NATIONAL MULTI-SECTORAL STRATEGY AND COSTED ACTION PLAN FOR NON-COMMUNICABLE DISEASE PREVENTION AND CONTROL IN THE GAMBIA

2022 – 2027

MINISTRY OF HEALTH
THE GAMBIA
May 2022

Publication details

Published by: Non-Communicable Disease Programme Unit, Directorate of Health Promotion and Education, Ministry of Health, The Government of The Gambia

With technical support from:

The Defeat-NCD Partnership at the United Nations Institute for Training and Research and the World Bank

Publication date: May 2022

CONTENTS

PREFACE 5
FOREWORD 6
EXECUTIVE SUMMARY 7
CHAPTER 1: INTRODUCTION 13
1.1 Global and Regional Burden of Non-Communicable Diseases 13
1.2 Country Profile 14
1.3 Burden of Non-Communicable Diseases in the Gambia 15
CHAPTER 2: COMMON NCDS IN THE GAMBIA 18
2.1 Hypertension 18
2.2 Stroke 18
2.3 Diabetes Mellitus 19
2.4 Diabetic Retinopathy 20
2.5 Chronic Respiratory Diseases 20
2.6 Cancers 21
2.7 Road Traffic Crashes and Injuries 22
CHAPTER 3: RISK FACTORS FOR NCDS 23
3.1 Obesity and Overweight 23
3.2 Physical inactivity 23
3.3 Unhealthy Diet 24
3.4 Harmful use of Alcohol 24
3.5 Tobacco use 24
3.6 Air Pollution 25
CHAPTER 4: SOCIO-ECONOMIC IMPACT OF NCDS IN THE GAMBIA 26
4.1 Health Financing/NCD funding 26
4.2 Health System Organization 27
4.3 Non-Communicable Disease Service Coverage 28
4.4 Human Resource for Health 29
CHAPTER 5: SWOT ANALYSIS ON NCDS PREVENTION AND CONTROL 30
5.1 NCD Governance and Programming Challenges 32
CHAPTER 6: STRATEGIC PLAN FRAMEWORK 33
6.1 Vision 33
6.2 Mission 33
6.3 Goals 33

6.4 Guiding Principles....33
6.4.1 A Multi-Sectoral Approach....33
6.4.2 A Life-Course Approach....33
6.4.3 A Human Rights Approach....34
6.4.4 An Equity-Based Approach....34
6.4.5 Empowerment of Individuals, Families and Communities....34
6.4.6 An Evidence-Based Approach....35
6.4.7 Integration....35
6.4.8 Universal Health Coverage....35
6.5 Strategic Objectives....35
6.6 Monitoring and Evaluation Framework....48
Objective 2:....48
Objective 3:....49
Objective 4:....50
Objective 5:....51
Objective 6:....51
CHAPTER 7: THE NATIONAL COSTED ACTION PLAN FOR PREVENTION AND CONTROL OF NCD.... 52
Introduction....53
Methodology and Assumptions....51
Cost Estimates....54
Intervention costs by Condition....58
Financing the NCD Action Plan....59
Potential health impact of the plan....62
Summary findings....63
ANNEX.... 64
Annex 1. Detailed implementation plan....64
Annex 2. Coverage assumptions.... 106
Annex 3. Costs by Activity.... 108
REFERENCES.... 115

PREFACE

It is my privilege and honour to preface this flagship National Multi-Sectoral Strategy and Costed Action Plan for Non-Communicable Disease Prevention and Control in The Gambia (2022 - 2027).

As the Head of State, I sign this Strategy, with commitment and conviction to provide all the political and governance support required to achieve the results of this Strategy and its Action Plan, to preserve the health of Gambians and to relieve the suffering of people living with non-communicable diseases.

More than 5,500 Gambians die prematurely every year, due to non-communicable diseases. This does not only directly affects the quality of lives of their families, but also affects our nation and leads to the loss of our people at the peak of their socio-economic productivity. The Global COVID-19 pandemic has posed an extra challenge on our health system and other health systems worldwide, putting non-communicable disease patients at risk of complicated COVID-19 cases, and creating barriers to providing them with the necessary care.

The Gambia was successful in prioritizing and keeping non-communicable diseases high on its agenda, scaling-up its action on non-communicable diseases and progressing towards achieving the Sustainable Development Goal 3.4 and committing to the global call to action in building back better.

I am delighted that the Ministry of Health in collaboration with partners prepared this national multi-sectoral strategic plan to cover 2022 through to 2027. The comprehensiveness of the strategy and costed action plan will enable us to minimize lost lives.

I would like also to acknowledge the valuable support from the Defeat-NCD Partnership and the World Bank leading to the timely achievement of this strategy and its costed action plan.

I urge our Ministry of Finance and relevant development partners to take note of this costed action plan and help The Gambia to achieve our global commitment to the Sustainable Development Goals.

I am sure that effective implementation of this strategy and costed action plan will lead to a healthy and prosperous Gambia by 2030.

Adama Barrow

PRESIDENT, THE REPUBLIC OF THE GAMBIA

Foreword

The Gambia is taking major steps towards universal health coverage, scaling-up its health services and increasing the financial protection of the population, especially the most vulnerable.

The COVID-19 pandemic has challenged our already fragile healthcare system and interrupted the delivery of some essential services. However, it also presented a good opportunity to build a stronger, more resilient healthcare system, with innovative and more resilient service delivery channels that will ensure the continuity of care during emergencies.

While the burden of communicable diseases is becoming increasingly controlled, challenges remain particularly among non-communicable diseases (NCDs) which are major contributors to the physical, mental, and social suffering of the population in The Gambia.

The Ministry of Health, with support from the World Bank and the Defeat-NCD Partnership, developed this first National Multi-sectoral Strategy and Costed Action Plan for NCD Prevention and Control in The Gambia (2022-2027). The development of this strategy and costed action plan was indeed a participatory and collaborative process with contributions from various sectors, including relevant government ministries, national and international development partners, national societies, academia, and the private sector. The comprehensiveness of this plan will enable us to reach our people at all stages of their lives and reduce premature deaths due to NCDs.

I wish to express my profound gratitude to our development partners for their invaluable contributions. The technical and financial support from the Defeat-NCD Partnership, the financial support from the World Bank, in addition to the support from the World Health Organization (WHO) and other partners made the development of this flagship strategy possible.

I wish to invite all partners as we launch this strategy to take the costed action plan to the implementation phase, catalyzing on existing efforts and scaling-up services reaching patients across our nation with the most effective and affordable technologies and required, quality care.

Dr. Ahmadou Lamin Samateh
MINISTER OF HEALTH

EXECUTIVE SUMMARY

The National Multi-Sectoral Strategy and Costed Action Plan for Non-Communicable Diseases (NCDs) Prevention and Control in The Gambia is a five-year roadmap of how The Gambia seeks to address the increasing NCD burden from May 2022 to April 2027. Key documents reviewed included the Global NCD Action Plan, the National Development Plan of The Gambia 2018-2021, the National Health Strategy Plan 2014-2020, the National Health Policy 2021-2030 of The Gambia and The Gambia Health Service Assessment Report. The strategy incorporated learnings from the NCD policy 2012-2016 and aligned with the NCD policy 2021-2030 and the other key national policies and plans.

Therefore, the document combines The Gambia national multi-sectoral strategy for NCDs, with the costed action plan. It also adopted a multi-sectoral approach and outlined the critical stakeholders involved or who should be involved in NCD prevention and control in The Gambia and provided a detail of roles they will play in each intervention and their targets.

This strategy envisions a Gambia free from the avoidable burden of non-communicable diseases. This is in view of NCDs being the leading cause of death, morbidity and disability globally, accounting for more than 71% of global deaths with 77% occurring in low- and- middle-income countries (LMICs). NCDs result from a combination of behavioural, metabolic, environmental and genetic risk factors. Most premature mortalities due to NCDs can be avoided with well-established interventions to target common, modifiable risk factors. These behaviourally modifiable risk factors include physical inactivity, harmful use of alcohol, tobacco use, air pollution and unhealthy diets. Metabolic risk factors include being overweight and obese, raised blood pressure, raised blood glucose and abnormal blood lipids levels.

The Gambia, as in many LMICs, is currently experiencing a double burden of communicable and non-communicable diseases. To add to the challenges, there is limited national capacity to address and respond to both needs. The latest WHO NCD profile indicated that NCDs account for 34% of total annual mortality in The Gambia, with cardiovascular diseases (CVDs) accounting for the highest proportion of NCD-related mortality, followed by cancers, chronic respiratory diseases (CRDs), diabetes and other NCDs accounting for 14%, 4%, 2%, 1% and 12% respectively.

The overarching goal of this plan is to reduce premature deaths from NCDs in The Gambia by one-third by 2027. The guiding principle and the strategic objective are aligned to the WHO recommendations. Hence the action needed to achieve the goal are organised in six strategic objectives.

OBJECTIVE 1: **To raise priorty for NCD prevention and control at national and regional level through strengthened collaboration and advocacy.**

- Strengthen advocacy and strategic engagement of stakeholders for prioritisation of NCDs prevention and control.
- Build strong public private partnerships for NCDs prevention and control.

OBJECTIVE 2: **To strengthen national NCD capacity, leadership, governance, multi-sectoral action and partnerships to accelerate country response for the prevention and control of NCDs.**

- Improve coordination and governance for NCD prevention and control.
- Strengthen national capacity and leadership to accelerate and scale up the national response to the NCD epidemic.

OBJECTIVE 3: **To reduce risk factors for NCDs and underlying social determinants through health-promotion and education.**

- Strengthen tobacco control.
- Promote a healthy diet.
- Promote physical activity.
- Reduce the harmful use of alcohol.
- Reduce air pollution.
- Support vaccination against vaccine preventable diseases and early management of infections leading to NCDs.
- Promote road safety for the prevention of injuries and disabilities.

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

- Expand quality NCD service delivery.
- Improve human resources capacity for early detection, management and care of NCDs.
- Strengthen the supply chain of NCD medications, laboratory commodities and technologies/ medical equipment.
- Establish specialized NCD diagnostic and treatment centres, including injuries and disabilities.
- Enhance innovative financing of NCD prevention and control.

OBJECTIVE 5: **To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.**

- Strengthen national capacity for research in NCDs.

OBJECTIVE 6: **To monitor NCDs and their determinants to effectively evaluate progress at national and regional levels.**

- Strengthen surveillance and monitoring and evaluation (M&E) for improved data quality and decision making.

Within each of these objectives are expected outputs, including indicators and measures to be tracked. Efforts over the next five years will ensure quality NCD services reaching at least 50% of the people who need them, with continuous availability of affordable NCD supplies and technologies. Achieving this will require a shift in financing. National budget allocation to health, although increased, is limited and not delineated for NCDs prevention and control. This plan details alternative approaches such that every Gambian dalasi (GMD) invested in NCD care brings cost savings, direct and indirect, many times higher.

The costed action plan outlines the resources needed to achieve the defined objectives, and a total budget of GMD 3.01 billion (USD 57.8 million) is required for the full scale up implementation of the plan (2022-2027). To fund the activities in the strategy, there is a need to set priorities. This has to happen within budget allocations across government sectors, by developing a list of cost-effective priority activities within this strategy, as well as bringing in new funders and funding innovations. This will require close collaboration among different players, including government departments, the private sector, local communities, and development partners. While this strategic document and costed action plan is meant to provide guidance, clarity of purpose and national alignment as we respond to NCDs, it does not imply that the strategy is frozen for the next five years. As a result, we expect that this strategy will evolve during its five-year lifespan, as new facts and evidence come to light and new contexts emerge, especially assessments and research that will be conducted.

The costed action plan outlines how The Gambia, with GMD 3.01 billion over the next five years, will improve prevention, screening, diagnosis, and treatment of NCDs, while equally strengthening health advocacies, building capacities of healthcare workers and increasing awareness of the general population on risk reduction for NCDs. Therefore, GMD 442 million will be needed for treating cardiovascular disease, GMD 592 million for diabetes, GMD 426.4 million to treat cancers, GMD 286 million for respiratory diseases and GMD 108.3 million for injuries.

Investing now in prevention will lead to savings in the future, money that would otherwise have to be spent on treating Gambians in advanced stages of cancer, diabetes, and cardiovascular disease.

