

**UNIVERSITY  
OF  
LUSAKA**

**SCHOOL OF SOCIAL SCIENCES AND TECHNOLOGY.**

**An Investigation of the Socio-economic Implications of Inadequate Case Management of  
Non-Communicable Diseases in Lusaka's Matero Constituency.**

**A Report Submitted in Partial Fulfillment of the Requirements for the Award of the Degree  
of Bachelor of Arts in Development Studies at the University of Lusaka**

**By**

**Mwelwa Mukuka Mulenga**

**(BDS22112014)**

**Supervised By:**

**Mr MULAMBWA MWANANGONO**

**2025**

## **DECLARATION**

I hereby declare that this research study titled “An Investigation of the Socio-economic Implications of Inadequate Case Management of Non-Communicable Diseases in Lusaka’s Matero Constituency” is my original work. It has been conducted solely for academic purposes and has not been submitted, in whole or in part, to any other institution for any degree or qualification. All sources of information and data used in this study have been duly acknowledged in accordance with academic standards.

**Student’s name: Mwelwa Mukuka Mulenga**

**Student sign: M.Mulenga**

**Date: 12th November, 2025**

**Supervisor’s name: MULAMBWA MWANANG’ONO**

**Supervisor’s signature:**



**Date: 12th November, 2025**

## **DEDICATION**

I would like to express my sincere gratitude to my parents Raphael and Mutale Mulenga, thank you so much for investing in me, trusting me to pursue this degree, thank you for your support, for being my strength, my heroes, my inspiration and my biggest motivation. To my siblings Mwila and Mubanga each time I doubted myself I remembered I had to keep going and do it for you 2. Above all My Abba Father thank you for the strength, knowledge, wisdom, understanding, and thank you doing Above and Beyond.

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## Table of Contents

DECLARATION.....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
Copyright .....	v
ABSTRACT.....	ix
CHAPTER 1: INTRODUCTION.....	1
1.0 Overview.....	1
1.1 Background of the Study .....	1
1.2 Statement of the Problem.....	3
1.3 Objectives of the study.....	4
1.3.1 General objective .....	4
1.3.2 Specific Objectives .....	4
1.4 Research Questions .....	4
1.5 Scope of the study.....	4
1.6 Significance of the Study .....	5
1.7 Delimitations of the Study .....	5
1.8 Limitations of the Study.....	5
1.9 Definitions of Key Terms and Concepts .....	6
Chapter Summary .....	6
CHAPTER TWO: LITERATURE REVIEW .....	8
2.0 Introduction.....	8
2.1 Overview of Case Management of Non-Communicable Diseases (NCDs).....	8

2.2 Empirical Review.....	9
2.2.1 Global Perspective .....	9
2.2.2 Regional Perspective.....	10
2.2.3 Local Perspective (Matero, Lusaka) .....	11
2.2.4 Gaps in Knowledge.....	12
2.3 THEORETICAL FRAMEWORK .....	13
2.3.1 Structural Violence Theory (Galtung, 1969).....	13
2.3.2 Social Determinants of Health Theory (WHO, 2008) .....	13
2.4 Conceptual Framework.....	14
2.5 Chapter Summary .....	15
CHAPTER 3: RESEARCH METHODOLOGY .....	16
3.0 Introduction.....	16
3.1 Research Design.....	16
3.2 Research Approach .....	16
3.3 Target population .....	17
3.4 Sample Size.....	17
3.5 Sampling Techniques .....	17
3.6 Data Collection .....	17
3.7 Data Analysis .....	18
3.8 Reliability and Validity .....	18
3.9 Ethical Consideration.....	19
3.10 Chapter Summary .....	19
CHAPTER 4: PRESENTATION AND DISCUSSION OF STUDY FINDINGS .....	20

4.0 Introduction.....	20
4.1 Description of Respondent Characteristics.....	20
4.2 Effects of Delayed Diagnosis on NCD Management Outcomes among Patients in Matero ..	21
4.3 Impact of Missed Clinic Appointments on Effective NCD Management among Patients in Matero.....	22
4.4 Impact of Health System Support on Patients’ Ability to Effectively Self-Manage Non-Communicable Diseases in Matero .....	24
4.5 Discussion of Findings.....	26
4.5.1 Effects of Delayed Diagnosis on NCD Management Outcomes .....	26
4.5.2 Impact of Missed Clinic Appointments on NCD Management .....	27
5.3 Impact of Health System Support on Patient Self-Management .....	29
4.5.4 Socio-Economic Implications of Inadequate NCD Management.....	30
CHAPTER FIVE .....	32
CONCLUSION AND RECOMMENDATIONS .....	32
5.0 Introduction.....	32
5.1 Conclusion .....	32
5.2 Recommendations.....	32
5.3 Future Research .....	33
REFERENCES .....	34

## **ABSTRACT**

This study investigated the socio-economic implications of inadequate case management of Non-Communicable Diseases in Matero Constituency, Lusaka, Zambia. Non-Communicable Diseases such as hypertension and diabetes are increasingly contributing to illness, loss of income, and household economic strain in densely populated urban communities. In Matero, weaknesses in case management including delayed diagnosis, missed clinic appointments, inconsistent medication supply, and limited health worker support continue to undermine effective disease control. Despite the growing burden of these conditions, limited empirical evidence exists on how inadequate case management affects the socio-economic wellbeing of patients and their households in low-income urban settings. This gap necessitated the undertaking of the present study.

The study employed a mixed methods sequential explanatory design. A sample of 40 respondents was selected using purposive sampling techniques. Quantitative data were collected using structured questionnaires administered to Non-Communicable Disease patients, while qualitative data were obtained through semi structured interviews with healthcare providers and community health workers. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically to provide explanatory depth to the findings.

The findings revealed that delayed diagnosis and missed clinic appointments were common and were associated with worsening health outcomes, increased out of pocket healthcare costs, and reduced productivity among patients. Medication shortages and limited health worker support further constrained effective self-management of Non-Communicable Diseases. These challenges imposed significant socio-economic strain on households, particularly among low-income earners. The study concludes that inadequate case management of Non-Communicable Diseases in Matero has serious socio-economic consequences and recommends strengthening follow up systems, improving availability of essential medicines, and enhancing health worker capacity to support long term NCD care.

**Keywords:** Non Communicable Diseases, Case Management, Socio economic Implications, Matero, Lusaka, Zambia

## **CHAPTER 1: INTRODUCTION**

### **1.0 Overview**

Non-Communicable Diseases (NCDs), including hypertension, diabetes, and cancer, are major contributors to illness and death worldwide (Christian, Daniel & Sanuade, 2025). In Zambia, the prevalence of these diseases is increasing, creating a significant burden on both patients and the healthcare system. Matero, a constituency in Lusaka, faces challenges in managing NCDs effectively. Inadequate case management such as irregular monitoring, insufficient follow-up, and poor adherence to treatment can worsen health outcomes and impose socio-economic hardships on patients and their families. Socio-economic factors, including income, education, and employment, influence how individuals manage their conditions and utilize available healthcare services. Understanding the socio-economic implications of inadequate NCD case management in Matero is therefore essential for designing interventions that improve patient outcomes and reduce the disease burden. This study seeks to investigate these socio-economic implications, providing evidence to inform policies and strategies that enhance NCD case management in the Matero constituency.

### **1.1 Background of the Study**

Non-Communicable Diseases (NCDs) such as hypertension, diabetes, and cancer have emerged as a major public health concern globally. The World Health Organization (2022) reports that these diseases are responsible for more than seventy percent of deaths worldwide. The burden is especially heavy in low- and middle-income countries, including Zambia, where rapid urbanization, lifestyle changes, and aging populations contribute to rising NCD rates. This shift places considerable strain on health systems and threatens economic progress, underscoring the need for effective disease management strategies.

In many countries, similar challenges with NCD management have been observed. For example, in South Africa, the increasing prevalence of hypertension and diabetes has exposed weaknesses in primary healthcare systems, with poor patient follow-up and limited access to affordable medications contributing to uncontrolled disease and rising complications (Mayosi et al., 2012). Likewise, India faces a growing NCD epidemic compounded by socio-economic disparities, where

rural and low-income populations experience barriers to consistent care and medication adherence, resulting in higher morbidity and economic hardship (Reddy et al., 2011). These international experiences highlight the critical role of well-organized case management and patient support to mitigate the NCD burden.

Other countries have also demonstrated the impact of strengthening case management in improving outcomes. In Brazil, community health worker programs have been effective in increasing patient follow-up and adherence for chronic diseases, reducing hospital admissions and lowering healthcare costs (Macinko et al., 2010). Similarly, Thailand's investment in universal health coverage and continuous care models has improved hypertension and diabetes control across diverse populations (Aekplakorn et al., 2014). These examples provide valuable lessons for Zambia in designing strategies that improve NCD care, especially in underserved urban areas like Matero.

