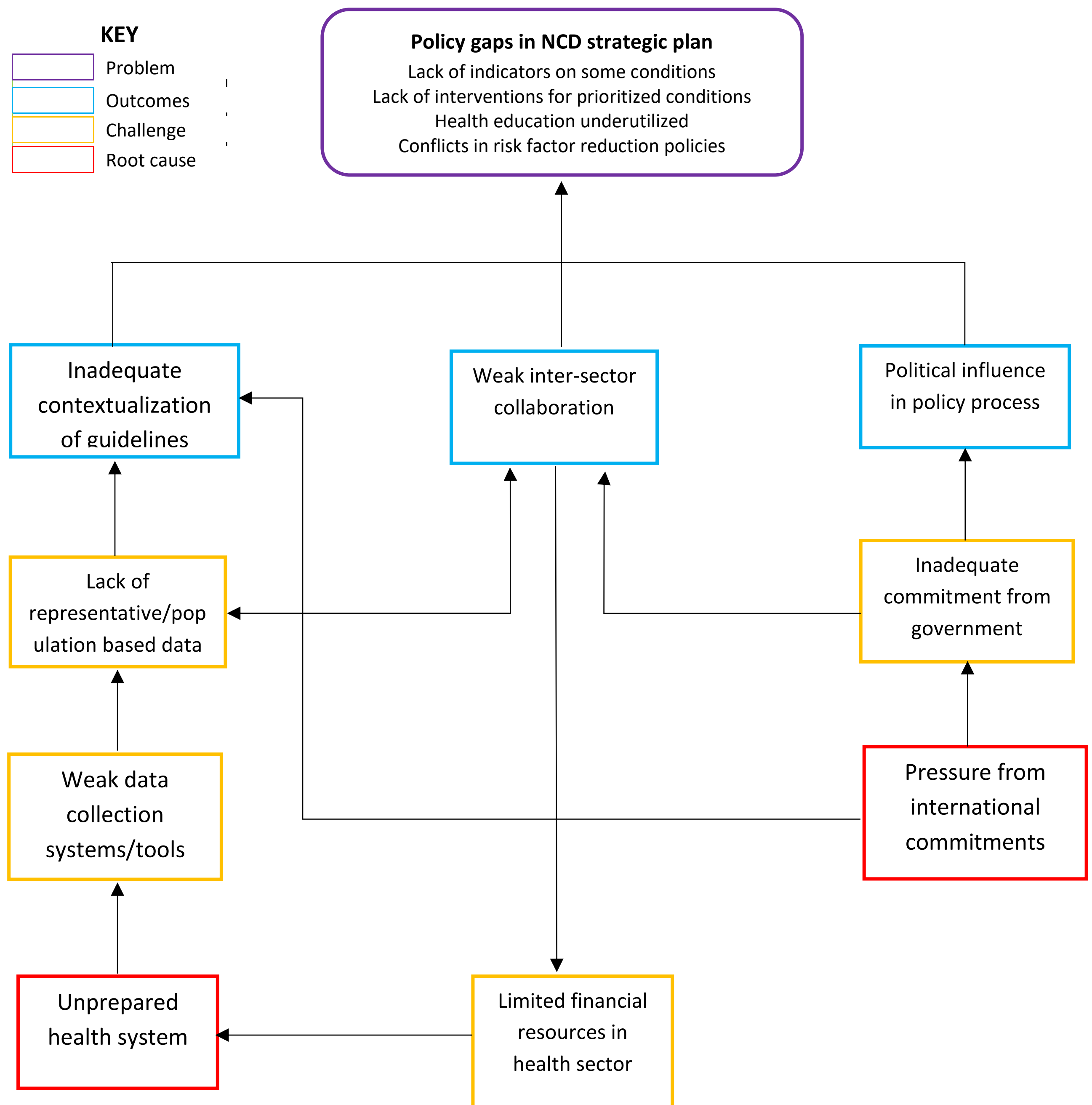

Figure 2: Root cause analysis of the policy content gaps in the NCD strategic plan

5.2.1 Weak data

This study shows that the policy process was heavily dependent on data from health facilities collected through the Health Management Information System (HMIS). Although it was argued that this data could be used as a proxy in the absence of population data, HMIS still remains inadequate because it reports limited information for NCDs and is therefore unrepresentative (Aantjes et al., 2014). The policy process should ideally have been preceded by a population based survey to understand the intricate drivers of NCDs in the various cultural and geographic diversities of Zambia as did other countries (Islam and Biswas, 2014, Silva-Matos and Beran, 2012, Echouffo-Tcheugui and Kengne, 2011). In this way, the policy content would include strategies and interventions that might address gaps unique to the Zambia context such as low health seeking behaviour, underutilization of health education and excessive alcohol consumption. Having baseline data on the common NCDs in Zambia would also help the government lobby for support and collaborations from stakeholders to successfully address aspects of NCDs and their risk factors which might result in increased funding for NCD activities.