LIST OF PARTNERS (ALPHABETICAL)

Civil Society Organizations

Defeat NCD partnership at United Nations Institute of Training and Research

Medical Research Centre Unit, The Gambia at London School of Hygiene and Tropical Medicine (MRC@LSHTM)

Ministry of Basic and Secondary Education

Ministry of Environment

Ministry of Finance and Economic Affairs

Ministry of Foreign Affairs, International Cooperation and Gambians Abroad

Ministry of Health

Ministry of Higher Education, Research, Science and Technology

Ministry of Information and Communication Infrastructure

Ministry of Interior

Ministry of Local Government, Lands and Religious Affairs

Ministry of Trade, Employment and Regional Integration

Ministry of Women, Children and Social Welfare

Ministry of Works, Transport, and Infrastructure

Ministry of Youth and Sport

National Assembly

National Nutrition Agency

Office of the President

Private Sectors

Special Olympic Gambia

University of The Gambia (UTG)

World Bank

World Health Organization

LIST OF ACRONYMS

COPD	Chronic obstructive pulmonary diseases
CRD	Chronic respiratory disease
CSO	Civil society Organization
CVDs	Cardiovascular diseases
DALYs	Disability-adjusted life years
DHIS	District Health Information System
DNCD	Defeat NCD Partnership
EMR	Electronic Medical Record
EPI	Expanded programme on immunization
GDHS	Gambia demographic health survey
GDP	Gross domestic product
HMIS	Health Management Information System
HPV	Human papilloma virus
HRH	Human resource for health
ICER	Incremental cost effectiveness ratio
IDA	International Development Assistance
IHRIS	Integrated Human Resource Information System
IMNCI	Integrated management of new-born and childhood illness
LMICs	Low- and middle-income countries
MDA	Ministries Department and Agencies
MICS	Multiple Indicator Cluster Survey
MNS	Mental and neurological health and substance abuse
MOH	Ministry of Health
MTWG	Multi-sectoral Technical Working Group
NHA	National Health Accounts
NCD	Non-communicable diseases
NCR	National Cancer Registry
NHA	National Health Accounts
NCD	Non-communicable diseases
NCR	National Cancer Registry
OOPE	Out of pocket expenditure
OP	office of the President
OPD	Outpatient department
RTA	Road traffic accident
SBCC	Social and behavioural change communication
SDG	Sustawinable Development Goal
SSA	Sub-Saharan Africa
SSB	Sugar sweetened beverages
TB	Tuberculosis
THE	Total health expenditure
TWG	Technical working group
UHC	Universal health coverage
WB	World Bank
WHO	World health organization
WHO-PEN	WHO Package of Essential non-communicable disease Interventions

CHAPTER 1: INTRODUCTION

1.1 Global and Regional Burden of Non- Communicable Diseases

Non-Communicable Diseases (NCDs) are the leading cause of death, morbidity, and disability globally, accounting for more than 71% of global deaths with 77% occurring in low- and middle-income countries (LMICs) (WHO, 2021). The burden varies by disease areas. For example, the number of people living with diabetes globally has increased by 62% over the last 10 years. The number of adults between the ages of 20 and 79 years living with diabetes was 463 million in 2019 and is expected to increase to 700 million by 2045 (Saeedi et al., 2019).There are also disparities in the prevalence of hypertension between high-income and low- and middle-income countries which is further magnified by disparities in awareness, treatment and control rates (Bloch, 2016). Cardiovascular diseases, cancer, diabetes, and respiratory diseases account for over 80% of all premature mortality associated with NCDs (WHO, 2021).

NCDs result from a combination of behavioural, metabolic, environmental, and genetic risk factors. Most premature mortalities due to NCDs can be avoided with well-established interventions to target common, modifiable risk factors. These behaviourally modifiable risk factors include physical inactivity, harmful use of alcohol, tobacco use and unhealthy diets. Metabolic risk factors include being overweight and obese, raised blood pressure, raised blood glucose and abnormal blood lipids levels (WHO, 2021).

The burden of NCDs is not only epidemiological, but also economic, social, and psychosocial. It comes at a huge cost for individuals, households, and entire societies. NCDs are a challenge to sustainable development and can hinder the attainment of the United Nations Sustainable Development Goals (UN SDGs) (Pullar et al., 2018, Clark, 2013). NCDs pose an increasing challenge for health systems, individuals, and families in sub-Saharan Africa. Total disability-adjusted life years (DALYs) due to NCDs increased by 67% between 1990 and 2017 in the region (Gouda et al., 2019).

Most NCDs are largely preventable but require multi-sectoral efforts from all stakeholders to address the underlying socioeconomic determinants, behavioural, environmental, and other risk factors. Such efforts need to be based on strategic, long-term, well-executed action plans, as well as population-based cost-effective interventions, to reduce the impact of NCDs on society. Oral, ear and eye health, mental health, and injuries from road accidents and other physical harm, are additional NCDs prioritised in many countries.

NCD-related mortality can be reversed through primary prevention, early detection, and provision of quality care. For example, a 2017 report on monitoring NCD commitments in Europe shows a rapid decline in premature deaths related to NCDs. The region is likely to achieve and exceed SDG target 3.4 [WHO, 2017]. WHO estimates that up to 80% of premature heart disease, stroke and diabetes could be prevented with the right interventions [WHO, 2005].

People with NCDs often suffer from two or more conditions, such as diabetes and hypertension, which are closely linked. NCDs are also interconnected to, and interact with, communicable diseases. Health systems must therefore increasingly manage patients living with NCDs as well as communicable diseases. Infectious respiratory diseases like tuberculosis (TB) weaken the lungs and expose patients to a greater risk of developing chronic respiratory diseases (CRDs) such as chronic obstructive pulmonary disease (COPD) and asthma (Oni and Unwin, 2015).

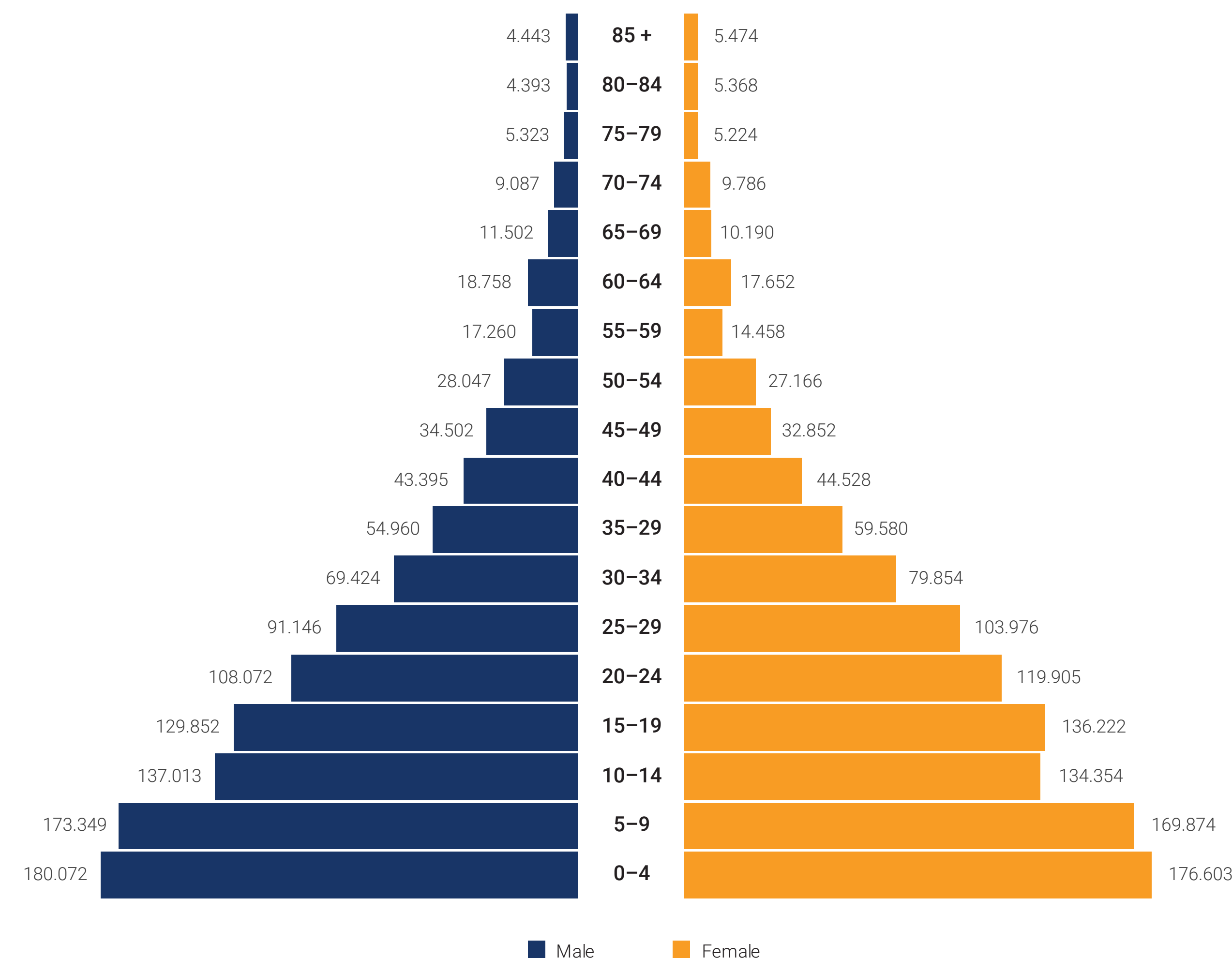
Interestingly, every NCD has an eye and/or sight-related manifestation. These eye manifestations are specific for different NCDs with the most common manifestation being visual impairment (VI) (Hydara et al.,2021). Over 75% of visual impairment is due to cataract and uncorrected refractive error (IAPB, 2017). Almost 90% of the world's visually impaired live in LMICs. By the year 2050, it is estimated that 50% of the world's population will have myopia with over 70 million people at risk of vision loss from diabetic retinopathy by the year 2040 (IAPB, 2017). The eyes also have cancers with retinoblastoma being the commonest intraocular cancer in children. It is also one of the most curable cancers that unfortunately claims so many lives in LMICs.

1.2 Country Profile

The Gambia has a population estimated at 2.35 million, with the majority being young people (figure 1). The annual population growth rate is estimated at 3% (HMIS, 2019). The country is experiencing increasing urbanisation with 60% of the population now living in urban areas (HMIS, 2019). Nationally, the total fertility rate has modestly decreased from 5.4 to 4.4 between 2013 and 2018 (GBOS 2014, GBOS,2019). Life expectancy has steadily increased over the years as life expectancy and healthy life expectancy at birth are 61.9 and 54.4 years respectively.

The literacy rate in The Gambia is very low and the poverty rate is high which are both closely associated with an increasing incidence of non-communicable diseases (NCDs). The Gambia is ranked 172nd out of 189 countries in the United Nation's Human Development Index 2020 (UNDP, 2020). The integrated household survey of 2016 revealed that 48.6% of Gambians live on less than 1.25 USD/day and 37% under 1 USD/day (GBoS, 2017). The poverty rate is higher in rural areas. The inflation rate is high, reported as 7.7% in May 2021 by The Gambian Central Bank. The high inflation rate is not only a strong driver for increases in food prices but also contributes to the high poverty rate.

Figure 1: Population Pyramid of The Gambia



HMIS 2019

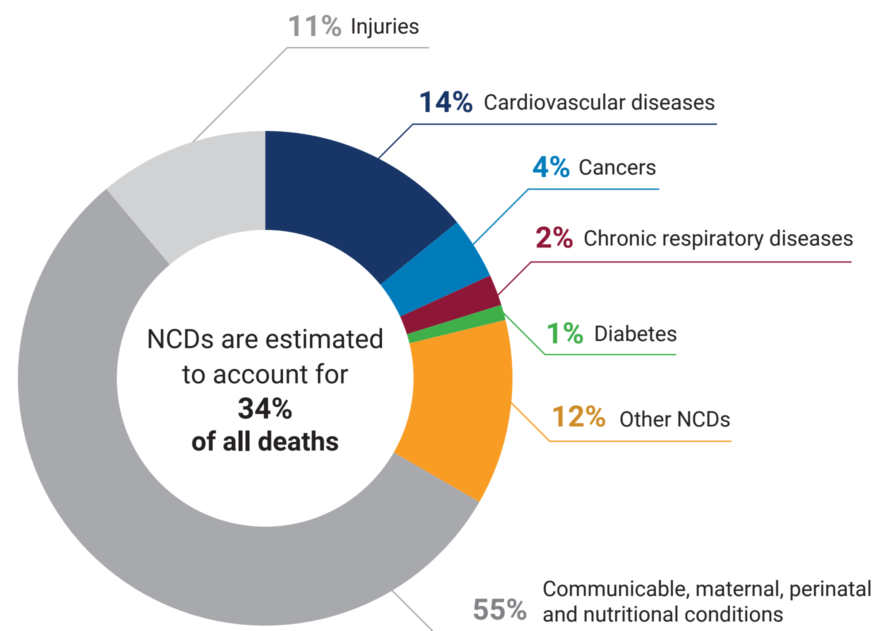
1.3 Burden of Non-Communicable Diseases in the Gambia

The Gambia, as in many LMICs, is currently experiencing a double burden of communicable and non-communicable diseases. To add to the challenges, there is limited national capacity to address and respond to both needs (Omeleke, 2013). The latest WHO NCD profile indicated that NCDs accounts for 34% of total annual mortality in The Gambia, with CVDs accounting for the highest proportion of NCD-related mortality, followed by cancers, CRDs, diabetes and other NCDs accounting for 14%, 4%, 2%, 1% and 12% respectively (figure 2).

Risk factors for NCDs are high with the prevalence of hypertension at 29% (27.7% in males vs 30.5% in females), obesity at 15% (8% in males and 17% in females) and smoking at 16.7% (31% in males vs 1% in females) (Cham et al., 2018, Cham et al., 2020b, Cham et al., 2019). Over 90% of Gambians

aged between 25 and 64 years have one or more NCD risk factors, implying that the burden of NCDs is expected to increase (Cham et al., 2020a).