In Zambia, the Ministry of Health (2019–2023) has documented a steady increase in the prevalence of hypertension, diabetes, and cancer over recent years. These diseases now contribute significantly to adult morbidity and mortality. Contributing factors include unhealthy diets, physical inactivity, tobacco use, and limited public awareness about prevention and management. The growing NCD burden in Zambia challenges an already resource-limited health sector, requiring urgent attention to improve healthcare delivery and patient outcomes.

Effective management of NCDs relies on continuous care, including regular monitoring, adherence to medication, and timely follow-up appointments, collectively described as case management (Creswell & Plano Clark, 2011). In Matero, a densely populated area of Lusaka, gaps in case management have been reported. These include irregular patient follow-ups, insufficient healthcare personnel trained in NCD care, and poor monitoring of disease progression. Such shortcomings increase the risk of complications, reduce patients' quality of life, and heighten socio-economic burdens on households

Health system reports from Lusaka reveal that many NCD patients lack consistent follow-up care, which contributes to worsening health outcomes (Ministry of Health Zambia, 2019–2023). Without regular contact with health professionals, patients may fail to adhere to treatment plans or adopt necessary lifestyle changes. This inconsistency exacerbates disease progression and

increases the likelihood of preventable complications, placing additional pressure on families and the healthcare system.

Beyond the health implications, inadequate management of NCDs has substantial socio-economic consequences. Patients and their families often face high out-of-pocket expenses for medications, hospital visits, and treatment of complications (Christian, Daniel & Sanuade, 2025). Loss of income due to illness reduces household financial stability and may push vulnerable families deeper into poverty. These challenges are particularly acute in low-income communities like Matero, where resources and social safety nets are limited.

The increasing NCD burden in Zambia highlights the urgent need to explore the impact of inadequate case management on both health and socio-economic conditions in affected populations. Research focused on Matero offers valuable insights into the specific barriers patients and providers face in this urban context. By understanding these challenges, policymakers can develop tailored interventions to strengthen case management, improve patient outcomes, and reduce the broader social and economic costs of NCDs.

## **1.2 Statement of the Problem**

Non-Communicable Diseases (NCDs) such as hypertension and diabetes are an increasing health burden in Zambia, with the 2017 Zambia WHO STEPS Survey reporting prevalence rates of 18.9% for hypertension and 6.2% for diabetes among adults (WHO, 2017). Socio-economic factors like education, income, and employment significantly influence the distribution and management of these diseases (Christian, Daniel & Sanuade, 2025). However, in densely populated and low-income areas such as Matero in Lusaka, little is known about how NCD case management is carried out and what socio-economic effects arise from inadequate follow-up, monitoring, and treatment adherence (Ministry of Health Zambia, 2019–2023).

The lack of effective case management leads to poor health outcomes, increased out-of-pocket expenses, reduced productivity, and greater financial strain on households (Christian, Daniel & Sanuade, 2025). This knowledge gap limits the ability of policymakers and health providers to address the full impact of NCDs in vulnerable communities. This study therefore aimed to explore the socio-economic consequences of inadequate NCD case management in Matero, providing

evidence to guide targeted interventions that improve health outcomes and reduce economic hardship for affected patients and families.

### **1.3 Objectives of the study**

#### **1.3.1 General objective**

To investigate the socio-economic implications of inadequate case management of Non-Communicable Diseases (NCDs) in Matero, Lusaka, Zambia.

#### **1.3.2 Specific Objectives**

This study was guided by the following objectives

- i. To investigate patient knowledge, beliefs, and attitudes influencing adherence to NCD treatment and clinic attendance in Matero.
- ii. To examine the economic and social barriers affecting patients' consistent access to NCD care and medications in Matero.
- iii. To assess health system challenges, including workforce capacity and resource availability, that impact the quality of NCD case management in Matero.

### **1.4 Research Questions**

The study sought to answer the following research questions;

- i. What patient knowledge, beliefs, and attitudes influence adherence to NCD treatment and clinic attendance in Matero?
- ii. What economic and social barriers affect patients' consistent access to NCD care and medications in Matero?
- iii. What health system challenges, including workforce capacity and resource availability, impact the quality of NCD case management in Matero?

### **1.5 Scope of the study**

This study investigated the socio-economic implications of inadequate case management of Non-Communicable Diseases (NCDs) in Matero Constituency, Lusaka. Geographically, the study was

confined to Matero and focuses on selected public health facilities that provide NCD services. The study population included NCD patients, healthcare workers, and community stakeholders who play a role in NCD management.

Conceptually, the study limited itself to four key aspects of inadequate case management: delayed diagnosis, missed clinic appointments, inadequate medication, and limited availability of healthcare workers. The study examined how these case-management challenges influence the socio-economic conditions of NCD patients, particularly in terms of healthcare costs, income productivity, household welfare, and overall quality of life.

### **1.6 Significance of the Study**

The significance of this study lay in its examination of how inadequate case management of Non Communicable Diseases affected the socio economic well being of individuals and households in Matero, Lusaka. The study highlighted the financial burden, loss of productivity, and social challenges associated with poor NCD management. Its findings provided useful evidence for healthcare providers, policymakers, community leaders, and health organizations to improve case management practices, reduce household economic strain, and strengthen health outcomes in low resource urban communities.

### **1.7 Delimitations of the Study**

This study was delimited to individuals living with Non Communicable Diseases in Matero, Lusaka, Zambia. It focused on the socio economic implications of inadequate NCD case management and the experiences of affected patients. The study excluded other health conditions, communities outside Matero, and assessment of interventions, concentrating only on existing challenges and their socio economic effects.

### **1.8 Limitations of the Study**

The study faced several limitations. Its focus on Matero, Lusaka limited the generalization of findings to other settings, though results were contextualized and compared with existing literature. The sample size may not have fully represented all NCD patients, but purposive sampling was used to include diverse participants. Reliance on self reported data introduced possible bias, which was minimized through anonymity and structured tools. The cross sectional

design limited causal interpretation. Language barriers and time constraints were addressed through use of local languages and careful scheduling.

## **1.9 Definitions of Key Terms and Concepts**

**1. *Non-Communicable Diseases (NCDs):*** Chronic diseases that are not transmissible between individuals, including conditions such as diabetes, hypertension, cancer, and cardiovascular diseases.

**2. *Inadequate Case Management:*** Insufficient or ineffective management of a patient's disease, including poor follow-up, delayed treatment, lack of monitoring, or limited adherence support, which can negatively affect health outcomes.

**3. *Socio-Economic Implications:*** The effects of inadequate NCD case management on an individual's or household's economic status, social life, productivity, and overall well-being.

**4. *Barriers to Healthcare:*** Factors that hinder individuals from receiving proper NCD care, such as financial constraints, limited healthcare resources, distance to health facilities, or lack of knowledge about disease management.

**5. *Case Management:*** A coordinated approach to patient care that involves assessing, planning, implementing, and monitoring interventions to manage NCDs effectively and improve health outcomes.

**6. *Health Outcomes:*** The measurable consequences of healthcare or its absence on a person's health, including disease progression, morbidity, mortality, and quality of life.

## **Chapter Summary**

Chapter One introduced the study by highlighting the growing burden of Non-Communicable Diseases (NCDs) in Matero and the challenges arising from inadequate case management. It outlined the research problem, emphasizing how delayed diagnosis, missed clinic appointments, inadequate medication, and limited healthcare worker support contribute to poor health outcomes and socio-economic strain among patients. The chapter also presented the study's objectives and research questions, which focus on examining how these case management gaps affect the lives and well-being of NCD patients in Matero. Overall, this introduction established the foundation

for investigating the socio-economic implications of inadequate NCD case management and set the stage for deeper analysis in the subsequent chapters.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

The inadequate management of Non-Communicable Diseases (NCDs) presents significant challenges to both patients and healthcare systems, particularly in low-resource urban settings. Understanding the existing literature is critical to contextualize the research problem, identify knowledge gaps, and inform strategies to address the socio-economic consequences of poor NCD case management. This chapter reviews literature on NCDs, case management practices, and their socio-economic implications, with particular attention to low-resource environments such as Matero, Lusaka, Zambia. The review aims to synthesize current evidence, highlight gaps in understanding, and provide a foundation for developing interventions to improve NCD management and reduce the associated socio-economic burdens on affected individuals and communities.

### **2.1 Overview of Case Management of Non-Communicable Diseases (NCDs)**

Effective case management is essential for controlling Non-Communicable Diseases (NCDs) and minimizing their socio-economic impacts. Case management involves the coordinated provision of healthcare services, including diagnosis, treatment, follow-up, monitoring, and patient support, to ensure optimal disease control.