5.2.2 Inadequate domestication

The problem of lack of population data also resulted in inadequate domestication of the guidelines from WHO which formed the basis of the interventions in the NCD strategic plan. The strategic plan does not have interventions for conditions like mental illness, epilepsy, eye conditions and sickle cell disease which are common in Zambia according to health facility data. Because the interventions in the document mainly focused on the four ‘traditional’ NCDs as identified by WHO (WHO, 2013), the NCD strategic plan in its current state is inadequate for the Zambia setting. The government needed to include interventions targeting those conditions that are not covered by the frameworks from the WHO, but are contributing to the disease burden in the country (McKee et al., 2014). This inadequate domestication of international guidelines could have its root cause in policy development for satisfaction of international commitments and pronouncements (figure 2) and could result in policies that are never intended to be translated into action. Several studies in developing countries have showed how international donors and multilateral agencies like the WHO influence the health policy agenda on issues like malaria (Woelk et al., 2009), maternal health (Koduah et al., 2015, Deleye and Lang, 2014) and childhood vaccination (Chilengi et al., 2015). Donor dependence in some developing countries contributes to such agencies influencing policy development as they

usually provide funds and evidence and thus open a 'window of opportunity' for the policy change to occur (Nabyonga-Orem et al., 2014, Burris et al., 2011).

5.2.3 Weak collaborations

The policy process for the development of the NCD strategic plan did not adequately involve input from other sectors outside of health. The policy process for NCDs should ideally include traditionally non health based sectors such as the media, agriculture, private health facilities and food industries (Beaglehole et al., 2011). Studies show that such sectors are crucial in evidence generation (Islam and Biswas, 2014, Silva-Matos and Beran, 2012), increasing awareness (Bosu, 2012) and improved implementation of regulations (Al-Bahlani and Mabry, 2014). Informants in this study also added that public private partnerships should also be strengthened as the impact of NCDs are crosscutting. Limited involvement of key stakeholders could potentially affect policy implementation, an argument in line with Zulu et al. (2013) in their analysis of the development process of the community health worker strategy in Zambia.

5.2.4 Political influence

Political will in policy development contributes to quick adoption and implementation of policies (Atun et al., 2013). Political actors dominating the process is however not encouraged as it might result in the neglect of areas that might be against the politicians main focus (Lunze and Migliorini, 2013, Hutchinson et al., 2011). The conflicts in the policies for risk factor reduction that were reported in this study might imply that the political will shown in policy development did not extend to policy implementation. It could also imply that the focus of government is not on NCD prevention and risk factor reduction. In the absence of representative evidence on the severity, extent and impact of NCDs, it is possible other competing health priorities like HIV whose burden has been quantified could the primary focus of the government.

Atun et al. (2013) also advises that a unified strategy is required in addressing NCDs. These conflicts show disunity in combating NCDS within the government and have the potential to frustrate partners and stakeholders, the likely sources of support and funding for NCD activities. It is therefore necessary to have champions and advocacy groups with strong voices to protect the policy process from undue influences which some studies have shown to be beneficial (Woelk et al., 2009). In Zambia however, the advocacy work of the former First

Lady which added to the strong political will that accelerated the policy response might have negatively contributed to the process by rushing it hence some of the gaps reported.

5.3 Way forward

The root cause analysis (see figure 2) shows that pressure from international commitments coupled with a weak health system were the contextual factors were the likely causes of the gaps in the NCD strategic plan. The government needs to begin addressing the identified bottle necks in the root cause analysis with support from partners and stakeholders. The use of evidence from the HMIS to support policy development which was identified in this study is a good start. However, there is need to invest in tools and systems that will generate representative data that will contribute the development of comprehensive and relevant policies.