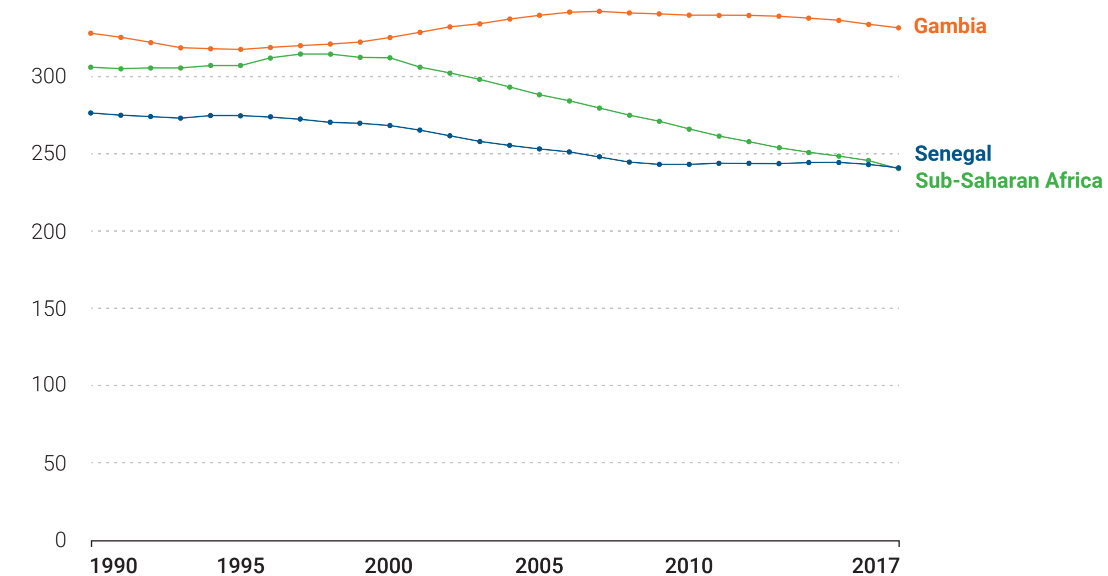
Figure 2: Gambia NCD profile – WHO 2018



A verbal autopsy conducted from 1998 to 2007 has revealed high rates of NCD-related deaths in The Gambia (Jasseh et al., 2014). This may suggest an inadequate capacity to diagnose and manage NCDs compared with communicable diseases. Data from the 2010 STEP survey has also indicated that up to 79% of hypertensive cases were not diagnosed in The Gambia (Cham et al., 2018).

With paucity of data on NCDs in The Gambia, a review of national health services delivery report of 2019 revealed that NCDs accounted for 12% of all outpatient consultations with CVDs, diabetes, and asthma accounting for 33.7%, 13.9% and 6.3% respectively (HMIS 2019).

Figure 3: Mortality from cardiovascular diseases, 1990 to 2017

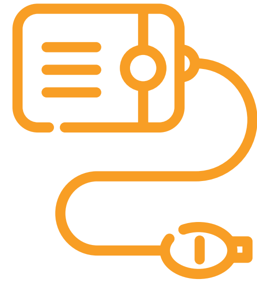


Source: IHME, Global Burden of Disease (GBD)
Note: To allow comparisons between countries and over time this metric is age-standardized.

OurWorldInData.org/causes-of-death

The Gambia conducted three population-based national eye health surveys in 1986, 1996 and 2019 (Hydara et al., 2021) and key findings suggest the common eye-related NCDs are: uncorrected refractive errors, glaucoma, diabetic retinopathy, age-related macular degeneration, allergic keratoconjunctivitis and retinoblastoma. Hence, a nationally coordinated multi-sectoral strategy for NCD-related eye conditions is necessary.

CHAPTER 2: COMMON NCDS IN THE GAMBIA



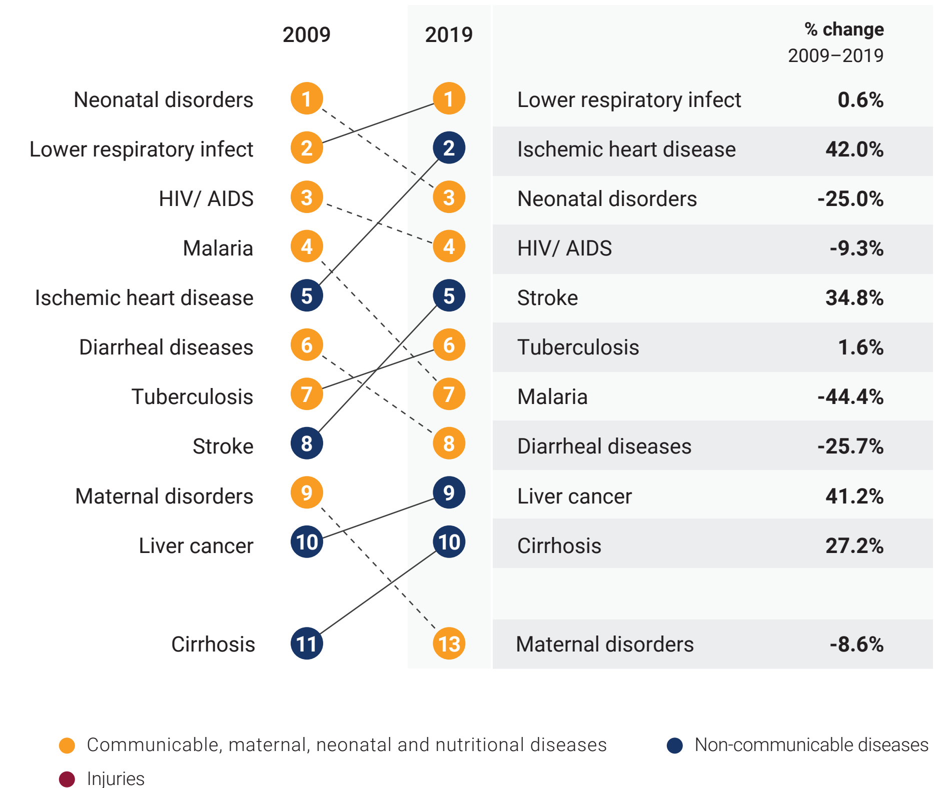
2.1 Hypertension

A systematic review of the risk factors for CVDs in The Gambia identified hypertension prevalence at between 18.3% and 29% (Koller & Agyemang, 2020). Corroborating with findings of the above study, the STEP survey in The Gambia revealed a high prevalence of hypertension (29%) which is higher in rural areas compared with urban areas. The higher prevalence of hypertension in rural areas could be associated with poverty and a lower level of education (Cham et al., 2018).

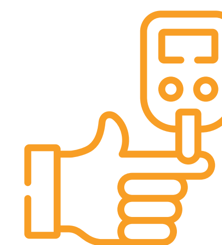
2.2 Stroke

In sub-Saharan Africa (SSA), the prevalence of strokes is generally low compared to high income countries (Connor et al., 2007). However, this should be interpreted with caution considering the high prevalence of hypertension in SSA. The low prevalence of strokes in SSA could be because of under reporting. Recent literature has indicated that strokes have moved from being the third most frequent cause of death among adults aged 60 years and above between 1998 and 2001 to being the leading cause of death between 2005 and 2007 (Jasseh et al., 2014). In 2019, the Institute of Health Metrics and Evaluation indicated that strokes were the eighth cause of death in 2009 but became the fifth cause of mortality in The Gambia in 2019 (figure 4). A prospective study of stroke presentation and outcome in The Gambia revealed that persons with mild forms of stroke do not present at health facilities, hence cases presenting at the health facilities are usually severe and associated with higher mortality (Garbusinski et al., 2005).

FIGURE 4: Trends in the major causes of mortality in The Gambia, 2009 to 2019



(Accessed on 5 October 2021 from http://www.healthdata.org/gambia*)*



2.3 Diabetes Mellitus

Diabetes is a major global public health problem, which causes complications that impact on the lives and wellbeing of people. There is limited published evidence on the prevalence of diabetes in The Gambia, but anecdotal evidence suggests that diabetes has been increasing steadily in the country. Koller and Agyemang, 2020, in a systematic review of the prevalence of cardiovascular disease risk factors in The Gambia, revealed a varied prevalence for diabetes. For example, a hospital-based study indicated a diabetes prevalence of 0.3% (van der Sande et al., 1997) and a study among people over the age of 35 years indicated a higher prevalence of 7.9% among urban males (2.2% in rural males) and 8.7% among urban women (0.8% in rural women) (van der Sande et al., 2000). There was an increasing prevalence of diabetes and cardiovascular diseases between 2008 and 2013 (Omoleke, 2013). The Gambia Micro Nutrition Survey in 2018 revealed the prevalence of hyperglycaemia among non-pregnant women to be 7.4% (NaNA, 2019). A recent study suggested a higher prevalence of 8.1%, with the estimated

prevalence of elevated blood glucose of 54.5% suggesting a larger pool of pre-diabetics at risk of developing diabetes (Petry et al., 2021).

The Gambia Demographic Health Survey 2019-2020 suggests that only 21% of males and 25% of females (aged between 15 and 59 years) had ever had their blood glucose measured by a healthcare worker with the majority of the tests occurring in the 12 months before the survey.

Diabetes complications are observed in clinical settings mainly due to late diagnosis, poor glucose control and unhealthy behaviour. The most common complications affect the nerves, eyes and kidneys, as well as macrovascular complications including strokes and heart disease. In The Gambia, diabetes accounted for 5.2% of hospital admissions in 1992 (Rolfe et al., 1992) and 13.94% of all NCDs admissions in 2019 (HMIS, 2019).

2.4 Diabetic Retinopathy

Diabetic retinopathy (DR) occurs in persons with long-standing diabetes, especially when the diabetes is poorly controlled. Early diagnosis can be accomplished through relatively inexpensive blood testing. However, access to this service is not widely available. DR is the leading cause of blindness in the working-age group (25-65 years) (IAPB, 2017). Anti-vascular endothelial growth factor (VEGF) agents and lasers can reduce the progression of the disease and preserve visual function. To mitigate the development of DR, a coordinated synergy between specialists is required to refer all diabetics for eye screening to identify DR in order to address eye complications and prevent blindness.

2.5 Chronic Respiratory Diseases

Chronic respiratory diseases (CRDs) include bronchial asthma, chronic pulmonary diseases, such as chronic obstructive pulmonary diseases (COPD), occupational lung diseases and chronic interstitial lung diseases. Available literature has suggested that the prevalence of asthma is low in The Gambia despite the relatively high prevalence of positive skin prick tests to aeroallergens (Walraven, et al., 2001). However, the 2019 Health Service Statistics Report revealed that asthma accounted for 6.3% of all NCDs admissions (HMIS, 2019). Due to paucity of data, the actual burden of other CRDs in The Gambia is not known.

2.6 Cancers

The actual prevalence of cancers in The Gambia is not known as the country only has one National Cancer Registry (NCR). However, a study providing a 10-year overview of cancers in The Gambia using data from The Gambia National Cancer Registry revealed an increasing number of cancer registration from the reported 275 per year in 1988 to 480 by 1997. However, it was noted that this increase coincided with the modification of registration, with permanent posting of registry personnel to all hospitals (Bah et al., 2001). This suggests that cancer incidence and death could have been under-reported in the past. Liver and cervical cancers were reported as the most common cancers among males and females respectively (Bah et al., 2001). Data from The Gambia cancer profile on the International Agency for Research on Cancer suggests a total of 1,035 new cancer cases in 2020, with cervical cancer accounting for the highest percentage at 27.6% followed by liver cancer at 24.5% (WHO, 2021b). Interestingly, the prevalence of both cancers can be reduced by vaccination, early detection and treatment of the infectious disease that contributes to their incidence. The 2019 Health Management Information System (HMIS) report revealed that cervical cancer accounted for more outpatient department (OPD) consultations while liver cancer accounted for more hospital admissions among cancers such as breast cancer, etc.

Cervical cancer is the most common cancer among females and the leading cause of death from cancer for women in The Gambia. A study conducted in the country reported a prevalence of 13% for cervical human papillomavirus (HPV) infection whilst 7% of its subjects had squamous intraepithelial lesions (Wall et al., 2005). Though data is quite limited, the facility-based report shows that significant numbers of women are infected with HPV. The majority of cases of cervical cancer in The Gambia were detected in advanced or terminal stages of the disease. This phenomenon is believed to account for the relatively low 5-year survival rate of around 20% of those registered for such a preventable cancer in The Gambia and elsewhere in sub-Saharan Africa (Sankaranarayanan et al., 2010).

Despite the challenges, the prospect of effective control and elimination of cervical cancer in The Gambia is now possible with the availability of an effective HPV vaccine that has been integrated into the country's national Expanded Programme on Immunization (EPI). In 2014, The Gambia piloted HPV vaccination among girls aged between 9 and 13 years. By 2019, the programme had achieved 83% coverage with an annual target of 34,000 girls in addition to those receiving the second dose.

The advent of COVID-19 has impacted negatively on the coverage of HPV vaccination due to initial movement restrictions and school closures. Currently, the myths and misconceptions around the COVID 19 vaccine have significantly increased the HPV vaccine rejection rate.

2.7 Road Traffic Crashes and Injuries

The Global Status Report on Road Safety 2015 pegged The Gambia's road traffic mortality rate at 29.4/100,000 population in 2013 (WHO, 2018). The report further ranked The Gambia 36th out of 47 countries with the highest mortality rate in the WHO African Region.

Road traffic crashes and injuries in The Gambia are on the increase. A 10-year analysis of road traffic rates in The Gambia (2007-2017) revealed a 16.85% increase from 27 per 100,000 population (2007) to 43.85 per 100,000 population (2017) (Kandeh et al., 2020). Furthermore, the National Health Management Information System data from 2018 and 2019 indicated an increase of 11% and 7% in outpatient attendance and admissions for injuries from road traffic crashes respectively (HMIS 2019).