Inadequate case management characterized by delayed treatment, poor follow-up, limited monitoring, and insufficient patient support can worsen health outcomes and increase the economic and social burdens on affected individuals and households. In low-resource urban settings like Matero, Lusaka, several factors contribute to inadequate NCD case management. Financial constraints, such as high out-of-pocket costs for medications, consultations, and diagnostic tests, prevent timely and consistent treatment. Shortages of trained healthcare providers, limited healthcare infrastructure, and insufficient medical supplies further compromise disease management.

These inadequacies not only affect patients' health outcomes but also impose socio-economic costs, including lost productivity, increased household expenditures, and reduced quality of life. Understanding the interplay between inadequate case management and socio-economic

consequences is crucial for developing targeted interventions and policies to support individuals living with NCDs in Matero.

## **2.2 Empirical Review**

### **2.2.1 Global Perspective**

Non-Communicable Diseases (NCDs) are a major public health challenge worldwide, contributing to 74% of global deaths annually, with a disproportionate burden in low- and middle-income countries (WHO, 2021). Research highlights that inadequate case management—such as poor follow-up, inconsistent treatment, and lack of monitoring—significantly worsens health outcomes and increases socio-economic burdens for patients and households.

For example, a study in India found that patients with diabetes who lacked structured case management experienced higher hospitalization rates and lost income due to inability to work, resulting in long-term financial strain on families (Ramachandran et al., 2019). In South Africa, inadequate hypertension management was linked to increased morbidity and household expenditures, particularly among low-income populations (Maimela et al., 2020). Similarly, in Brazil, poor follow-up care for cardiovascular diseases led to avoidable complications, negatively impacting patients' productivity and economic stability (Lotufo et al., 2018).

Global organizations, including the World Health Organization (WHO, 2021), emphasize the need for integrated NCD case management systems that combine regular monitoring, access to medicines, and patient education to reduce socio-economic impacts. Evidence from Kenya and China further indicates that community-based interventions and policy-driven programs can mitigate the adverse economic and social consequences of inadequate NCD management (Xu et al., 2018; Kiplagat et al., 2020).

By examining these global studies, it is evident that inadequate case management of NCDs not only compromises health outcomes but also imposes significant socio-economic burdens, providing critical lessons for designing interventions in low-resource urban contexts like Matero, Lusaka, Zambia.

### **2.2.2 Regional Perspective**

Across Sub-Saharan Africa, the burden of Non-Communicable Diseases (NCDs) continues to rise, increasing pressure on already constrained health systems. The challenge in the region is no longer just the availability of health services, but the quality and effectiveness of NCD case management, which includes diagnosis, follow-up, treatment adherence, continuity of care, and long-term monitoring. Many countries in the region struggle with fragmented care pathways, weak referral systems, shortages of trained health workers, and inconsistent supply of essential medicines—factors that directly contribute to inadequate case management.

Regional studies indicate that poor case management of NCDs such as hypertension, diabetes, and cardiovascular diseases leads to higher levels of complications, hospital admissions, disability, and premature mortality. This in turn creates significant socio-economic consequences, including increased household expenditure on repeated treatment, long-term medication, and hospitalization. Furthermore, the lack of structured NCD follow-up systems results in productivity losses, reduced labour participation, and increased dependency within families.

Institutions such as the World Health Organization Regional Office for Africa (WHO AFRO) and the Africa Centres for Disease Control and Prevention (Africa CDC) have consistently highlighted the need for improving clinical management and continuity of care for NCD patients. Regional frameworks—such as the WHO AFRO NCD Action Plan—stress strengthening primary health care, standardizing NCD treatment guidelines, improving health worker training, and ensuring reliable access to chronic medication. These initiatives recognize that effective case management is essential to reducing the socio-economic burden of NCDs at household and community levels.

Despite these regional efforts, many Sub-Saharan African countries, including Zambia, continue to face challenges in operationalizing these strategies. Health facilities often lack structured NCD clinics, patient tracking systems, and data management tools needed for long-term follow-up. Consequently, patients frequently experience inconsistent care, delayed treatment adjustments, and poor disease control. These inefficiencies disproportionately affect low-income communities, where the cumulative economic burden of repeated visits, frequent drug stockouts, and advanced complications is most severe.

Understanding the regional context of inadequate NCD case management provides essential insight into the situation in Matero, Lusaka. Matero, like many urban low-income settings in Africa, faces health system constraints that mirror broader regional trends. Examining these parallels helps highlight where targeted interventions are needed to strengthen NCD case management and minimize the socio-economic strain on affected households.

### **2.2.3 Local Perspective (Matero, Lusaka)**

The challenge of inadequate case management of Non-Communicable Diseases (NCDs) in Zambia becomes particularly visible at community level, especially in high-density areas such as Matero. Local evidence shows that while NCD prevalence continues to rise, case management systems remain weak across primary healthcare facilities. Matero, which is served mainly by Matero Main Clinic, Matero Level One Hospital, Chipata Clinic, George Clinic, and several health posts, faces multiple gaps in the continuum of NCD care.

Local assessments by the Ministry of Health and Lusaka District Health Office indicate that poor follow-up, inconsistent patient monitoring, and irregular review appointments contribute to worsening NCD outcomes in the area. Many facilities struggle with long waiting times, limited consultation rooms, and high patient loads, which reduce the quality and consistency of case management, especially for chronic conditions like hypertension and diabetes. These structural limitations often lead to delayed adjustments of treatment, poor blood pressure/sugar monitoring, and uncontrolled disease progression.

In addition, Matero's local context is shaped by economic vulnerability, with many residents relying on informal jobs. As a result, inadequate case management often translates into frequent episodes of illness, absenteeism from work, and reduced household productivity. Studies conducted in Lusaka's peri-urban communities show that when case management is weak, NCD patients commonly experience more complications, leading to increased household spending on emergency care, transport, and medication purchases. These economic pressures intensify the cycle of poverty, especially in already low-income homes.

Local health reports also highlight medication stock-outs, especially for essential NCD drugs like antihypertensives and insulin. This inconsistency undermines continuous treatment — a core component of effective case management. When patients miss doses or switch medications

because of unavailability, complications become more frequent, increasing both the clinical and socio-economic burden.

Matero is additionally affected by limited health literacy, where many patients lack adequate information on self-management, the importance of routine follow-ups, lifestyle modifications, and adherence to medication. This gap is partly due to the shortage of trained NCD specialists and inadequate community outreach programs, resulting in patients receiving insufficient guidance on managing their conditions effectively.

Furthermore, community studies from Lusaka's high-density areas show that stigma and misconceptions surrounding chronic illnesses contribute to delayed health-seeking behaviors. These socio-cultural barriers, combined with weak case management structures, exacerbate complications and emergency episodes, increasing household healthcare expenditures and further straining economic resilience.

Overall, the local perspective reveals that inadequate case management — not merely access barriers — is a major driver of the socio-economic burden of NCDs in Matero. Weak follow-up systems, overwhelmed health facilities, medication inconsistencies, and limited patient support mechanisms collectively contribute to worsening clinical outcomes and heightened financial vulnerability for affected households. Understanding these local dynamics is essential for designing interventions tailored to Matero's unique social and economic realities.

#### **2.2.4 Gaps in Knowledge**

Riha Parvin and Panakaje (2022) examined the socio-economic effects of chronic disease management globally, emphasizing patient adherence and healthcare access. While their study highlighted the importance of structured case management in improving health outcomes, it did not explore how inadequate case management affects the socio-economic well-being of patients in densely populated urban areas such as Matero, Lusaka. This gap underscores the need for localized research to understand the financial and social burdens faced by NCD patients in Zambia.

Pan and Mishra (2018) investigated the relationship between healthcare system efficiency and disease outcomes in middle-income countries, noting that improved service delivery enhances patient quality of life. However, their study focused mainly on clinical outcomes without considering the broader socio-economic implications of inadequate care. This limitation indicates

the necessity to examine how gaps in case management translate into economic strain, lost productivity, and reduced household welfare in the Zambian context.

Sajid Nazir (2010) explored barriers to effective NCD management in urban settings, emphasizing medication availability and follow-up systems. Although insightful, the study was conducted outside Zambia and did not account for local healthcare resource constraints, patient behaviors, and socio-economic realities in Matero. Understanding these local dynamics is crucial for informing targeted interventions that can improve both health and economic outcomes for patients.

Cyuzuzo (2016) studied the impact of healthcare accessibility on chronic disease management in Rwanda, highlighting systemic challenges such as staffing shortages and irregular patient monitoring. While informative, the research did not examine the socio-economic consequences of inadequate case management for patients and households. Similarly, Kosgei (2014) explored health system inefficiencies in Kenya but did not link these challenges to the economic and social well-being of patients. This study aims to fill this gap by investigating the socio-economic implications of inadequate NCD case management specifically in Matero, Lusaka, offering evidence that can inform local policy and healthcare interventions.