With the findings in this study, it is difficult to conclude on whether the policy will be implemented successfully and will achieve the intended targets. However, the methodological approach of triangulating the data from the document review with the key informants and vice versa enhanced the trustworthiness of the findings. The fact that the key informants who participated in the study were the very ones that were involved in the development of the NCD policy could have introduced response bias arising from their vested interest, expectations and experiences from the policy process. However, since there were no major divergent views from the informant's data and the data from the informants was comparable to that from the document review, it's unlikely that this bias occurred. These results are therefore transferable to government policy response to other emerging health concerns other than NCDs.

As a follow up to this study, the level of implementation of interventions and strategies contained in the NCD strategic plan can be evaluated to assess if the goals are being achieved. Methodologies like cluster randomized trials could be utilized to conduct research for policy by assessing the effectiveness of interventions and strategies for NCDs in different populations in Zambia. Further studies to identify and evaluate strategies that can be used to consistently collect data on NCDs in Zambia are also required.

CHAPTER 6: CONCLUSION

Using the policy triangle framework, this study has shown that both local and international contextual factors were important catalyst to setting the NCD agenda in Zambia. It has also revealed a policy process dominated by the government who played the major role in agenda setting and adoption, with other actors only participating during the consultative workshop. Although the NCD strategic plan has been put in place, implementation of the interventions and activities is still a challenge due to lack of resources and capacity within the health system. Evidence from this study showed that inadequate contextualization of the policies contributed to these challenges, which further suggests that the policies were developed for the satisfaction of international commitments. There is need to adequately domesticate international frameworks adopted to guide policy development to match the resources and capacities in the local context if policy measures are to be comprehensive, relevant and measurable.

6.1. Recommendations

The following are the recommendations for addressing NCDs in Zambia arising from the study:

a. Central government

   The government needs to continue showing leadership and commitment by supporting implementation of NCD policies. There is need to allocate the sufficient resources required to translate the NCD policy into action especially for the generation of baseline data and enforcement of regulation.

b. Ministry of Health

   MoH needs to facilitate health system reorientation with emphasis on capacity building and integration of NCDs into routine health services at Primary Health Care level. They need to prioritize the strengthening of information and surveillance system for monitoring and evaluation of NCD interventions.

c. Implementers and other stakeholders

   Stakeholders need to assist the government with the implementation of the NCD interventions according to the implementation framework provided by the MoH. Stakeholders also need to help in the monitoring and evaluation of NCD activities. The

WHO should further take a leading role in assisting the government successfully adapt generic guidelines to the disease burden and capacity in the local context.

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APPENDICES

Appendix 1: Budget

Item description	Quantity	Unit Cost ZMK	Total Cost
STATIONERY			
Ream of paper	2	50	100
Pens	10	3	30
Highlighters	3	5	15
Box folders	4	30	120
Stapler	1	100	100
Staples	1 box	20	20
Perforator	1	100	100
DATA COLLECTION AND ANALYSIS TOOLS			
Tape recorder	1	1000	1000
Flash drive	1	100	100
Research assistant	1	1000	1000
TRANSPORT AND ACCOMODATION			
Transport to study site		1000	1000
Accommodation at graduate forum	5 days	155	775
DISSEMINATION OF RESULTS			
Final thesis binding	4	200	800
Research poster publication	1	1000	1000
Journal publication logistics	1	3500	3500
MISCELLENEOUS			
Printing	1500 pages	1	1500
UNZABREC		250	250
Contingency at 10%		1135	1141
TOTAL			**12551**

Appendix 2: Time line

	2015												2016					
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Proposal development																		
Graduate forum																		
Ethics approval																		
Data collection																		
Data analysis																		
Report writing																		
1st draft submission																		
Corrections																		
Preliminary defence																		
Corrections																		
Final submission																		

Appendix 3: Information Sheet

Research topic: Government's health policy response to Non-Communicable Diseases in Zambia

Introduction and purpose: My name is Mulenga Mukanu. I am a student at the University of Zambia pursuing a Master of Public Health, specializing in Health Policy and Management. As part of the requirements for the awarding of this master's degree, I am conducting a research titled 'Government's Health Policy Response to Non-Communicable Diseases in Zambia'. The main aim of my study is to explore and analyze the response of Zambia's government to non-communicable diseases at the national policy level. You have been selected because of your likely experience with this topic. I will therefore appreciate the information you will provide around this topic.

Procedure: If you agree to participate in this research, you will be asked to sign a consent form after you have read and understood the information form. After you consent, you will be asked to respond to questions about the national policy level response to non-communicable diseases in Zambia

Risks/discomforts: The study will not result in any risk to you. Some questions may seem like your job is being evaluated, but this is not the case.