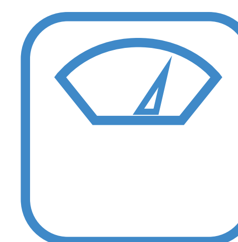
A study on risk factors for road traffic injuries among road users has indicated a high proportion of injuries occurred among young people and pedestrians (Sanyang et al., 2017).

CHAPTER 3: RISK FACTORS FOR NCDS

Globally, the risk factors for NCDs include the harmful use of alcohol, an unhealthy diet, tobacco use, physical inactivity, air pollution and obesity (table 1). Other risk factors associated with NCDs include the human papilloma virus, hepatitis and sickle cell disease.

TABLE 1: NCDs and their common risk factors.

NCDs	Causative Risk Factors				
	Tobacco Use	Unhealthy Diet	Physical Inactivity	Harmful use of Alcohol	Indoor Air Pollution
Heart Disease & Stroke	√	√	√	√	√
Diabetes	√	√	√	√	
Cancer	√	√	√	√	√
Chronic Lung Disease	√				√



3.1 Obesity and Overweight

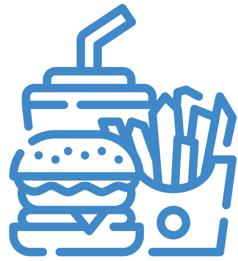
Research has shown that a high proportion of Gambians are overweight or obese (40.2%) (Cham et al, 2020a). The prevalence of obesity is 8% among men and 17% among women (Cham et al., 2020b). Apart from being more common among women, obesity is most prevalent among people between the ages of 55 and 64 years. People in this age group are more likely to have sedentary lifestyles which increases the risk of NCDs. The 2018 Gambia Micronutrient Survey (GMNS) also revealed that obesity among non-pregnant women in The Gambia was associated with hyperglycaemia and that 15% of overweight and 20% of obese women suffer from hypertension compared to normal weight (6%) and underweight women (3%).

3.2 Physical inactivity

The 2010 NCD risk factors STEP survey conducted in The Gambia revealed that 59.2%, 22.6% and 18.2% of the population engage in high, moderate, and low levels of physical activity respectively. However, this rating focused mainly on work and transport related physical activity. Leisure time physical activity was low. Higher level physical activity was reported to be more

among the younger population, and males (64.3%) are more physically active than their female counterparts (54.4%).

In an effort to promote and enhance physical activity in The Gambia, several national and regional activities have been organised in the form of Sport for Health, walk4Health and Marathon competitions. Banjul Marathon and Walk4Health which both started in 2017 are still on-going both at national and regional levels. These events have and continue to provide a platform for people to engage more in physical activities.



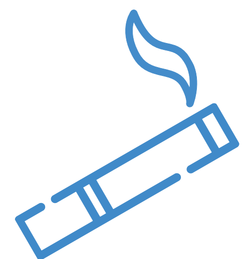
3.3 Unhealthy Diet

Using the WHO minimum recommended standard for fruits and vegetables intake, only a few Gambians met the established criteria with 77.6% of the population consuming less than five combined servings of fruits and vegetables (Cham et al., 2020a). Furthermore, salt intake among rural and urban Gambian women is above the WHO-recommended not greater than 5 g/day (Dalzell et al., 2018). Consumption of food additives that contain high amounts of sodium is reported be high.

3.4 Harmful use of Alcohol

Generally, the harmful use of alcohol is quite low in The Gambia, estimated at 0.8% and 0.1% among males and females respectively. Lifetime abstainers of alcohol consumption is estimated at 97.4% among Gambians aged between 25 and 64 years (WHO, 2016).

Although there is no alcohol use policy in The Gambia, alcohol taxation is high. However, locally produced traditional alcohol is affordable and accessible to a large majority of The Gambian population. There is no evidence that locally produced alcohol is being consumed at a harmful rate. If consumption of locally brewed alcohol cannot be adequately estimated, it could pose a challenge for alcohol control in the country. Sensitisation efforts on the harmful use of alcohol should be continued



3.5 Tobacco use

The prevalence of tobacco smoking in The Gambia is estimated at 15.6%. It is higher among men (31.3%) than among women (1%) (Cham et al., 2019). Tobacco use among young people in The Gambia (measured as having ever smoked) is 16.7% among students between the ages of 12 and 20 years. The prevalence of tobacco smoking among boys was 25.7% compared to 9.4% of girls while the prevalence of ever having smoked shisha was 8.1% (Jallow et al., 2017). The 2017 Global Youth Tobacco Survey revealed that ever having smoked among the 13 to 15 years age-group in The Gambia is 9.2% (15.9% and 4.2% among boys and girls respectively). The report further uncovered that up to 10.5% also used tobacco products other than cigarettes (Centers for Disease Control and Prevention, 2017). Exposure to tobacco smoke among adults between the ages of 15 and 64 years was high, estimated at 66.1%, again higher among men (79.9%) than among women (58.7%) (Cham et al., 2021). Of great concern is the increasing use of a local tobacco product called "tabaa", especially among females, poses a challenge to tobacco control efforts and invariably NCDs.

The Gambia has a Tobacco Control Act with a strong regulatory mechanism, supported by a functional multi sectoral coordination system. Through these arrangements, the Ministry of Health (MoH), in collaboration with stakeholders, is enforcing the provisions of the Act and the WHO Framework Convention on Tobacco Control (FCTC). Now, minors under the age of 18 years cannot be sold cigarettes. These interventions from the Tobacco Control Act are paying dividends as compliance is gradually increasing. With a change in the taxation regime, revenue generated from tobacco taxes has increased considerably from GMD 155 million in 2012 to GMD 470 million in 2017 (GRA, 2018). Despite the increase in tobacco tax revenue, there is still limited funding for tobacco control programmes and interventions as there is no tobacco levy allocated to tobacco control implementation.

3.6 Air Pollution

Exposure to household air pollution from the burning of solid fuels for cooking is the cause of approximately 5% of the global disease burden (Smith et al., 2014). Many of the world's poorest people do not have access to cleaner fuels, such as gas or electricity. They often cook on open fires in poorly ventilated homes (Havens et al., 2015). This exposes those who are cooking on the fire, usually women and their young children, to high levels of indoor air pollution higher than internationally recommended safe levels and often for extended periods of time (Havens et al., 2015).

Current epidemiological evidence suggests that indoor air pollution from the use of solid fuel contributes to the global burden of morbidity and mortality, such as COPD, accounting for about 1.6 million of the 59 million annual deaths (Rylance et al., 2010). In low-income countries, use of solid fuel is now considered the top most risk factor for ill health (Quansah et al., 2015).

In The Gambia, the Demographic Health Survey (GDHS) 2019-2020 reports that 7% of households cook inside the house, and 85% use solid fuel for cooking with only 6% of households using clean fuel for cooking (GBOS, 2021).

CHAPTER 4: SOCIO-ECONOMIC IMPACT OF NCDS IN THE GAMBIA

The impact of NCDs goes beyond individuals, families, communities and health systems. Global economic analysis suggests that a 10% increase in NCDs is associated with a 0.5% decline in annual economic growth (WHO, 2010). Even with limited data, it has been suggested that there is a strong negative correlation between socio-economic status and hypertension in The Gambia as people from poorer regions have a higher predisposition to the condition (Cham et al., 2018). Though prevention and control of NCDs is globally prioritised in the Sustainable Development Goals (SDGs), it remains grossly underfunded, particularly in The Gambia. NCDs also receive less than 3% of global development assistance (Nugent and Feigl, 2010).

4.1 Health Financing/NCD funding

Even with the increasing budgetary allocation for the health sector over the years, The Gambia's health sector is considerably underfunded and largely donor funded for the sector as a whole. External funding per total health expenditure accounted for 28.8% in 2016 (NHA, 2016) and 45.5% in 2017 (NHA, 2017). Government health expenditure as a percentage of the Total Health Expenditure (THE) was 32.8% in 2015, 38.6% in 2016 and 30.7% in 2017.

By contrast, the largest share of NCD expenditures is borne by Household Out-of-Pocket Expenditure (OOPE), which has increased steadily from 21.2% in 2013 to 45.85 % in 2017. Although the total NCD expenditure as a percentage of the total health expenditure increased from 5.5% in 2016 to 8.2% in 2017, government expenditure on NCDs reduced by almost 10%. The NHA 2017 suggested the total expenditure on NCDs, excluding mental health services, as a percentage of THE in 2017 stood at 27.93%, 45.85%, 0.85%, 8.24% and 17.13% for government, out-of-pocket, private insurance, donors, and employers respectively (NHA, 2017). The high OOPE, coupled with the high rate of poverty in the country, implies that poorer households are very likely to face catastrophic health expenditures. Unless the national health insurance scheme in development provides a robust cover for NCDs, financial protection for the most vulnerable households may be elusive.

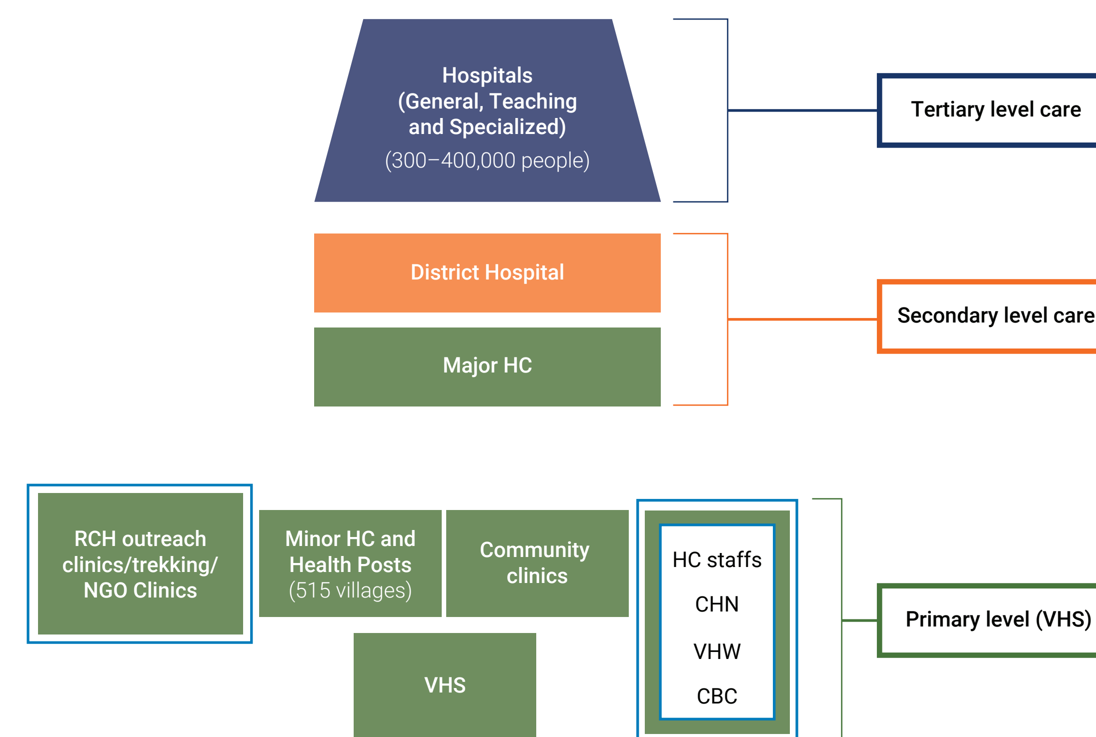
There is no delineated budget line for NCDs prevention and control and without it NCDs prevention and control efforts in The Gambia will be extremely constrained. Additionally, some of the essential medicines for NCDs are not in the Essential Medicines List of the country, thus not procured. This affects availability of and access to NCD medicines.

Structurally, mental health is a separate technical and stand-alone programme not within the NCD Programme in The Gambia. These parallel programmes hinder implementing a comprehensive approach to NCD programming, prevention and control.

4.2 Health System Organization

The Gambian health system is based on a strong Primary Health Care concept dating back to 1980 and operates a three-tier system consisting of primary, secondary and tertiary levels. The primary level is village health services (VHS), which consists of village health posts, village clinics and reproductive health outreach clinics. The secondary level consists of minor and major health centres and district hospitals, while the tertiary level is comprised mainly of hospitals (general, specialized and teaching hospitals) as detailed in figure 5. The public health system is complimented by a network of private health facilities across the country consisting of non-governmental organizations (NGOs), private for profit and faith-based health facilities.

FIGURE 5: Structure of The Gambian Health System



The Health Service Assessment report of 2019 acknowledged that "the decentralization of healthcare is weak, and that the delegation of authority is more of a "push" system" where allocation to facilities is based on what is received from the centre rather than specific requisition (HMIS, 2019). This system impacts on the quality of both general and specific services provided at facility level. Hence, health services utilization is low with a shortage of health facilities, core healthcare workers, medicines, and equipment. Although 40% of the population resides in rural areas, where access to healthcare is mainly from primary or secondary level facilities, coverage in rural areas is low with an average coverage of 40% nationally. Only 20% of health funding is allocated to these facilities (NHA, 2015, NHSSP, 2021-2025).

The Health Service Assessment report of 2019 graded The Gambia's general service availability index (average infrastructure, workforce and service utilization score) at 28.6% with variations across the different levels of healthcare. The overall availability of specific health service delivery is 59% with only diabetes and hypertension among the NCDs that ranked near overall average. The availability of services was moderate for diabetes (69%) and CVDs (71%), but low for CRDs (49%) and cervical cancer (14%).