## **2.3 THEORETICAL FRAMEWORK**

### **2.3.1 Structural Violence Theory (Galtung, 1969)**

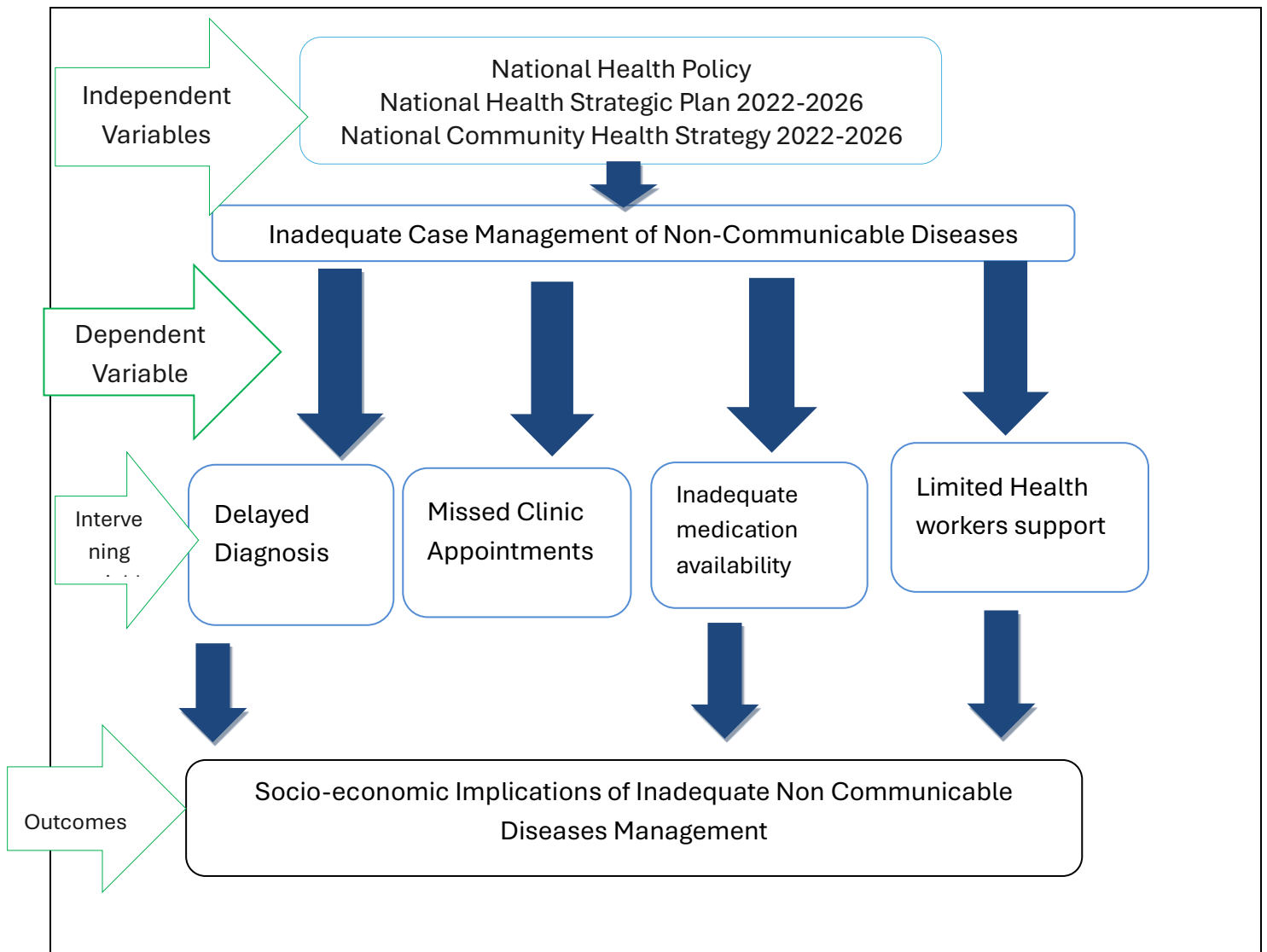
Structural Violence Theory, developed by Johan Galtung in 1969, explains how social, economic, and institutional structures can unintentionally harm individuals by limiting their access to essential services. In the context of this study, the theory helps explain how systemic issues—such as shortages of medicines, inadequate follow-up systems, overcrowded facilities, and limited staffing—contribute to inadequate case management of NCDs in Matero. These structural barriers prevent patients from receiving consistent and effective care, leading to adverse socio-economic consequences.

### **2.3.2 Social Determinants of Health Theory (WHO, 2008)**

The Social Determinants of Health Theory, popularized by the WHO Commission on Social Determinants of Health in 2008, states that health outcomes are shaped by factors such as income,

education, housing, employment, and social support. In Matero, these socio-economic conditions affect patients' ability to adhere to treatment, attend follow-up appointments, and manage NCDs effectively. This theory helps explain how income levels, health literacy, living conditions, and employment patterns influence the adequacy of NCD case management and its broader socio-economic impacts.

## 2.4 Conceptual Framework



*Source: Researcher's Perspective (2025)*

The conceptual framework demonstrates the relationship between inadequate case management of Non Communicable Diseases as the independent variable and the resulting socio economic consequences for patients and households as the dependent variable. Poor follow up systems,

inconsistent medication supply, limited monitoring, and weak patient support contribute to disease complications, frequent illness episodes, and increased hospital admissions. These outcomes lead to higher household healthcare costs, loss of income, reduced productivity, and declining household welfare. The framework is informed by Structural Violence Theory, which highlights systemic health system constraints, and the Social Determinants of Health Theory, which emphasizes the role of socio economic conditions in shaping chronic disease management outcomes.

## **2.5 Chapter Summary**

This chapter reviewed literature on the inadequate management of NCDs and its socio-economic effects. Global, regional, and local evidence shows that poor case management such as weak follow-up, medication shortages, and limited monitoring leads to worse health outcomes, higher healthcare costs, and reduced productivity. In Matero, these challenges are intensified by overcrowded facilities, resource shortages, and economic vulnerability. The chapter also identified gaps in previous studies, highlighting the need for localized research on the socio-economic impacts of poor NCD management. The theoretical and conceptual frameworks provide the basis for understanding how structural and social factors influence NCD outcomes in Matero.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This chapter outlines the research methodology adopted for investigating the socio-economic implications of inadequate management of Non-Communicable Diseases (NCDs) in Lusaka's Matero constituency. It provides a detailed description of the research design, approach, population, sampling techniques, data collection methods, and data analysis procedures.

### **3.1 Research Design**

This study used a mixed-methods approach, combining quantitative and qualitative methods to examine the socio-economic impact of inadequate case management of Non-Communicable Diseases (NCDs) in Matero, Lusaka (Creswell & Plano Clark, 2011). The quantitative component used structured questionnaires with NCD patients to assess delayed diagnoses, missed appointments, medication access, and health worker support, as well as related socio-economic effects such as medical costs, income loss, and reduced productivity. The qualitative component involved semi-structured interviews with healthcare providers, patients, and community health workers to explore lived experiences and systemic challenges in case management. By integrating both methods, the study provided a comprehensive understanding of the socio-economic implications of inadequate NCD care.

### **3.2 Research Approach**

This study employed a descriptive and explanatory research design, using a mixed-methods approach to examine the socio-economic impact of limited healthcare access on NCD management in Matero, Lusaka. The quantitative component used a descriptive design to analyse secondary data on healthcare access, clinic attendance, and NCD prevalence from Ministry of Health reports and facility records. The qualitative component applied a case-study design, conducting semi-structured interviews with healthcare workers, NCD patients, and community health volunteers to explore lived experiences of delayed diagnosis, missed appointments, inadequate medication, and shortages of healthcare workers. This study followed a sequential explanatory strategy, where quantitative findings guided the qualitative phase, enhancing the validity, reliability, and depth of the results (Creswell, 2014; Yin, 2014)

### **3.3 Target population**

The target population included three groups in Matero, Lusaka: adult patients aged 18 and above diagnosed with Non-Communicable Diseases who accessed healthcare services; healthcare providers such as doctors, nurses, and clinical officers directly involved in NCD care; and community health workers supporting NCD patients. These groups were chosen for their direct experience and knowledge of challenges in NCD case management.

### **3.4 Sample Size**

A sample size of 40 participants was selected for this study. This sample included adults aged 18 years and above living in Matero, Lusaka, who had been diagnosed with Non Communicable Diseases such as hypertension and diabetes and had accessed healthcare services for NCD management. Health practitioners involved in NCD care, including doctors, nurses, and community health workers, were also included. This sample size provided balanced insights into the socio economic implications of inadequate NCD case management from both patient and provider perspectives.