Benefits: The study will not result in direct benefits to you. However, the results from the study will provide information on the available plans for managing NCDs. This information can be used for planning and advocacy to improve the services for NCDs in Zambia.

Confidentiality: Your name will not be recorded. No audio recordings will be done without your permission. The information you provide will be stored securely and will only be accessed by the principle investigator. The results of the study may be published in a scientific journal, but your name will be withheld.

Voluntary participation: You are free not to participate in this study. You have the right to withdraw from the study at any time without any consequences. You have the right not to answer any question you do not feel comfortable with.

Whom to contact: For further information about this study, please contact the following:

Principal Investigator:

Mulenga Mukanu, C/O Department of Public Health, School of Medicine, University of Zambia, P.O. Box 50110, Lusaka.

Telephone number 0977624883. Email address miss.mukanu@gmail.com

Ethics Committee:

The Chairperson, University of Zambia Biomedical Research Ethics Committee, P.O. Box 50110, Ridgeway Campus, Lusaka.

Appendix 4: Consent form

As the participant, I agree that

- I have read and understood the purpose of the study
- I understand my rights as a participant as well as the risks and benefits of this study
- I understand that I have the right not participate in the study, or withdraw my participation at any point during the study after enrolling
- I have the right not to respond to any question that I deem personal or otherwise without any consequences
- I have been given the chance to ask question and clarify any issues I am not clear on.
- I voluntarily agree to participate in this study which is looking at the Government's Health Policy Response to Non-Communicable Diseases in Zambia.

Participant's signature: ______________________

Researcher's signature: ______________________

Witness signature: ______________________

Date: ______________________

Appendix 5: Key informant interview guide

Research topic: Government's Health Policy Response to Non-Communicable Diseases in Zambia

Organization: ___________________
Position in organization: ___________________
Date of interview: ___________________

Introductory information

My name is Mulenga Mukanu. I am a student at the University of Zambia pursuing a Master of Public Health, specializing in Health Policy and Management. As part of the requirements for the awarding of this master's degree, I am conducting a research titled 'Government's Health Policy Response to Non-Communicable Diseases in Zambia'. The main aim of my study is to explore and analyze the response of Zambia's government to non-communicable diseases at the national policy level.
You have been included in this study because of your likely experience with this topic. I will therefore appreciate the information you will provide around this topic.
This research has been granted ethical approval by the University of Zambia Biomedical Research Ethics Committee. Your participation in the study is entirely voluntary and your participation will be kept confidential. The interview might need to be recorded, but this will only be done with your express permission.

Part a: General information

- Tell me what you know about NCDs?
- What is your experience working with NCDs? What have been your roles?
- Are you aware of any kind of government policies that are addressing NCDs in Zambia?

Part b: Themes from Policy Analysis Framework

Theme 1: Process

- Of the policies you mentioned, could you kindly tell me how they each of them came into being?
- In your opinion, what went well in the different stages of developing the policies?
- What where the challenges faced in the different stages of developing the policies?
- Looking at the current policies, is there anything that should be revisited going forward?

Theme 2: Content

- Could you kindly tell me about the contents of the available government policies that are focusing on addressing NCDs? Which NCDs do these policies address?
- In your opinion, what are the strengths or positive issues in the policy content?
- Are there any gaps in the existing policies?

Theme 3: Context

- What factors influenced the development of available government policies addressing NCDs?
- In your opinion, what factors shape the implementation of the NCD policies?

Theme 4: Actors

- Who do you think are the key players who were involved in the development of available government policies aimed at addressing NCDs?
- What was the role of each of these key players in the different stages of developing the policies?
- In your opinion, which key players had the most influence? Why?

Part c: Summary

- Is there any further information surrounding the policy response to NCDs by the government in Zambia you like to share with me?
- Is there anyone else whom you think could provide me with more information on the policy response to NCDs by the government in Zambia?

Thank you for your time.