4.3 Non-Communicable Disease Service Coverage

Generally, NCD service delivery within The Gambian health system is uncoordinated and unstructured. Screening activities for diabetes and hypertension are currently being provided at the primary healthcare level as part of the routine health service. Services are not standardized and often not captured in the routine data collection tools. This has affected tracking of NCDs risk factors and overall NCDs prevention and control.

At the primary care level, basic NCDs screening interventions, such as blood sugar estimation and blood pressure monitoring, are conducted. However, other services, such as cancer screening, involving visual inspections of the cervix, are seldom available at the secondary level. Patients needing such services are referred to the tertiary level. Referrals of cases are made across the different levels of healthcare and when diagnosis is made and documented at a higher level, the individual can be monitored at the primary level while going for scheduled visits at the secondary or tertiary levels as part of the two-way referral system. However, this practice needs to be strengthened. Ambulance services, though not adequately equipped, are available to evacuate critically ill individuals to a higher level of care.

The weak NCDs service package interventions led to the development of a Minimum NCD Service Package by adopting the WHO Package of Essential NCD (WHO-PEN) interventions. This facilitated the capture of interventions provided at the primary health care level. This NCD strategy selected a comprehensive list of interventions which are covered in the WHO One Health Tool to form part of the costed action plan.

The majority of these interventions are new additions to NCDs intervention coverage as the majority of the previous interventions were more focused on prevention through health education and health promotion. These services are designed to be provided at the different levels of the healthcare system corresponding to the human resources for health capacities at those levels.

The Ministry of Health in The Gambia has organised her NCDs prevention and control plan to be delivered as a well-integrated and coordinated set of services that includes health education and promotion, Demand creation for all NCDs care that is available at PHC, secondary and tertiary level. Hence, the specific interventions for the different disease areas have been clearly defined in the NCD strategy. To ensure a continuum of care, NCD services would start from the community to the secondary and tertiary facilities through a well-structured referral pathway.

The actual number of NCD cases reporting to health facilities is not known because of the inadequacies of the current Health Management Information System (HMIS) tools, which only capture the episodes of consultations or visits rather than unique individual patients. According to the 2019 service delivery statistics, a total of 240,676 OPD consultations were related to NCDs with 4,241 (1.8%) requiring hospital admission (HMIS, 2019). In the past three years, six special NCDs clinics have been established in health facilities across two health regions. These clinics have helped to improve the availability and quality of NCD services provided, and the quality (completeness and accuracy) of documentation through support from an external funding partner. An evaluation of the performance of these NCDs clinics led to recommendations for more such NCD clinics across the country.

While data collection in the NCD clinics is good, substantial gaps exist in health system data documentation as data is collected manually and collated at the regional levels where it is entered into a database. Data quality issues, such as inaccuracy and incompleteness, have been reported. Understanding the reasons for discrepancies in data sources has been identified as a critical area to strengthen the health system in The Gambia (Sine et al., 2019).

4.4 Human Resource for Health

The public health sector of The Gambia is faced with human resource for health (HRH) challenges that negatively impact on all disease programme areas, including NCDs. The country was supported by WHO to establish an Information System Access database for HRH in 2010. However, the system is still not fully functional as health regions and hospitals are not fully integrated. Thus, planning for health programmes is carried out with limited data on the HRH situation in The Gambia.

The HRH for the public health sector in The Gambia in 2021 is estimated at 2,279 trained health workers comprising of 225 medical doctors, 1,128 general nurses, 544 midwives, 284 public/environmental health officers and 98 pharmacists/pharmacy technicians. Of the total medical doctors, 65 are specialist trained which suggest the number that can provide specialized care for advanced stage of NCDs. While conducting the situation analysis for the development of this strategy plan, a key informant interview with the MOH revealed the limited number of specialists e.g. there are 2 Cardiologists, 5 Ophthalmologists, 1 specialist Oncologist surgeon, 1 Endocrinologist, 1 Nephrologist and 1 Haematologist with no specialist Pulmonologist despite several respiratory diseases. Only five of the specialists named above are Gambians. This reaffirms the need for a robust public health education and promotion programme towards effective prevention and control of NCDs in the country.

CHAPTER 5: SWOT ANALYSIS ON NCDS PREVENTION AND CONTROL

The table below highlights the SWOT analysis (strengths, weaknesses, opportunities, and threats) of the NCD prevention and control efforts in The Gambia.

Table 2: SWOT analysis on the NCDs situation in The Gambia

STRENGTH	WEAKNESS
There is an established and functional NCD Programme Unit within the Ministry of Health under the Directorate of Health Promotion and Education.	A national multi-sectoral integrated NCD coordination mechanism doesn't exist.
There is a multi-sectoral committee on tobacco control with a robust Tobacco Control Act and regulations.	There is inadequate Human Resource for Health (HRH) across all cadres of health care workers.
There is a Motor Traffic Control Act, and a Road Safety Policy and Strategy.	There is an inadequate number of specialists in NCD management.
On-going integration of NCD services into all health facilities.	There are insufficient health communication materials to address a multi-sectoral list of risk factors (unhealthy lifestyles, agriculture, climate change).
There is a national nutrition policy that seeks to address diet related NCDs.	There is an intermittent out-of-stock and/or non-availability of NCD medicines and supplies.
Six piloted NCD clinics were found to be effective in providing NCD services.	Chemotherapy agents, which are not part of the essential medicine list but important in the management of NCDs, aren't available.
The draft National Health Policy (2021-2030) seeks to address NCDs in The Gambia.	Specialised therapeutic modalities for NCDs, such as radiotherapy, aren't available.
Experience has been gained in conducting population-based surveys, such as the Step survey and the national eye survey.	Updated guidelines and protocol in the management of NCDs aren't available.
	There are general inadequacies in the capacity for screening of NCDs in the general population.
	There is inadequate community engagement on NCDs risk factors, contributing to low awareness.
	Inadequate NCDs data is generated from all levels of the health system, public and private.
	There is inadequate engagement of private sectors to report data on NCDs.
	Low index of suspicious of NCDs leading to poor tracking of risk factors for NCDs.
	Limited rehabilitative and psycho-social services relating to NCDs at peripheral level.
	Inadequately equipped laboratories to investigate NCDs.
	Inadequate representation of organized associations for people living with NCDs.
	Limited intervention for post-crash victims .
	Limited intervention for oral health.
	Lack of walkways to facilitate physical activity.
	Inadequate recreational facilities to support lifestyle for NCD prevention and control.
	There are no palliative services for terminally ill persons in The Gambia.

OPPORTUNITIES	THREATS
The country has a decentralised health system which can support availability of NCD services at all levels.	Limited budgetary allocations for NCD programmes.
There is a research directorate in the Ministry of Health that can carry out operational research on NCDs.	Challenges in accessing limited operational costs.
There are strong research institutions and individual experienced researchers in the country that can carry out research on NCDs.	Limited number of national and international partners providing technical and financial support to NCDs programmes.
There are programme units for the prevention and control of other diseases so there is a possibility for collaboration between and within programme units.	High out-of-pocket expenditure for the management of NCDs because of weak health system.
There is a health journalist association that can help disseminate information on NCDs.	Non regulatory mechanism or legislation on the sale and use of traditional medicines.
There are community entertainment groups that can support dissemination of health information related to NCD prevention and control.	Non regulatory mechanism and/or legislation on imports, sales and advertisement of food.
There are organizations that facilitate or spearhead health promotion interventions, such as Change - Walk for Health.	High attrition of health workers, which affects service delivery at all levels of healthcare.
There is an expressed political will in the National Development Plan.	Limited involvement and participation of civil society organizations in NCDs and related activities.
On-going development of a food-based dietary guideline.	Lack of regulations on air pollution.

5.1 NCD Governance and Programming Challenges

The above SWOT analysis highlighted stark challenges to NCDs programming and governance in the country which can be clustered into the following priority areas to inform the development of this strategic plan:

- **a.** Inadequate community engagement on NCDs' risk factors is contributing to low awareness of NCDs.
- **b.** Limited budgetary allocations for NCD programmes, interventions and activities.
- **c.** Limited allocation of funds for operational costs coupled with difficulties accessing those funds.
- **d.** Poor resource tracking for NCDs impacts planning for each category of NCD as well as targeted resource mobilisation and allocation.
- **e.** Weak monitoring and evaluation system for NCD programming, including poor data capture and reporting across the health care system.
- **f.** Limited research on NCDs affects policy and decision making relating to NCDs.
- **g.** Unavailability and unaffordability of certain essential medicines, supplies and basic technologies for NCD screening and management.
- **h.** Inadequate capacity of health workers (quantity and skills) for the prevention and control of NCDs at all levels of care.
- **i.** Limited health facilities with integrated management of NCDs.
- **j.** Non-existence of a multi-sectoral coordination mechanism for NCD prevention and control.
- **k.** Non availability of updated guidelines and protocol for the management of NCDs.
- **l.** Minimal integration of NCD prevention and control in key public health care platforms, such as COVID19, HIV/AIDS, TB, family planning, reproductive, maternal, neonatal, child and adolescent health (RMNCAH) services.
- **m.** Limited partners active in NCD prevention and control, across public and private sectors, and CSOs.
- **n.** Limited intervention for post-crash victims, oral health and other NCDs.

CHAPTER 6: STRATEGIC PLAN FRAMEWORK

6.1 Vision

To attain a Gambia free from the avoidable burden of non-communicable diseases.

6.2 Mission

To apply a multi-sectoral approach to mitigating the burden of NCDs, reducing premature mortality, and ensuring a healthier population.

6.3 Goals

To reduce by one-third premature deaths from NCDs in The Gambia by 2027.

6.4 Guiding Principles

The overarching guiding principles and approaches in the programming, coordination and implementation of this strategic plan shall be in line with the WHO NCD Global Action Recommendations (WHO, 2013):

6.4.1 A Multi-Sectoral Approach

Given that NCDs are closely associated with social determinants of health and risk factors, justify the need for the involvement of all stakeholders, including both health and non-health actors. All stakeholders shall be involved from the development to the implementation of NCD prevention and control measures. Mechanisms to ensure coordinated multi-stakeholder engagement and multi-sectoral action for health, within government and by non-government actors, are being developed. To that end, a National Multi-sectoral Steering Committee (NMSC), shall be established with clearly outlined terms of reference. To provide support to the NMSC, Technical Working Groups (TWGs) will also be established with clearly outlined terms of reference.

6.4.2 A Life-Course Approach

The Gambia, with a predominantly young but growing population, is also witnessing an increase in life expectancy. This, in part, is due to improved living conditions in the country. Globalisation and

urbanization are influencing lifestyles and local practices, which is impacting on the burden of NCDs across all ages. Hence, prevention and control of NCDs needs to include all ages. To that end, a life-cycle approach to NCD prevention and control shall be applied in all NCD-related interventions. Interventions to limit NCDs need to begin early in life as a longer period living with NCDs would have a negative impact on health. Therefore, addressing NCDs from conception, through early childhood and through the course of life would greatly depend on increasing general knowledge and empowering the people to make healthy choices. However, specific attention needs to be directed at caring for the elderly and other vulnerable groups who often bear the higher burden of NCDs.

6.4.3 A Human Rights Approach

Protecting and promoting health, and respecting, promoting, and fulfilling human rights are inextricably linked. Health is enshrined as a basic human right in the constitution of The Gambia. Section 216, sub-section 4 of the 1997 Constitution of The Gambia clearly states that *"The State shall endeavour to facilitate equal access to clean and safe water, adequate health and medical services, habitable shelter, sufficient food and security to all persons."* The right to health is a basic human right and, as such, NCD prevention and control shall take a human rights approach in that it shall be a priority to make NCD prevention and control services available and accessible at all levels of the public health system.

6.4.4 An Equity-Based Approach

Through this approach, all people shall have the opportunity to improve or maintain their health and well-being. Adequate evidence exists indicating that social determinants of health contribute to the occurrence of NCDs. Therefore, it is increasingly important to first identify the most vulnerable groups in the general population so that interventions are inclusive, equitable and economically accessible for healthy communities and the population.

The COVID-19 pandemic, for example, has adequately exposed the inherent weaknesses of health systems around the globe and their inability to care for different vulnerabilities concurrently. This resulted in increased suffering of NCD patients globally as more focus was placed on COVID-19. However, the global surge in premature mortality caused by NCDs suggests that NCDs share a lot of similarities with COVID-19. Thus, NCDs require the same level of preparedness and response as an infectious disease pandemic. To mitigate such, all activities included within this strategic plan are inclusive of all people, including those with diverse disabilities.

6.4.5 Empowerment of Individuals, Families and Communities

Using the Primary Health Care concept of community involvement and participation, all people shall have a voice in deciding on NCD matters, either directly or indirectly through the established structures at national, regional and community levels. The participation of individuals, families and communities shall be towards helping informed decision making, which is key to the implementation of activities related to the prevention and control of NCDs. Individuals and communities will participate in advocacy, policy development, planning, legislation, service provision, research, and monitoring and evaluation.

6.4.6 An Evidence-Based Approach

Information and facts are essential for a good understanding of the health system, without which it is not possible to provide evidence for informed decisions that influence the behaviour of different interest groups that support, or at least do not conflict with, the strategic vision of health. NCD-related standards, protocols and guidelines shall be informed by evidence and expert opinion.