### **3.5 Sampling Techniques**

Purposive sampling was used to select healthcare providers and community health workers who have direct experience with Non-Communicable Disease (NCD) management in Matero. This ensured that knowledgeable participants about the challenges in NCD care were included. For NCD patients, simple random sampling was applied. A list of eligible patients from health facilities in Matero was used, and participants were randomly selected to represent the wider patient population. This method helped reduce bias and gave all patients an equal chance of being included.

### **3.6 Data Collection**

Data for this study was collected using a combination of structured questionnaires and semi-structured interviews. Questionnaires, including both closed-ended and open-ended questions, gather quantitative data on delayed diagnoses, missed clinic appointments, medication availability, access to health worker support, and the socio-economic effects of inadequate NCD case management.

According to Bryman (2016), questionnaires are an efficient method for collecting standardized data from multiple respondents, allowing both quantitative analysis and qualitative insights through open-ended questions.

Semi-structured interviews were conducted with healthcare providers, patients, and community health workers to gain deeper qualitative insights into experiences, challenges, and systemic factors influencing NCD care (Creswell & Plano Clark, 2011). This mixed approach ensures that the study captures measurable patterns while also exploring the nuanced realities of NCD management, enhancing the validity and richness of the findings.

### **3.7 Data Analysis**

The study investigating the socio-economic implications of inadequate NCD case management in Matero, Lusaka has qualitative and quantitative data.

The study's qualitative data was collected and analyzed using interview guides and Questionnaires, which allowed participants to share their perceptions and experiences.

The study used a mixed methods approach Quantitative data from structured questionnaire administered to NCD Patients were coded and analyzed using descriptive statistics frequencies and percentages to identify patterns in delayed diagnosis missed appointments medication availability and socio economic impacts .Qualitative data from semi structured interviews with Healthcare providers and patients were analyzed thematically to explore experience perceptions and challenges in NCD Management integrating both data types allowed for triangulation enhancing the study s depth and credibility.

### **3.8 Reliability and Validity**

To ensure that the results of this study are credible and of high quality, both reliability and validity were guaranteed (Patton, 2022).

Reliability: The consistency of the questionnaire was tested using a test-retest method, where the same questionnaire was administered to a small subset of participants on two different occasions to check for consistency in responses.

Validity: A pilot test of the questionnaire was conducted with a small group of NCD patients and healthcare providers to ensure that the questions are clear, concise, and easily understood, thereby confirming that the questionnaire accurately measures what it is intended to measure.

### **3.9 Ethical Consideration**

Protecting the rights of participants is vital, and the integrity of research depends on adherence to ethical standards (Hasan et al., 2021). This study ensured that each participant was treated with dignity and that their identity was protected by following strict ethical guidelines.

**Informed Consent:** All participants were fully informed about the nature, purpose, and procedures of the study before participation. They were made aware of their voluntary involvement and advised that they could withdraw at any time if they felt uncomfortable, without any repercussions.

**Voluntary Participation:** Participants were assured that their involvement was entirely voluntary. No coercion or incentives were used, and participants gave consent prior to participation, with the freedom to withdraw at any point.

**Confidentiality:** To protect confidentiality, participants' identities were kept anonymous, and all information collected was aggregated. The study ensured that individual responses could not be traced back to any participant.

### **3.10 Chapter Summary**

This chapter outlined the methodology used to investigate the socio-economic implications of inadequate NCD case management in Matero, Lusaka. A mixed-methods approach was employed, collecting both quantitative and qualitative data from NCD patients, healthcare providers, and community health workers. Purposive sampling was used to select participants with relevant experience. Data collection involved structured questionnaires and semi-structured interviews, with quantitative data analyzed using R Studio and qualitative data analyzed using Google Forms to identify key patterns and themes. Reliability and validity measures were described to ensure consistent and accurate results, and ethical considerations, including informed consent, voluntary participation, and confidentiality, were addressed.

## CHAPTER 4: PRESENTATION AND DISCUSSION OF STUDY FINDINGS

### 4.0 Introduction

This chapter presents the key findings from the study examining the socio-economic implications of inadequate management of Non-Communicable Diseases (NCDs) in Matero, Lusaka. The findings are organized according to the study objectives and structured around thematic analysis incorporating perspectives from patients, healthcare providers, and policy stakeholders. It covers respondent characteristics, effects of delayed diagnosis, missed clinic appointments, health system support, and a summary of findings.

### 4.1 Description of Respondent Characteristics

This section presents the socio-demographic profile of study participants, including NCD patients, healthcare providers, and policy stakeholders in Matero, Lusaka.

Among the 40 patients, 55 percent were female and 60 percent married. Education levels ranged from primary (25 percent) to secondary (35 percent) and post-secondary or vocational training (40 percent). Healthcare providers comprised nurses, clinical officers, and community health workers with an average of six years' experience in NCD care. Policy stakeholders included Ministry of Health officials, local government representatives, and civil society members.

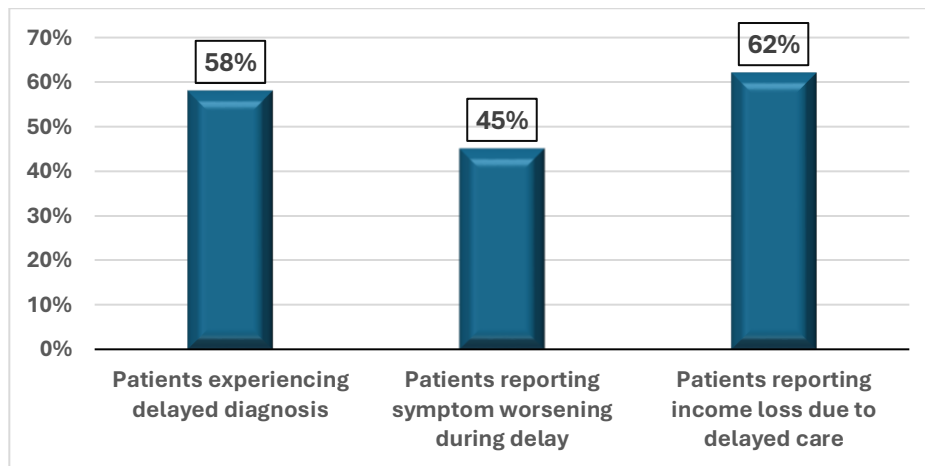
This diverse group offered a well-rounded view of the socio-economic challenges linked to NCD management in the community.

<i>Characteristic</i>	<i>Category</i>	<i>Frequency</i>	<i>Percentage (%)</i>
<b>Sex</b>	Male	18	45
	Female	22	55
<b>Marital Status</b>	Married	24	60
	Single	10	25
	Widowed/Divorced	6	15
<b>Education Level</b>	Primary or less	10	25
	Secondary	14	35

#### 4.2 Effects of Delayed Diagnosis on NCD Management Outcomes among Patients in Matero

Delayed diagnosis poses a serious challenge to effective NCD management in Matero, with substantial consequences for patients' health and livelihoods. Quantitative data reveal that 58 percent of patients experienced delays in receiving a diagnosis, while 45 percent reported worsening symptoms during this period. These delays often extend the time before treatment begins, increasing the risk of complications.

*Figure 4.0: Delayed Diagnosis and Its Impact on NCD Patients in Matero*



Delays in diagnosis in Matero largely result from shortages of medical supplies and limited health resources, which affect not only treatment but also the ability to confirm diagnoses promptly. One health provider explained the challenges this creates:

*“We try to order enough medication, but delays and budget limitations mean stockouts happen frequently, which also affects diagnosis and treatment start times” [Health Provider 3].*

Such prolonged waiting times for diagnostic tests cause patients’ conditions to worsen before they receive care. A key informant described this issue, noting that:

*“Patients sometimes wait weeks or even months to see specialists, and by then, their illnesses have progressed and are harder to manage”* [Key Informant 2].

This delay not only impacts health outcomes but also patients’ livelihoods. One patient shared how missing medication due to delayed diagnosis weakened them to the point of being unable to work:

*“When my blood pressure rises because I miss my medicine, I get too weak to go to work. This affects my whole family’s livelihood”* [Patient 19].

Another patient expressed frustration with the slow pace of testing, highlighting how symptoms worsen during the wait:

*“I often wait a long time to get my test results, and by the time I do, my symptoms have gotten much worse”* [Patient 23].

Healthcare workers observed the clinical consequences of these delays, explaining that late diagnosis increases complications and treatment difficulty:

*“If we cannot diagnose early, patients return sicker and with complications, which makes treatment more difficult and expensive”* [Health Provider 1].