Appendix 6: Data extraction matrix for document review

<table>
<tr><td colspan="2">Summary of NCD relevant policy:</td></tr>
<tr><td colspan="2">Source document:</td></tr>
<tr><td colspan="2">Background information on the source document:</td></tr>
<tr><td>Process</td><td></td></tr>
<tr><td>Content</td><td></td></tr>
<tr><td>Context</td><td></td></tr>
<tr><td>Actors</td><td></td></tr>
</table>

Appendix 7: Ethical clearance

THE UNIVERSITY OF ZAMBIA

BIOMEDICAL RESEARCH ETHICS COMMITTEE

Telephone: 260-1-256067
Telegrams: UNZA, LUSAKA
Telex: UNZALU ZA 44370
Fax: + 260-1-250753
E-mail: unzarec@unza.zm

Ridgeway Campus
P.O. Box 50110
Lusaka, Zambia

Assurance No. FWA00000338
IRB00001131 of IORG0000774

18th August, 2015.

Our Ref: 009-06-15.

Ms. Mulenga M. Mukanu,
University of Zambia,
Department of Public Health,
P.O Box 50110,
Lusaka.

Dear Ms. Mukanu,

RE: RESUBMITTED RESEARCH PROPOSAL: **"GOVERNMENT'S HEALTH POLICY RESPONSE TO NON-COMMUNICABLE DISEASES IN ZAMBIA" (REF. No. 009-06-15)**

The above-mentioned research proposal was presented to the Biomedical Research Ethics Committee on 6th August, 2015. The proposal is approved.

CONDITIONS:

- This approval is based strictly on your submitted proposal. Should there be need for you to modify or change the study design or methodology, you will need to seek clearance from the Research Ethics Committee.
- If you have need for further clarification please consult this office. Please note that it is mandatory that you submit a detailed progress report of your study to this Committee every six months and a final copy of your report at the end of the study.
- Any serious adverse events must be reported at once to this Committee.
- Please note that when your approval expires you may need to request for renewal. The request should be accompanied by a Progress Report (Progress Report Forms can be obtained from the Secretariat).
- **Ensure that a final copy of the results is submitted to this Committee.**

Yours sincerely,

M.C Maimbolwa PhD
CHAIRPERSON

Date of approval: 18th August, 2015. **Date of expiry:** 17th August, 2016.

Appendix 8: Permission letter from Ministry of Health

All Correspondence should be addressed to the Permanent Secretary
Telephone: +260 211 253040/5
Fax: +260 211 253344

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH

In reply please quote:

No.............................

MH/101/23/10
NDEKE HOUSE
P. O. BOX 30205
LUSAKA

11th September, 2015

Mrs C Jacobs
The University of Zambia
School of Medicine, Department of Public health
P. O. Box 50110
LUSAKA

Dear Mrs. Jacob,

Re: Request for Authority to Conduct Research

The Ministry of Health is in receipt of the request you submitted on the behalf of Ms Mukanu for authority to conduct research titled **"Government's Health Policy Response to Non-communicable Disease in Zambia."** I wish to inform you that following submission of your request to my Ministry, our review of the same and in view of the ethical clearance, my Ministry has granted you authority to carry out the above mentioned exercise on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to MoH quarterly from the date of commencement of the study;
3. The final study report is cleared by the MoH before any publication or dissemination within or outside the country;
4. After clearance for publication or dissemination by the MoH, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, and all key respondents.

Yours sincerely,

Dr. D. Chikamata
Permanent Secretary
MINISTRY OF HEALTH

Appendix 9: Permission letter from Ministry of Community Development

Telephone: (260) 211 235 341
Fax: (260) 211 235 342

In reply please quote:
No.:...............................

REPUBLIC OF ZAMBIA

MINISTRY OF COMMUNITY DEVELOPMENT, MOTHER AND CHILD HEALTH

OFFICE OF THE PERMANENT SECRETARY
COMMUNITY HOUSE
SADZU ROAD
PRIVATE BAG W 252
LUSAKA

MCDMCD/7/6/38

23rd June 2015

Mr. Mulenga Mukanu
C/o University of Zambia
School of Medicine
Department of Public Health
LUSAKA

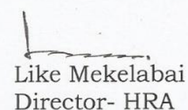
Re: REQUEST FOR ETHICAL CLEARANCE - YOURSELF

The above subject refers.

I acknowledge receipt of your letter dated 1st June 2015 and wish to inform you that you have been allowed to carry out your research on "the Zambian Government's Policy response to non-communicable diseases".

Kindly be reminded that your research is for academic purposes only.

I wish you the best in your studies.



Like Mekelabai
Director- HRA
For/Permanent Secretary
MINISTRY OF COMMUNITY DEVELOPMENT MOTHER AND CHILD HEALTH

All Correspondences should be addressed to the Permanent Secretary