6.4.7 Integration

Addressing NCDs must adopt an integrated approach rather than looking at individual or silo mentality health programmes. Therefore, interventions to prevent, control and manage NCDs shall span across all service delivery spectrums using the primary health care concept.

6.4.8 Universal Health Coverage

With the mantra *"Leave no one behind"*, efforts will be invested to promote and facilitate access to basic healthcare including NCD services. To that end, a Minimum Health Care Package relating to NCD prevention and control shall be defined for all levels of the health care delivery system. Essential NCD services shall be delivered in a safe, affordable, effective and high-quality manner. It must be ensured that using these services does not expose the user to financial hardship, particularly for vulnerable populations.

6.5 Strategic Objectives

The strategic objectives are:

OBJECTIVE 1:

To raise priority for NCD prevention and control at national and regional level through strengthened collaboration and advocacy.

Strengthen advocacy and strategic engagement of stakeholders for prioritisation of NCDs prevention and control.

Strategic Actions

a. Advocate, to national and regional governments, for legislature to prioritise and increase the allocation of resources for NCDs.

b. Conduct an impact assessment of different sector policies on NCDs.

c. Develop advocacy or policy briefs to facilitate engagement with policy makers and other critical stakeholders on NCDs.

d. Organize national forums/seminars for policy makers/stakeholders on NCDs and its impact on development.

e. Conduct advocacy visits to all relevant sectors to forge a strong multi-sectoral collaboration in the implementation of NCD prevention within workplace or other settings.

f. Conduct advocacy meetings with other sectors to implement activities that promote a reduction in NCDs.

g. Advocate for the development of a regulatory framework for traditional medicine.

h. Advocate and engage the Ministry of Information and Communication Infrastructure, the Public Utility Regulatory Authority and GSM operators on m-Health (a term used for the practice of medicine and public health supported by mobile devices).

i. Engagement with relevant ministries and agencies, and advocate for full integration of NCDs into their strategic plans.

j. Engagement with UN agencies to include NCDs in the United Nations Development Assistance Framework (UNDAF).

Build strong public private partnerships for NCDs prevention and control.

Strategic Actions

a. Organize an annual public private partnerships forum for the prevention and control of NCDs.

b. Strengthen collaboration at all levels among governmental agencies, intergovernmental organizations, non-governmental organizations, civil society, communities, and the private sector to prevent and control NCDs.

c. Joint commemoration of international NCDs and risk factor days.

OBJECTIVE 2:

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

Improve coordination and governance for NCD prevention and control.

Strategic Actions

a. Establish a multi-sectoral steering committee on NCDs prevention and control chaired by the Office of the President.

b. Establish a Multi-sectoral Technical Working Group (MTWG) for NCD prevention and control.

Strengthen national capacity and leadership to accelerate and scale up the national response to the NCD epidemic.

Strategic Actions

a. Expand the availability of programme staff to manage NCDs at different levels.

b. Train or orient personnel from other sectors on the complexities of NCDs.

c. Strengthen structures and capabilities for the prevention and early detection of NCDs at all levels.

d. Engage and train community-based organizations as NCD change agents to promote/facilitate dialogues that catalyse society-wide change.

e. Conduct periodic community-based screening for NCDs and their risk factors.

f. Conduct periodic public awareness campaigns on NCDs and their risk factors.

OBJECTIVE 3:

To reduce risk factors for NCDs and underlying social determinants through health-promotion and education.

Strengthen tobacco control

Strategic Actions

- **a.** Advocate for the introduction of a tobacco levy to reinforce and finance the implementation of a tobacco control policy and action plan.
- **b.** Sustain progressive increases to excise duty and prices for tobacco products, in line with WHO recommendations.
- **c.** Develop and disseminate social and behavioural change educational material to raise public awareness about the consequences of tobacco use and exposure to tobacco smoke and encourage smokers to quit by providing a step-by-step guide on how to stop tobacco use.
- **d.** Conduct mass media campaigns to support the implementation of the Tobacco Control Act.
- **e.** Strengthen an inter-sectorial collaboration in the implementation of measures to minimise illicit trade in tobacco products.
- **f.** Strengthen and scale up cessation and rehabilitation centres.
- **g.** Capacity building of healthcare providers on tobacco cessation clinical guidelines

Promote a healthy diet

Strategic Actions

- **a.** Advocate for the implementation of subsidies to increase the affordability, accessibility, availability and consumption of fruits and vegetables.
- **b.** Conduct mass media campaigns and social marketing initiatives that inform and encourage consumers about healthy dietary practices.
- **c.** Increase the availability and affordability of healthy foods through appropriate policy and fiscal measures.
- **d.** Create health- and nutrition-promoting settings through the implementation of nutrition education and counselling in schools, workplaces, and hospitals.
- **e.** Control the inappropriate marketing of unhealthy products through the mass media.
- **f.** Engage food retailers, caterers, and restaurant owners to progressively improve the availability and affordability of healthier foods.
- **g.** Advocate for standardized targets for the amount of salt in foods and meals.
- **h.** Advocate for the implementation of front-of-packet labelling on food products to reduce total energy intake, sugars, sodium, and fats.
- **i.** Advocate for the introduction and implementation of a sugar sweetened beverage tax.
- **j.** Conduct school social and behavioural change communication (SBCC) programmes to reduce the consumption of salt, saturated fat and sugar.
- **k.** Advocate for the replacement of trans and saturated fats with unsaturated fats through reformulation, labelling and fiscal policies by the Ministry of Agriculture and other relevant stakeholders.
- **l.** Conduct community SBCC and mass media campaigns on the consumption of salt, saturated fats and sugar.
- **m.** Support the finalization and implementation of the Food-Based Dietary Guidelines and Nutrition Education for healthy diets for the prevention and control of diet related NCDs.
- **n.** Advocate for the inclusion of NCDs education in all school curricula.

Promote physical activity

Strategic Actions

- **a.** Develop and disseminate guidelines for the general population on physical activity and sports.
- **b.** Advocate for creating enabling environments for promoting physical activity. For example, through road design and recreational spaces. Advocate for reducing tax to incentivise the use of gyms and sports centres.
- **c.** Increase general awareness on physical activity and its benefits.
- **d.** Engage celebrities and on-air personalities to demonstrate model behaviours and promote the same on social media platforms.
- **e.** Strengthen quality physical education from primary to tertiary education levels with practical opportunities for physical activities before, during and after school days.
- **f.** Engage corporate organizations to sponsor periodic mass physical activity programmes as part of their corporate social responsibility.

g. Engage communities and encourage them to institute local activities that increase physical activity.

h. Strengthen and scale up walk4Health initiative for all regions.

i. Support the commemoration of the annual walk4Health day.

Reduce harmful use of alcohol

Strategic Actions

a. Develop and implement a multi-sectoral alcohol policy.

b. Develop SBCC material to discourage harmful use of alcohol as part of the integrated SBCC materials for NCDs prevention and control using audience specific channels.

c. Engage and empower communities to educate on harmful alcohol use.

d. Strengthen community awareness and ownership of actions against harmful use of alcohol.

e. Advocate for the establishment of a taskforce for the prevention of illicit alcohol trade with monitoring for compliance.

f. Strengthen and scale up cessation and rehabilitation centres.

Reduce Air Pollution

Strategic Actions

a. Engagement of relevant partners on air pollution control.

b. Advocate for the development of regulations to address air pollution.

c. Develop and disseminate guidelines for using modern fuels and technologies for cooking, heating and lighting.

d. Raise awareness on the benefits of using modern fuels and technologies for cooking and heating.

Support vaccination against vaccine-preventable diseases and early management of infections leading to NCDs.

Strategic Actions

a. Reinforce continuous vaccination against hepatitis B

b. Support early detection, quality treatment and care of hepatitis B and C infections through raising awareness.

c. Reinforce continuous vaccination programmes against HPV while developing a communication strategy for addressing vaccine rejection.

d. Strengthen routine liver, breast and cervical cancer screening and management of the early stages of these diseases.

e. Screening, diagnosis and treatment of rheumatic fever and rheumatic heart disease (RHD).

f. Continuous vaccination for COVID 19.

Promote road safety for the prevention of injuries and disabilities.

Strategic Actions

a. Advocate for the development and implementation of comprehensive laws (drink driving, mobile phone use, child restraint, speed limits in residential areas) that address risk factors for road traffic accidents.

b. Advocate for the creation of a national emergency care toll free number.

c. Advocate for the development of harmonised tools for trauma cases.

d. Create a national emergency care response system.

e. Advocate for periodic mandatory technical check-ups of motorcycles and vehicles.

f. Increase awareness among motorcyclists and other public road users on the proper use of roads.

g. Introduce mandatory first-aid training for public transport and truck drivers.

h. Introduce mandatory first-aid kits in public transport and trucks.

i. Identify and improve accident prone sites or 'black spots'.

j. Establish injury data sharing mechanisms between the various concerned stakeholders.

k. Enforce mandatory medical check-ups (such as sight, hearing and disabilities). before issuing or renewing a driver's license.

l. Road safety awareness campaign in schools.

m. Road safety awareness campaign in communities.

OBJECTIVE 4:

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

Expand quality NCD service delivery

Strategic Actions

a. Expansion of NCD clinics

b. Expansion of diabetes/CVD/cancer/CRD intervention coverage

    a. Diabetes mellitus interventions
    b. Cardiovascular diseases
    c. Cancer intervention
    d. Chronic respiratory disease
    e. Injuries

c. Develop a pictorial self-guide for education on self-care for diabetes and other NCDs.

d. Develop integrated NCD treatment guidelines that include guidance on using the WHO-PEN App for use by all health facilities and train heath workers on the use of the treatment guidelines.

e. Strengthen a two-way referral system for NCD prevention, care and management between the different tiers of the health sector, while ensuring the availability of interoperable, high quality, electronic medical records or referral documentation.

f. Designate and equip centres of excellence for NCD care with appropriate equipment to screen and manage complications of NCDs.

g. Integrate NCD screening, treatment and care into other services, focusing on HIV/AIDS, TB and maternal, child and community health (MCCH) services.

h. Improve physical access for all to health services, including the elderly and people with disabilities.

i. Strengthen an integrated model of care that includes facility and home visits for all.

j. Conduct community-based screening for diabetes and hypertension.

k. Train community-based structures/institutions on NCD prevention and control.

Improve human resources capacity for early detection, management and care of NCDs

Strategic Actions

a. Develop a training manual for strengthening capacity for health care providers to readily screen for NCDs to facilitate early detection and diagnosis, and commence management of NCDs, at all levels.

b. Training of PHC village CHWs to conduct community screening of diabetes and other NCDs and to properly refer patients to higher levels of care using the established referrals pathways.

c. Training of healthcare workers on NCD treatment guidelines.

d. Training healthcare workers on the use of the pictorial guide for education on self-care.

e. Strengthen the retention of a skilled NCD workforce, through career development opportunities and continuous learning.

f. Establish and implement a strong NCD clinical mentoring system, throughout health system tiers.

g. Provide pre-service training (such as postgraduate study or fellowships) to ensure adequate numbers of NCD specialists, e.g. in the fields of oncology, pathology, cardiology, nephrology, emergency medicine and palliative care.

h. Integrate NCD curricula into pre-service training for nurses, medical students and other health professionals.

i. Develop NCD e-learning modules targeting health care providers at all levels to serve as CMEs for licensing renewal processes.

Strengthen the supply chain of NCD medications, laboratory commodities and technologies/ medical equipment.

Strategic Actions

- **a.** Advocate for the continuous availability of essential NCD medicines, supplies and technologies for screening, diagnosis, treatment and monitoring at all levels.
- **b.** Regularly update a list of essential NCD drugs, supplies and equipment at different levels of care, based on the National NCD prevention and treatment guidelines.
- **c.** Train relevant logistics staff on the digital inventory and stock management, and advise technical teams on forecasting commodity needs, their procurement and distribution capacity planning.
- **d.** Perform knowledge extraction, analysis and dissemination of results for capacity building.

Establish specialized NCD diagnostic and treatment centres, including injuries and disabilities.

Strategic Actions

- **a.** Develop business cases for establishing a multi-disease priority specialized centre in NCD diagnostics and treatment, in order to attract funding and private investment.
  - a. National Cardiac Centre
  - b. National Renal Transplant Centre
  - c. A Nuclear Medicine Centre
  - d. Gambia Cancer Centre
  - e. Upgrading of laboratories, including pathology services, at teaching hospitals
  - f. Establishment of satellite cancer centres in hospitals
  - g. Centre of Excellence for Trauma and Rehabilitation
- **b.** Build and equip new specialized NCD diagnostic and treatment centres.

Enhance innovative financing of NCD prevention and control.

Strategic Actions

- **a.** Adapt innovative, sustainable and equitable financing mechanisms to ensure universal health coverage (UHC) for NCD prevention and control.
- **b.** Advocate for strong UHC initiatives through health insurance schemes to facilitate affordability and sustainable financing of NCD services.
- **c.** Advocate for an increase in the number of NCD services in the benefit package covered by health insurance.
- **d.** Advocate subsidising expensive NCD services for the most vulnerable/poor patients.
- **e.** Development of proposals for funding specialized NCDs services.

OBJECTIVE 5:

To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.

Strengthen national capacity for research in NCDs.