Community health workers also pointed out missed opportunities for early intervention, emphasizing the importance of timely diagnosis:

*“We often only see patients when their condition has worsened significantly, but early diagnosis could prevent many complications”* [Community Health Worker 2].

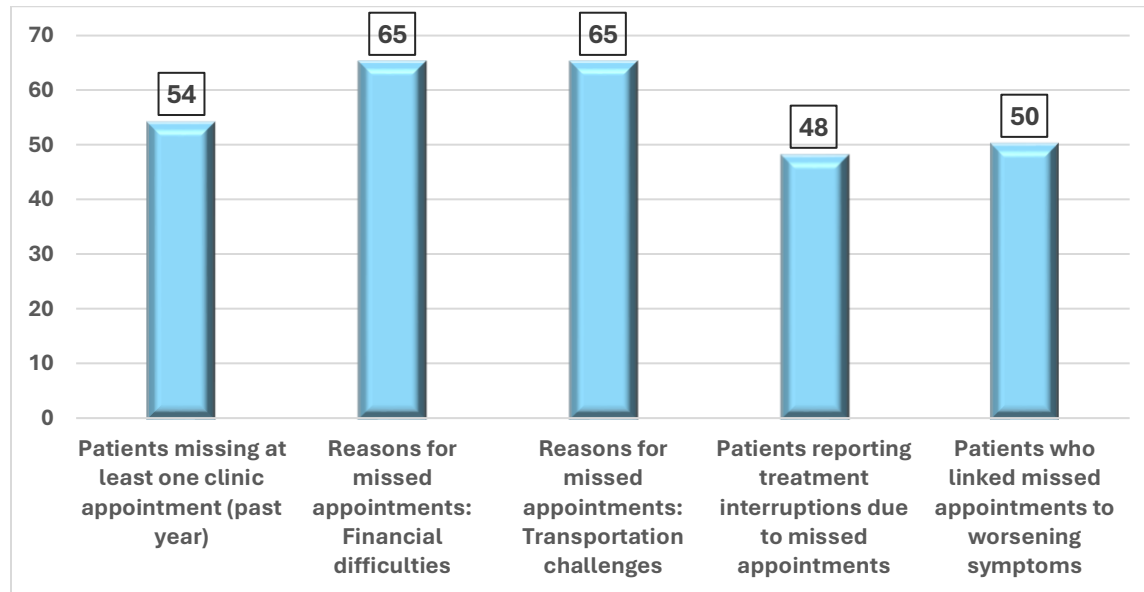
Together, these insights show that systemic delays in diagnosis not only worsen patients’ health but also deepen socio-economic difficulties for affected families in Matero.

### **4.3 Impact of Missed Clinic Appointments on Effective NCD Management among Patients in Matero**

Missed clinic appointments pose a serious challenge to the continuous care needed for effective management of noncommunicable diseases. Results from patient surveys indicate that 54 percent of patients missed at least one scheduled clinic visit in the past year. Among these, 65 percent cited financial difficulties and transportation problems as primary reasons for missing appointments.

Such absences disrupt healthcare providers’ ability to monitor disease progression, adjust treatment plans, and reinforce adherence.

Figure 4.2: Missed Clinic Appointments and Their Causes among NCD Patients in Matero



Furthermore, it was found that missed visits limit healthcare providers’ ability to track disease progression and reinforce treatment adherence. One patient described the frustration caused by resulting medication access problems:

*“Sometimes I go to the clinic, and they do not have my medicine. I have to wait or buy it myself, which is expensive”* [Patient 12].

Healthcare providers acknowledged that irregular follow-up impedes clinical decisions and continuity of care:

*“When patients miss appointments, we lose chances to adjust their medication or provide vital counseling, which affects their health outcomes”* [Health Provider 4].

A community health worker highlighted how economic and social barriers increase missed visits, further complicating care delivery:

*“Many patients struggle with transport costs or must choose between clinic visits and daily work, leading to frequent absences”* [Community Health Worker 1].

The gap between policy intentions and patient realities was also noted by a health official:

*“People see these policies but wonder why no action follows; without enforcement and support, patients continue missing appointments and falling through the cracks”* [Key Informant 6].

Patients linked missed visits to worsening symptoms and financial strain, as one shared:

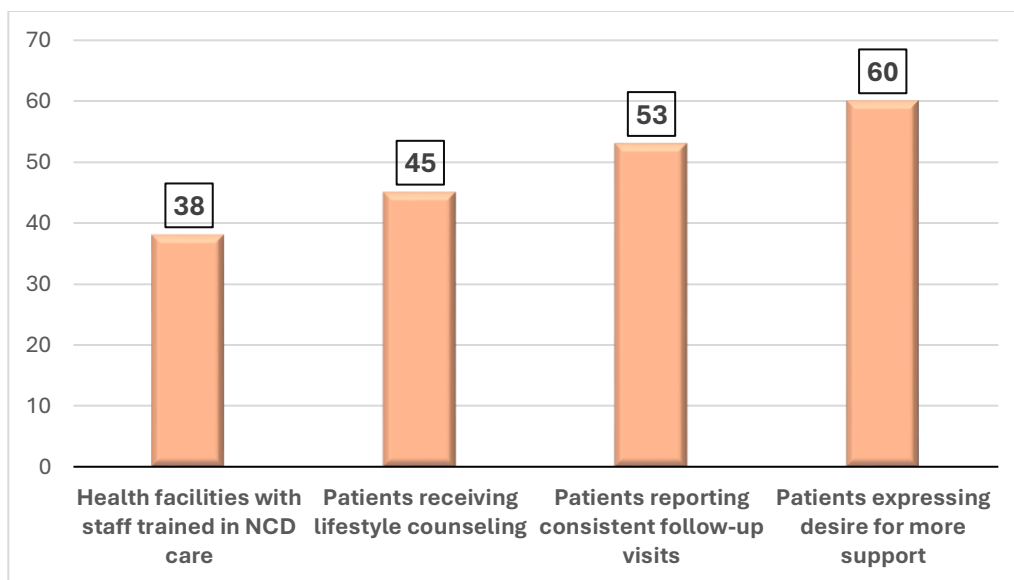
*“When I miss clinic days, my condition worsens, and I spend more money on hospital bills and private medication”* [Patient 19].

Together, these findings reveal that missed appointments, driven largely by socio-economic factors, undermine efforts to manage noncommunicable diseases effectively in Matero. Addressing these barriers is essential to improving patient outcomes and reducing the burden of disease.

#### **4.4 Impact of Health System Support on Patients’ Ability to Effectively Self-Manage Non-Communicable Diseases in Matero**

Effective self-management of noncommunicable diseases depends greatly on continuous, well-informed support from trained health workers. However, the study reveals significant gaps in this support system within Matero. Only 38 percent of health facilities reported having staff trained specifically in NCD management, while just 45 percent of patients received counseling on lifestyle changes. Although 53 percent of patients reported consistent follow-up visits, a majority (60 percent) expressed a desire for more ongoing support from health workers to help manage their condition

*Figure 4.3: Health Worker Support and Patient Self-Management Indicators in Matero*



The shortage of trained personnel directly impacts the quality of care and patients’ confidence. One community health worker explained the challenge:

*“We want to provide more education and guidance, but there are simply too few of us, and many have not received updated training on managing complex chronic diseases like diabetes and hypertension”* [Community Health Worker 2].

This shortage directly affects the quality of care and patient confidence. A health provider emphasized:

*“Many health workers want to help but lack the necessary skills to provide comprehensive NCD care and counseling”* [Health Provider 4].

Patients also shared how this gap leaves them feeling unsupported. One patient explained:

*“Without regular counseling or check-ups, I sometimes doubt if I’m doing the right things. It’s hard to stay motivated when no one is guiding me”* [Patient 30].

Another patient expressed frustration over inconsistent follow-up:

*“After I was diagnosed, I received some advice, but then there was little follow-up. I often feel like I’m left alone to figure out how to manage my diabetes on my own”* [Patient 25].

Community health workers pointed out missed opportunities for early intervention and ongoing support:

*“We often only see patients when their condition has worsened significantly, but early and continuous support could prevent many complications”* [Community Health Worker 3].

A senior health official underlined the importance of building capacity to improve patient outcomes:

*“To improve NCD outcomes, building the knowledge and numbers of trained health workers is crucial. Only then can patients receive the support they need to take control of their health”* [Key Informant 3].

Collectively, these findings highlight that the limited training and support available to health workers constrain patients’ ability to manage their conditions effectively. Expanding professional development and ensuring consistent patient counseling are essential steps to empower patients and improve disease control in Matero

## **4.5 Discussion of Findings**

### **4.5.1 Effects of Delayed Diagnosis on NCD Management Outcomes**

The study identified delayed diagnosis as a significant barrier to effective management of noncommunicable diseases in Matero. This finding is consistent with Kasujja et al. (2021), who documented similar diagnostic delays for diabetes in Uganda due to limited healthcare resources and specialist shortages. Such delays contribute to the progression of disease, making treatment more complex and costly. Phutane et al. (2024) also highlighted how deficiencies in diagnostic supplies and trained personnel prolong diagnosis in low-resource settings, resulting in increased risks of advanced illness and poor health outcomes.