Strategic Actions

a. Establish and implement a national NCD research agenda.

b. Strengthen research for NCDs and risk factors.

   a. Conduct a population-based survey on NCDs risk factors and conduct NCD risk factors prevalence studies, such as a STEPS study, a study on risk factors for cancers, etc.
   b. Conduct a global youth tobacco survey.
   c. Conduct a global adult tobacco survey.
   d. Conduct a national economic impact study of NCDs.

c. Collaborate and strengthen research on NCDs with the Directorate of Research, the Medical Research Council, University of The Gambia, and other training institutions, such as the National Public Health Laboratories (NPHL).

d. Build capacity in NCD clinical research for health professionals at all levels.

e. Conduct a comprehensive situational analysis of NCD data availability, accessibility, and affordability for planning, including data of injuries, disabilities and geriatric services.

f. Build capacity around grant and manuscript writing for knowledge sharing.

OBJECTIVE 6:

To monitor NCDs and their determinants to effectively evaluate progress at national and regional levels.

Strengthen surveillance and M&E for improved data quality and decision making

Strategic Actions

a. Develop M&E guidelines for NCDs.

b. Develop national targets and indicators based on a national monitoring framework and linked with the National Development Plan (NDP).

c. Strengthen human resources and institutional capacity for surveillance, and monitoring and evaluation.

d. Introduce electronic medical records (EMR) in all NCD clinics to improve patient management and care, including referrals between health facilities.

e. Equip health facilities with computers for EMR.

f. Establish and/or strengthen a comprehensive NCDs surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response.

g. Monitor and produce progress reports on NCD indicators fitting existing national policy frameworks.

h. Support the development of an NCD M&E dashboard (preferably electronic) that provides basic information that empowers decision making to improve implementation at each level of access.

i. Develop a robust data quality assurance mechanism to facilitate data completeness and accuracy at all levels.

j. Strengthen the NCD data quality for effective decision making.

6.6 Monitoring and Evaluation Framework

OBJECTIVE 1:

To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.

Strategic Actions	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
Strengthen advocacy and strategic engagement of stakeholders for prioritisation of NCDs prevention and control	Improved prioritization with increased funding for NCDs	Number of advocacies and strategic engagement conducted % Increase in domestic funding for NCD prevention and control % Increase in external funding for NCDs	Annually, MOFEA reports on increase in NCD funding allocation (domestic and external) to the chair of the multi-sectoral committee	USD 6 million annually	USD 12 million annually	MOFEA	MOH, World Bank, WHO, DNCD, National Assembly, CSO
Build strong public private partnerships for NCDs prevention and control	A strong public private partnership for NCD prevention and control	Number of partners involved in NCDs prevention and control Number of partners supporting/ funding NCD activities	Annually, MOH reports on the number of partners involved in supporting/funding NCDs prevention and control to the chair of the multi-sectoral committee	3	10	MOH	World Bank, WHO, DNCD, Private sectors, CSO

OBJECTIVE 2:

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

Strategic Actions	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partner
Improve coordination and governance for NCD prevention and control	Availability of multi-sectoral coordination system for NCDs	Availability of multi-sectoral committee Availability of multi-sectoral technical working group	Annually. MOH reports on the establishment of multi-sectoral committee and the number of meetings held	0	2 Multi-sectoral committee meeting Annually 4 TWG meetings Annually	MOH	WHO, DNCD, MDA, CSO
Strengthened national capacity and leadership to accelerate and scale up the national response to the NCD epidemic	Availability of national capacity for NCD prevention and control	Number of staff leading NCD prevention and control	Annually. MOH reports on the number of staff with the capability of leading NCD prevention and control to the chair of the multi-sectoral committee.	4	50	MOH	WHO, DNCD, MDA, CSO

OBJECTIVE 3:

To reduce risk factors for NCDs and underlying social determinants through health-promotion and education

Strategic Actions	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partner
Reduce tobacco use	Reduction in tobacco use	% Reduction in tobacco use among adults and young people	STEPWISE survey, Global adult tobacco survey (GATS), Global youth tobacco survey (GYTS)	15.6%	Reduce by 10%	MOH	WHO, DNCD, MDA, CSO, GTB
Promote healthy diet	Reduction in mean population consuming unhealthy diet	% Reduction in mean population consumption of salt, sugar and fat % Increase in consumption of fruit and vegetables	STEPWISE survey.	0 77%	Reduce by 5% 87%	NaNA	MOH, WHO, DNCD, MDA, CSO, GTB
Promote physical activity	Increased engagement in physical activity	% Increase in physical activity	STEPWISE survey	60	75%	Ministry of Youth and Sport	MOH, WHO, DNCD, MDA, CSO, Walk4Health
Reduce harmful use of alcohol	Reduced harmful use of alcohol	% Reduction in harmful use of alcohol	STEPWISE survey	0.8%	0.3%	MOH	WHO, DNCD, MDA, CSO, GTB
Reduce Air Pollution	Reduction in air pollution	% of households using modern fuel and technologies for cooking and heating	Annually, Ministry of Environment reports on the % increase in the number of households using modern fuel and technologies for cooking and heating to the chair of the multi-sectoral committee	N/A	5% annual increase	Ministry of Environment	MOH, WHO, DNCD, CSO, GBOS
Support vaccination against vaccine preventable diseases and early management of infections leading to NCDs	Sustained vaccination programmes for vaccine preventable diseases	% Coverage of HPV, HBV, COVID vaccines	Annually, MOH reports on the % coverage of all the routine and COVID-19 vaccinations in the country	Above 90%	Above 90%	MOH	WHO, DNCD, Regional Health Directorate, CSO
Promote road safety for the prevention of injuries and disabilities	Reduction in road crashes	% Reduction in the number of road crashes % of drivers that conducted mandatory medical checks and training before licencing	Annually, Ministry of Transport/ Police reports on the % reduction in crashes and % of drivers taking the mandatory medical checks and training before licencing	N/A N/A	20% reduction in crashes 80% annually of licenced drivers	Ministry of Transport	Gambia police force, MOH WHO, DNCD, CSO,

OBJECTIVE 4:

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

Strategic Actions	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partner
Expand quality NCD services delivery	Availability of quality NCD services	% of health facilities providing quality NCD services	Annually, MOH reports on the % of health facilities providing quality NCDs services to the chair of the multi-sectoral committee	6	46	MOH	WHO, DNCD, WB
Improve human resources capacity for early detection, management and care of NCDs	Human resources for quality NCD services available	% of human resources with appropriate capacity for NCDs management Availability of standardized treatment of NCDs	Annually, MOH reports on the % of human resources for NCDs management and availability of standardized care to the chair of the multi-sectoral committee.	20% 0	70% 1 treatment guidelines	MOH	WHO, DNCD, WB, donors
Strengthen the supply chain of NCD medications, laboratory commodities and technologies/ medical equipment	Availability of essential medicines for NCD care	% Improvement in logistics management and reduction in out-of-stock syndrome	Annually, the MOH reports on the improvement in logistics management and reduction in out-of-stock syndrome to the chair of the multi-sectoral committee	NA	10% annually	MOH	WHO, DNCD, WB, donors
Establish specialized NCD diagnostic and treatment centres, including injuries and disabilities	Business plans for specialised NCD diagnostic and treatment centres are developed	Number of business plans developed to attract investment Number of new, functional, specialised NCD diagnostic and treatment centres	Annually, MOH reports on the number of business plans developed to attract investment, and the number of new and functional, specialised NCD diagnostic and treatment centres built to the chair of the NCD multi-sectoral committee	0	5	MOH	WHO, DNCD, WB, donors, MOFEA
Enhance innovative financing of NCDs prevention and control	Availability of insurance scheme to facilitate universal health coverage (UHC)	Percentage of government allocation for health insurance funding for UHC Number of new and essential NCD services included in insurance benefit packages	Annually, MOFEA reports on government allocation for health insurance and benefit packages coverage to the chair of the NCD multi-sectoral committee	N/A	TBD	MOFEA	WHO, DNCD, WB, donors, MOFEA

OBJECTIVE 5:

To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.

Strategic Actions	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partner
Strengthen national capacity for research in NCDs	Availability of capacity to conduct NCD research	Availability of NCD research agenda Number of NCD research projects conducted	Annually, MOH reports on the availability of an NCD research agenda and the number of NCD research projects conducted	0	5	MOH	WB, WHO, DNCD. MRC, UTG

OBJECTIVE 6:

To monitor NCDs and their determinants to effectively evaluate progress at national and regional levels

Strategic Actions	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partner
Strengthen surveillance and M&E for improved data quality and decision making	NCD surveillance strengthened and incorporated into the national information system for easy of decision making	Availability of national NCD indicators % Improvement in the data quality for decision making	Annually, the MOH reports on the NCD surveillance and % improvement in the NCD data quality for decision making to the chair of the multi-sectoral committee	0	80%	MOH	WHO, DNCD, partners

CHAPTER 7: THE NATIONAL COSTED ACTION PLAN FOR NCDS PREVENTION AND CONTROL

This segment documents the process and results of estimating costs, financing and the impact of the National Multi-Sectoral Strategy and Costed Action Plan for Non-Communicable Disease (NCDs) Prevention and Control in The Gambia 2022-2027. This plan includes a broad array of activities intended to build the health system's ability to mount an NCD response in the country, and to expand both the scale and scope of the services provided to the population.

7.1 Introduction

Background and Rationale

The development of cost and financing estimates supports the development of a rational and well-developed strategic plan. This process was designed to apply internationally recognized software to the development of a costed NCD Plan, allowing the team to set reasonable targets, understand the implications of decisions around scale-up plans, and design scenarios to respond to different financing realities that may emerge over time.

The One Health Tool was chosen as the tool to support the process in order to provide demographic and epidemiological modelling of populations needing services, and the potential impact of the plan, as well as to provide default guidance on treatment inputs for services.

Scope of the costed NCD Plan

The cost estimates included in this component include the priorities reflected in the NCD plan, including advocacy to raise the priority for NCD prevention and control, strengthening capacity for NCD Programmes, reducing risk factors for NCDs, strengthening the health system response to NCDs, promoting research, and monitoring and evaluation around NCDs.

Mental and neurological health and substance abuse (MNS) Programmes are captured under a separate document and set of estimated resource requirements.

Process of Costing the NCD Action Plan

A multidisciplinary team provided guidance, data and strategic thinking for the development of these estimates, including team members from the Ministry of Health, the NCD Partnership. Avenir Health applied the One Health Tool software for service delivery cost estimates, provided feedback on the above service delivery costing and analyzed the financial space for NCD programmes.

The costing of the NCD plan was a consultative and iterative process which included formulating objectives, data collection, baseline analysis, target setting and quality assurance to ensure accuracy of cost estimates. The phases of the costing exercise were as follows:

- Configuration of the One Health tool and financing projections to The Gambia context, including population and economic growth projections, as well as health care data such as NCD medicines and supplies, the number and types of health workers, health facilities and general infrastructure.
- Bilateral consultation with NCD experts to define the scope of interventions to be included, and baseline and target coverage.
- Data collection and cleaning by the technical focal persons from the Defeat-NCD Partnership and MoH.
- A workshop to validate activities and inputs for treatment and unit costs.
- Costing workshop for the strategy and beginning of the funding gap analysis.
- Development of financing models.
- Scenario analysis to reflect uncertainty about the future funding environment.
- Estimates of health impacts of different scenarios using the One Health Tool/Spectrum NCD Tool.
- Data analysis, report writing and stakeholder review of the report.

7.2 Methodology and Assumptions

This process applied a combination of epidemiological and cost modelling using the One Health Tool and Excel-based activity modelling for above service delivery costs.

Service delivery interventions were costed using a population-based approach, where a target population for a service is multiplied by the proportion of the population needing the service, and the coverage to estimate an annual number of services. Target populations were estimated using the Spectrum demographic projections and the Spectrum NCD epidemiological model (calibrated to Gambia Global Burden of Disease estimates) which incorporate the effects of preventive and curative care in order to provide a holistic picture of the population needing services.

Baseline coverage was estimated based on the number of services provided, the number of typical encounters for a condition per year per client and the number of people with a condition. Target coverage was set based on expert opinion of desirable yet feasible expansion of coverage for a set of services. See Annex 2 for detailed coverage assumptions by intervention.

The number of services is multiplied by the cost per service (estimated using an ingredients-based costing approach) to calculate the total cost per intervention. Medicine costs were drawn from the MSH Drug Price Indicator Guide and cross checked against Gambian procurement data.

Above service delivery costs, such as supervision, training, and policy and guideline development, were calculated using activity-based costings where the cost per item is multiplied by the number of activities or items in order to estimate the costs of each training or supervisory trip.

Costs are presented in USD for ease of use of the One health tool at a fixed exchange rate of 1 USD equal to 52 Gambia dalasi (GMD) with the total cost reflected in GMD in the executive summary.

Three scenarios were developed for this plan:

1. Ambitious scenario: this includes the full cost of the plan, including full scale-up of all interventions to the desired level and all above service delivery activities being fully captured.
2. Prioritized scenario. In the prioritized scenario, high priority interventions are fully scaled-up, moderate priority interventions are partially scaled-up, and lower priority interventions maintain baseline coverage. Highest priority above service delivery costs are included. The prioritized scenario is the primary focus of this costing, as full scale-up is not possible with the resources currently being projected for the implementation period of the strategic plan.
3. Status quo: This represents a counterfactual scenario where current coverage and spending is maintained.