Patients in Matero reported that delayed diagnosis adversely affected their ability to work, reflecting socio-economic impacts linked to untreated NCDs in Zambia. Musonda et al. (2024) found that untreated chronic illnesses lead to loss of income and deepen poverty in affected households. Similarly, Kim and Radoias (2018) noted that conditions such as hypertension and diabetes worsen over time without early treatment, reducing productivity and quality of life. These

effects exacerbate vulnerability by straining family resources and limiting capacity to meet healthcare and economic needs.

Healthcare providers stressed the missed opportunities for early intervention caused by diagnostic delays. Kisokanth et al. (2015) emphasized that timely diagnosis is crucial to improving chronic disease outcomes. In Matero, weak healthcare infrastructure and limited referral systems delay patient access to specialists and diagnostic tests. Mukanu et al. (2017) also identified discrepancies between Zambia's national policies and on-the-ground practices, underscoring the need to strengthen diagnostic services to enable prompt care and reduce complications related to delayed treatment.

The study further revealed that late diagnosis increases treatment complexity and costs. Franklin et al. (2018) argued that early detection lowers healthcare costs by preventing disease progression and complications. This aligns with experiences in Matero, where delayed diagnosis forces patients to require more intensive and expensive treatment regimens. Addressing this issue demands investment in diagnostic technologies, workforce capacity building, and supply chain improvements to facilitate faster, more reliable diagnosis at primary healthcare levels, thus easing pressure on referral centers.

Systemic factors contributing to delayed diagnosis in Matero call for urgent intervention. The findings support WHO Zambia's (2025) recommendations to enhance diagnostic services and broaden community health outreach programs. A coordinated approach involving policymakers, healthcare workers, and community members is essential to ensure timely diagnosis and intervention. Strengthening these areas promises to reduce patient suffering, prevent avoidable complications, and lessen the economic burden on families and the health system at large.

#### **4.5.2 Impact of Missed Clinic Appointments on NCD Management**

Missed clinic appointments pose a serious challenge for patients managing noncommunicable diseases in Matero. This finding aligns with Amos's (2019) study, which highlighted how missing scheduled visits disrupts continuous care and delays necessary treatment adjustments. The research showed that many patients missed appointments due to financial difficulties and transport challenges. Similarly, Junod Perron et al. (2010) found that social and economic barriers reduce patient adherence to healthcare visits. These missed appointments prevent healthcare workers from

providing consistent and effective care, hindering disease management and worsening patient outcomes over time.

Healthcare providers emphasized that missed appointments limit their ability to review medications and offer essential counseling. Tharani et al. (2021) stressed that regular follow-up supports patient adherence and reduces complications in chronic disease management. In Matero, these gaps in continuity mean treatments become less effective, with increased hospital admissions as a consequence. Health officials also noted a disconnect between policy intentions and patient realities, highlighting insufficient support systems and poor enforcement to ensure patients maintain regular clinic visits, leaving many patients vulnerable to deteriorating health.

Patients reported that missed clinic visits often led to worsened health and higher out-of-pocket expenses for private care and medication. This matches findings by Nuti et al. (2015), who showed that irregular care increases financial strain on families managing diabetes. The cycle of missing care, worsening illness, and rising costs intensifies poverty among affected households. Many patients already face hardships meeting daily needs, and this added burden undermines their ability to cope with chronic diseases. Economic strain remains a major obstacle to sustaining effective NCD management in low-income settings like Matero.

Community health workers explained that patients frequently choose between attending clinic appointments and earning income for daily survival. This dilemma is common in poor communities and contributes to missed visits. Werfalli et al. (2020) similarly found that socioeconomic pressures often hinder patient engagement with care plans. To address this, health services need to become more flexible, offering outreach programs and support to ease the costs and time involved in attending clinics. Such changes could improve appointment attendance and promote better health outcomes for patients with chronic illnesses.

The study places interest on the urgent need for health policies that address financial and transport barriers causing missed clinic appointments. Healthcare services must become more responsive to patients' realities by improving communication and offering practical support. Policy frameworks should incorporate targeted interventions to help patients overcome these challenges (by Nuti et al, 2015). By reducing missed visits, treatment adherence will improve, ultimately enhancing health outcomes and quality of life for patients living with noncommunicable diseases in Matero.

### **5.3 Impact of Health System Support on Patient Self-Management**

The study revealed that limited health system support significantly weakens patients' ability to manage noncommunicable diseases in Matero. Only a small proportion of health facilities had staff trained specifically in NCD care, and counseling on lifestyle changes was inconsistent. This finding aligns with Mukanu et al. (2017), who identified inadequate health worker training as a major barrier to Zambia's NCD response. Patients expressed a strong need for ongoing guidance and consistent support, which Franklin et al. (2018) confirmed as vital for building patients' confidence and improving self-management of chronic conditions. Without continuous education, patients struggle to maintain control over their illnesses, resulting in poorer health outcomes.

Community health workers reported that workforce shortages and lack of updated training limit their ability to provide ongoing education and counseling. Kisokanth et al. (2015) found that insufficient trained staff in resource-poor settings directly reduces the quality of care offered to patients. Health providers in Matero admitted that many lack the skills needed for comprehensive patient counseling, underlining the urgent need for professional development programs targeting chronic disease management. Strengthening staff capacity would improve patient education and support, ultimately enhancing health outcomes for those living with NCDs.

Patients shared that inconsistent follow-up and counseling left them feeling uncertain and demotivated about managing their diseases. Murphy et al. (2015) showed that inadequate support decreases motivation and medication adherence among patients with diabetes and hypertension. Regular, systematic counseling and monitoring are essential to sustaining lifestyle changes and ensuring patients take medications properly. The lack of such support in Matero limits patients' ability to effectively control their conditions, which worsens disease progression and increases the burden on the healthcare system.

Community health workers highlighted that missed opportunities for early intervention and continuous support contribute to poor disease management. WHO Zambia (2025) emphasizes the importance of strengthening primary healthcare to ensure ongoing NCD management. Improved training and structured follow-up systems would allow health workers to detect complications early and respond promptly, reducing disease severity and improving patient outcomes. These measures are crucial for creating a health system capable of addressing the complex needs of patients with chronic illnesses in Matero.

The findings emphasise the critical need to expand training programs for health workers and ensure regular patient counseling to empower effective self-management. Werfalli et al. (2020) argued that well-trained healthcare providers significantly improve patient adherence and clinical results. Investing in workforce development and establishing support structures is essential for enabling Matero's health workers to provide the comprehensive care patients require. Such investments would strengthen the overall healthcare system's capacity to manage the growing burden of noncommunicable diseases effectively.

#### **4.5.4 Socio-Economic Implications of Inadequate NCD Management**

The study shows that inadequate management of noncommunicable diseases in Matero has serious socio-economic consequences. Delays in diagnosis and missed clinic visits worsen patients' health, limiting their ability to work and increasing financial strain on families. Christian et al. (2025) highlight how poor NCD control disproportionately affects low-income groups in Zambia, trapping many in cycles of illness and poverty. These challenges deepen social inequalities and threaten household stability, making it harder for families to maintain their wellbeing under ongoing health and economic pressures.

Patients reported growing healthcare expenses and income loss linked to poor disease management. This supports Musonda et al.'s (2024) findings on the high economic burden of NCDs in Zambia. When public healthcare fails, families often seek costly private treatment, which pushes them further into poverty. These out-of-pocket costs undermine efforts toward equitable healthcare access and financial protection for vulnerable populations. The rising expenses challenge families' ability to meet daily needs while managing chronic illnesses.

Transport problems and the need to earn daily income add extra barriers to care, as noted by patients and community health workers. Phutane et al. (2024) similarly found that survival priorities limit health service use in resource-poor settings. Such socio-economic pressures reduce patients' ability to attend appointments and adhere to treatment. Overcoming these barriers is critical to improving healthcare access, continuity of care, and health outcomes for those with chronic diseases living in disadvantaged communities like Matero.

Health system weaknesses worsen the socio-economic impact by limiting patient support and continuity of care. Mukanu et al. (2017) observed that Zambia's healthcare system faces shortages

in resources and trained staff, which restricts comprehensive NCD management. Strengthening service delivery and workforce capacity would reduce financial and social burdens on affected families. Better-equipped health facilities and trained personnel can improve patient support, helping prevent complications and lowering the economic strain on households.

The link between poor disease management and economic hardship creates a cycle that traps families in ill health and poverty. Breaking this cycle requires integrated approaches that combine health system improvements with socio-economic support (Musonda et al., 2024). Policies must focus on improving access, affordability, and patient empowerment. Such strategies can help communities like Matero reduce the burden of noncommunicable diseases and improve quality of life by addressing both medical and social challenges.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter summarizes the main conclusions from the study on managing noncommunicable diseases in Matero, Lusaka. It provides practical recommendations for policymakers, health authorities, and stakeholders to address identified challenges. Finally, it outlines areas for future research to enhance understanding and management of NCDs in Zambia and similar settings.

#### 5.1 Conclusion

This study highlights significant challenges in managing noncommunicable diseases (NCDs) in Matero, Lusaka. Key barriers include delayed diagnosis, missed clinic appointments, limited health system support, and socio-economic hardships. These issues undermine patients' ability to adhere to treatment and effectively manage their conditions, leading to worsening health outcomes and increased financial strain on households. Despite existing policies aimed at addressing NCDs, weak implementation, inconsistent funding, and shortages of trained health workers limit progress. The health system's inadequate capacity to provide timely diagnosis, continuous patient education, and support further compounds these problems. Socio-economic factors such as poverty, transport difficulties, and the need to earn daily income significantly affect patient engagement with care. To improve NCD management, a coordinated approach is needed that strengthens healthcare infrastructure, builds workforce capacity, ensures consistent medicine supply, and addresses social determinants. Such a comprehensive response is essential to reduce the burden of NCDs and improve the well-being of affected communities in Matero and similar contexts.

#### 5.2 Recommendations

Based on the study findings, the following recommendations are proposed to improve the management of noncommunicable diseases in Matero:

**Central Government:** The study showed that erratic and delayed funding disrupts district health operations, hindering effective NCD management. The government should ensure timely and predictable allocation of resources to districts, strengthening financial accountability and

preventing service interruptions. Sustained political commitment is vital to support ongoing NCD programs and policy implementation.

**Ministry of Health:** Limited training and inconsistent patient counseling among healthcare workers weakened support for NCD self-management. The Ministry should prioritize capacity building through regular, targeted training on NCD care and patient education. Integrating NCD prevention and management into routine primary health services will improve care quality and patient adherence.

**Implementers and Other Stakeholders:** Socio-economic barriers such as transport difficulties and income needs cause missed clinic appointments. Stakeholders should promote flexible, community-based outreach and support services to ease access challenges. Aligning efforts with national policies and adapting international guidelines to local realities will enhance intervention relevance and sustainability.

### **5.3 Future Research**

Future studies should focus on evaluating the impact of current NCD policies and interventions to identify best practices and areas needing improvement. Research on innovative, scalable models for medicine supply, community health worker involvement, and digital health tools would be valuable. Additionally, exploring the social and economic factors influencing patient adherence and health outcomes will help design integrated strategies that address both health and social determinants of NCDs. Such research should aim to inform policies that are responsive to the realities of low resource settings like Matero and similar communities.

## REFERENCES

- Amos, A. D. (2019). *A Quality Improvement Study on Missed Appointment Management in Primary Care* (Doctoral dissertation, University of Missouri-Saint Louis).
- Christian, A.K., Daniel, E. & Sanuade, O.A. (2025) 'The silent epidemic: unravelling NCD risk clusters and socioeconomic determinants in Zambia', *BMC Public Health*, 25, Article 2535.
- CIDRZ (2022) '*CIDRZ hands over the first ever Zambia National Non-Communicable Diseases and Injuries (NCDIs) Poverty Commission Report to MoH*', *CIDRZ News Report*, 1 July.
- CIDRZ (2023) '*Zambia PEN-Plus Program Non-Communicable Diseases (NCD) Clinics at Matero and Mwachisompola First Level Hospitals officially opened*', *Centre for Infectious Disease Research in Zambia (CIDRZ) News Report*, 6 April.
- Creswell, J.W. & Plano Clark, V.L. (2011) *Designing and conducting mixed methods research*, 2nd edn., Sage Publications.
- Franklin, M., Lewis, S., Willis, K., Bourke-Taylor, H., & Smith, L. (2018). Patients' and healthcare professionals' perceptions of self-management support interactions: systematic review and qualitative synthesis. *Chronic illness*, 14(2), 79-103.
- Johnson, R.B. & Christensen, L. (2020) *Educational research: quantitative, qualitative, and mixed approaches*, 6th edn., SAGE Publications.
- Journal of Health, Population and Nutrition (2024) 'A comparative systematic review of risk factors, prevalence, and challenges contributing to non-communicable diseases in South Asia, Africa, and Caribbeans', *Journal of Health, Population and Nutrition*, 43, Article 140.
- Junod Perron, N., Dominicé Dao, M., Kossovsky, M. P., Miserez, V., Chuard, C., Calmy, A., & Gaspoz, J. M. (2010). Reduction of missed appointments at an urban primary care clinic: a randomised controlled study. *BMC family practice*, 11(1), 79.
- Kasujja, F. X., Nuwaha, F., Daivadanam, M., Kiguli, J., Etajak, S., & Mayega, R. W. (2021). Understanding the diagnostic delays and pathways for diabetes in eastern Uganda: a qualitative study. *PLoS One*, 16(4), e0250421.

Kim, Y., & Radoias, V. (2018). Screening, diagnosis, and long-term health outcomes in developing countries—The case of hypertension. *PLoS One*, *13*(12), e0208466.

Kisokanth, G., Prathapan, S., Indrakumar, J., & Joseph, J. (2015). Does Nurse Case Management Improve the Health Care Outcomes of Patients with Non-Communicable Diseases (NCDs)!-A Narrative Review.

Mukanu, M.M., Zulu, J.M., Mweemba, C. & Mutale, W. (2017) ‘Responding to non-communicable diseases in Zambia: a policy analysis’, *Health Research Policy and Systems*, *15*, Article 34.

Murphy, K., Chuma, T., Mathews, C., Steyn, K., & Levitt, N. (2015). A qualitative study of the experiences of care and motivation for effective self-management among diabetic and hypertensive patients attending public sector primary health care services in South Africa. *BMC health services research*, *15*(1), 303.

Musonda, E., Mumba, P. & Malungo, J.R.S. (2024) ‘Mortality from non-communicable diseases and associated risk factors in Zambia: analysis of the sample vital registration with verbal autopsy 2015/2016’, *BMC Public Health*, *24*, Article 666.

NKOLO, T., Daniel, F., Tatiana, M. O. S. S. U. S., MEVA’A, B. R. C., & ONGTOKONO Ingrid Lovana, N. E. E. (2025). Delays in Medical Care: A Systematic Review of Determinants, Consequences and Interventions. *SAS J Med*, *6*, 616-625.

Nuti, L., Turkcan, A., Lawley, M. A., Zhang, L., Sands, L., & McComb, S. (2015). The impact of interventions on appointment and clinical outcomes for individuals with diabetes: a systematic review. *BMC Health Services Research*, *15*(1), 355.

Pengpid, S. & Peltzer, K. (2020) ‘Prevalence and correlates of multiple non-communicable disease risk factors among adults in Zambia: results of the first national STEPS survey in 2017’, *Pan African Medical Journal*, *37*, Article 265.

Phutane, M. S., Sawant, P. A., Randive, A. P., Hulsurkar, Y. P., Mahajan, U. S., & Kudale, A. M. (2024). Sociocultural aspects of delays in diagnosis among tuberculosis-diabetes comorbid patients in Satara, India: Its implications for the implementation of the national framework for joint tuberculosis-diabetes collaborative activities. *Indian Journal of Tuberculosis*, *71*(3), 250-261.

Sum, G., Koh, G. C. H., Mercer, S. W., Wei, L. Y., Majeed, A., Oldenburg, B., & Lee, J. T. (2020). Patients with more comorbidities have better detection of chronic conditions, but poorer management and control: findings from six middle-income countries. *BMC Public Health*, 20(1), 9.

Tharani, A., Van Hecke, A., Ali, T. S., & Duprez, V. (2021). Factors influencing nurses' provision of self-management support for patients with chronic illnesses: A systematic mixed studies review. *International Journal of Nursing Studies*, 120, 103983.

Werfalli, M., Raubenheimer, P. J., Engel, M., Musekiwa, A., Bobrow, K., Peer, N., ... & Levitt, N. S. (2020). The effectiveness of peer and community health worker-led self-management support programs for improving diabetes health-related outcomes in adults in low-and-middle-income countries: a systematic review. *Systematic reviews*, 9(1), 133.

World Health Organization Zambia (2025) *Country profile: Non-Communicable Diseases and Mental Health — Zambia CCS 2024–2027*. Lusaka: WHO Zambia.