7.3 Cost Estimates

Total Costs

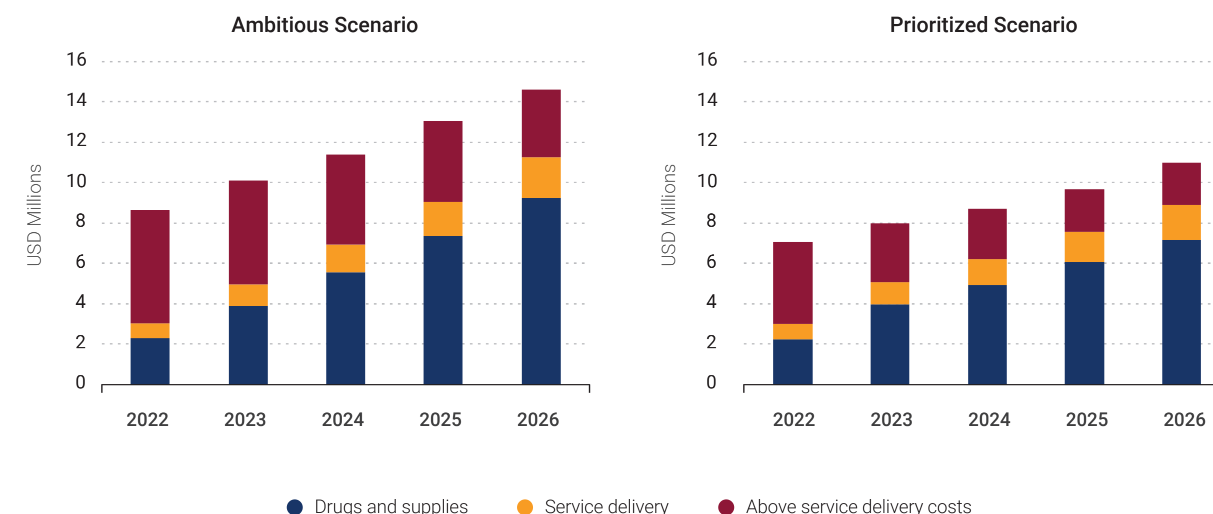
The implementation of the full strategic plan (as represented in the ambitious scenario), would increase from USD 8.6 million in 2022 to USD 14.6 million by 2026/27. Implementing the highest priority coverage increases and above service delivery elements (Prioritized scenario) would imply an increase in costs from USD 7 million in 2022 to USD 11 million by 2026/27. Even just maintaining current coverage would see an increase of USD 2 million to accommodate a growing and aging population. See Table 3 below.

TABLE 3: Total costs by scenario (USD million)

	2022	2023	2024	2025	2026
Ambitious	8.6	10.1	11.4	13.0	14.6
Prioritized	7.1	8.0	8.7	9.7	11.0
Status quo	6.0	6.6	7.1	7.6	8.2

As seen in figure 6 the ambitious scenario expands both the service delivery and particularly the above service delivery components more rapidly than the prioritized scenario (where above service delivery costs comprise 30% of total costs as compared to 39% in the ambitious scenario).

FIGURE 6: Service delivery and above service delivery costs



THE REMAINING segments of this report will focus primarily on the prioritized scenario, as it represents the most feasible set of goals for the plan.

Costs by objective

Costs by objective are seen in Table 4 and Table 5. Objective 4, including improved health system capacity and increased coverage of preventive and curative care for NCDs reflects 79% of the plan total, rising from USD 4.4 million to USD 9.7 million. Objective 3 to reduce NCD risk factors follows at 14% of the plan. Objectives 1,2,5, and 6 make up the remaining 7%. This reflects a clear emphasis and investment in preventive and curative care, followed by advocacy, capacity development, and research and monitoring and evaluation.

TABLE 4: Prioritized scenario cost by objective (USD million)

	2022	2023	2024	2025	2026	Total
1: To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.	0.1	0.1	0.1	0.1	0.1	0.6
2: To strengthen national NCD capacity, leadership, governance, multi-sectoral action and partnerships to accelerate the country response for the prevention and control of NCDs.	0.5	0.6	0.2	0.2	0.2	1.8
3: To reduce risk factors for non-communicable diseases and underlying social determinants through health-promotion and education-strengthened cooperation and advocacy.	1.9	1.3	1.3	0.9	0.9	6.2

4: To strengthen health systems to address the prevention and control of NCDs and the underlying social determinants through people-centred primary health care and universal health coverage.	4.4	5.8	7.0	8.3	9.7	35.1
5: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.	-	-	-	-	-	-
6: To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.	0.2	0.1	0.1	0.1	0.1	0.7
Total	**7.1**	**8.0**	**8.7**	**9.7**	**11.0**	**44.5**

The ambitious scenario follows a similar pattern with slightly more investment in Objectives 1,2,5, and 6, and a corresponding drop in the share of costs going to Objective 4 to 72%.

Table 5. Ambitious scenario costs by objective (USD million)

	2022	2023	2024	2025	2026	Total
1: To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.	0.2	0.2	0.2	0.2	0.2	0.8
2: To strengthen national NCD capacity, leadership, governance, multi-sectoral action and partnerships to accelerate the country response for the prevention and control of NCDs.	0.5	1.3	0.9	0.9	0.2	3.8
3: To reduce risk factors for non-communicable diseases and underlying social determinants through health-promotion and education-strengthened cooperation and advocacy.	2.4	1.7	1.6	1.1	1.1	7.9
4: To strengthen health systems to address the prevention and control of NCDs and the underlying social determinants through people-centred primary health care and universal health coverage.	4.9	6.1	8.1	10.2	12.4	41.8
5: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.	0.2	0.3	0.1	0.1	0.1	0.8
6: To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.	0.6	0.5	0.5	0.5	0.5	2.7
Total	**8.6**	**10.1**	**11.4**	**13.0**	**14.6**	**57.8**

See Annex 3 for more detailed costs by objective and activity.

Cost Categories

As seen in Table 6, the costs are dominated by service delivery, followed by risk factor reduction programmes, including outreach. This follows the prioritization of the plan, investing in preventive and curative care in order to achieve better health outcomes for the population. Program management and capacity building are the other two largest cost categories, followed by infrastructure and equipment, advocacy, and coordination. In the following table, highest priority items reflect those included in the prioritized scenario of the plan, while moderate and lower priority items are included in the ambitious scenario.

Table 6. Costs by cost category (USD)

		2022	2023	2024	2025	2026	Total
Highest priority	Advocacy	151,018	139,783	140,426	140,426	140,426	712,079
	Coordination	45,770	33,997	33,997	33,997	33,997	181,758
	Financing	16,579	16,579	16,579	16,579	16,579	82,895
	Infrastructure and equipment	654,889	21,049	21,049	21,049	21,049	739,086
	Monitoring and evaluation and research	19,483	19,483	19,483	19,483	19,483	97,415
	Programme Management	391,864	537,902	146,960	129,195	146,960	1,352,880
	Risk factor reduction Programmes	1,813,401	1,185,856	1,165,662	749,269	748,872	5,663,060
	Service delivery	2,981,250	4,200,128	5,506,420	6,891,093	8,359,024	27,937,914
	Capacity building	363,784	363,784	363,784	363,784	363,784	1,818,919
	Total	**6,438,038**	**6,518,560**	**7,414,360**	**8,364,876**	**9,850,173**	**38,586,007**
Moderate priority	Advocacy	31,359	27,063	27,063	27,063	27,063	139,610
	Monitoring and evaluation and research	250,340	250,340	250,340	250,340	250,340	1,251,700
	Programme Management	139,043	139,043	139,043	139,043	139,043	695,216
	Risk factor reduction Programmes	368,707	355,449	268,600	268,600	268,600	1,529,954
	Service delivery	631,557	1,168,684	1,762,765	2,401,031	3,085,452	9,049,489
	Capacity building	5,187	5,187	5,187	5,187	5,187	25,933
	Infrastructure & equipment	-	666,667	666,667	666,667	-	2,000,000
	Total	**1,426,192**	**2,612,432**	**3,119,664**	**3,757,930**	**3,775,684**	**14,691,902**
Lower priority	Advocacy	20,620	2,510	2,510	2,510	2,510	30,661
	Monitoring and evaluation and research	165,602	334,284	109,014	109,014	109,014	826,927
	Risk factor reduction programmes	59,930	26,840	26,840	26,840	26,840	167,289
	Service delivery	533,500	627,472	703,110	783,272	868,251	3,515,605
	Total	**779,653**	**991,106**	**841,474**	**921,635**	**1,006,614**	**4,540,482**
	Grand Total	**8,644,342**	**10,117,390**	**11,370,813**	**13,039,781**	**14,627,838**	**57,800,163**

Intervention costs by Condition

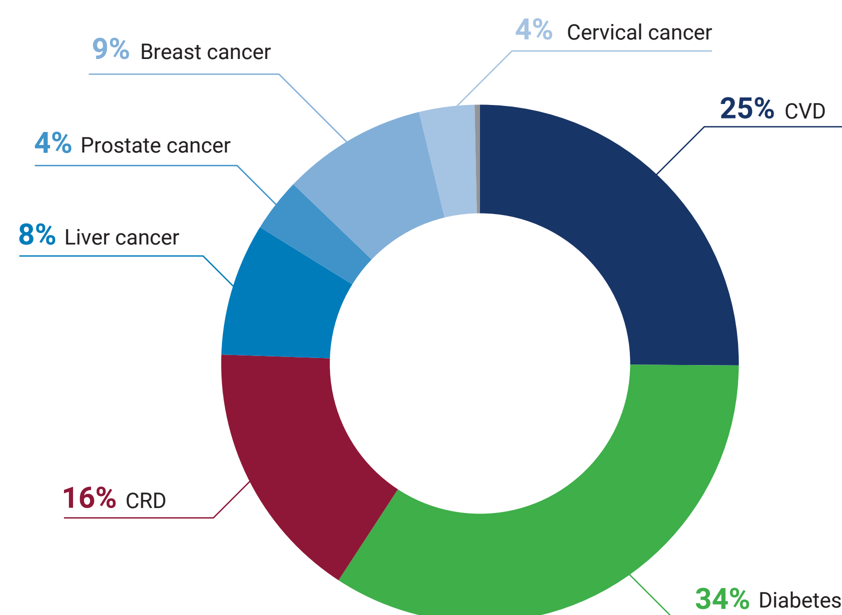
The service delivery costs (including medicines and supplies) for each condition are expected to expand substantially, rising from USD 0.4 million to USD 3 million by 2026/27, with a similar pattern for diabetes and chronic respiratory disease (rising from USD 1.1 million and USD 0.7 million to USD 3.3 million and USD1.6 million). Cancer screening and treatment (including liver, prostate, breast, cervical, and colorectal cancer) are estimated to rise from USD 0.6 million to USD 2.7 million, including expansion of screening and diagnosis and treatment (particularly in the earlier stages). See Table 7 below

TABLE 7. Service delivery costs by condition (USD million)

Condition	2022	2023	2024	2025	2026	Total
CVD	0.4	1.0	1.7	2.3	3.0	8.5
Diabetes	1.3	1.8	2.3	2.8	3.3	11.5
CRD	0.7	0.9	1.1	1.3	1.6	5.5
Cancer screening and treatment	0.6	1.1	1.6	2.1	2.7	8.2
Total	**3.0**	**4.8**	**6.6**	**8.6**	**10.6**	**33.6**

The distribution of service delivery costs by condition is reflected in figure 7, showing that diabetes treatment, and cardiovascular disease prevention and treatment are the largest shares of service delivery costs, at 34% and 25% respectively. These are followed by cancer care (24% spread across liver, prostate, breast, and cervical cancer screening and treatment) and chronic respiratory disease (16%).

FIGURE 7. Intervention costs by condition



7.4 Financing the NCD Action Plan

Estimating the financing gap for NCD (excluding MNS) programming required several steps in order to project the resources available from the funder. Firstly, current Total Health Expenditures (THE) were calibrated using the relationship between National Health Accounts (NHAs) and the World Development Indicators (WDI) database, as NHA data was only available up to 2017. Secondly, we projected THE assuming that its share of Gross Domestic Product (GDP) remains at 3.82%, the last reported value, and also projected GDP to grow 5.5% annually until 2026[1]. Thirdly, turning to NCD expenditures, we calibrated current values using the THE/WDI relationship derived in the first step, and then inflated to 2021 using the US GDP deflator. Finally, we projected NCD funding assuming that its current share of THE, 7.46%, increases to 10% by 2026; these figures are used in the analysis below.

Based on findings from the 2017 NHA, the main source of funding for NCDs is households, which account for 46% of overall NCD expenditure (see Table 8). The second largest funder is the government, which contributes 28%, while employers are the third largest funder at 17% of overall NCD funding. Donors play a small role in NCD funding, a total of 9%, while the contribution of insurance is negligible at less than 1%.

TABLE 8: Estimates of NCD (excl MNS) funding from different sources (Source: NHA 2017, special analysis)

Source	2017 (GMD)	2017 (USD)	%
WHO	7,470,000	160,266	3.56%
IDA/WB	9,810,000	210,470	4.68%
HH	96,140,000	2,062,648	45.85%
EMPLOYER	35,920,000	770,650	17.13%
GOV'T	58,570,000	1,256,597	27.93%
INSURANCE	1,780,000	38,189	0.85%
Total	**209,690,000**	**4,498,820**	

Assuming that the financing shares from Table 8 remain fixed, Table 9 displays the current financing sources for NCD until 2026/27. Recall that THE is projected to grow at the rate of GDP, 5.5%, while we assume that the share of NCD funding in THE increases from a base rate of 7.46% to reach 10% by 2026.

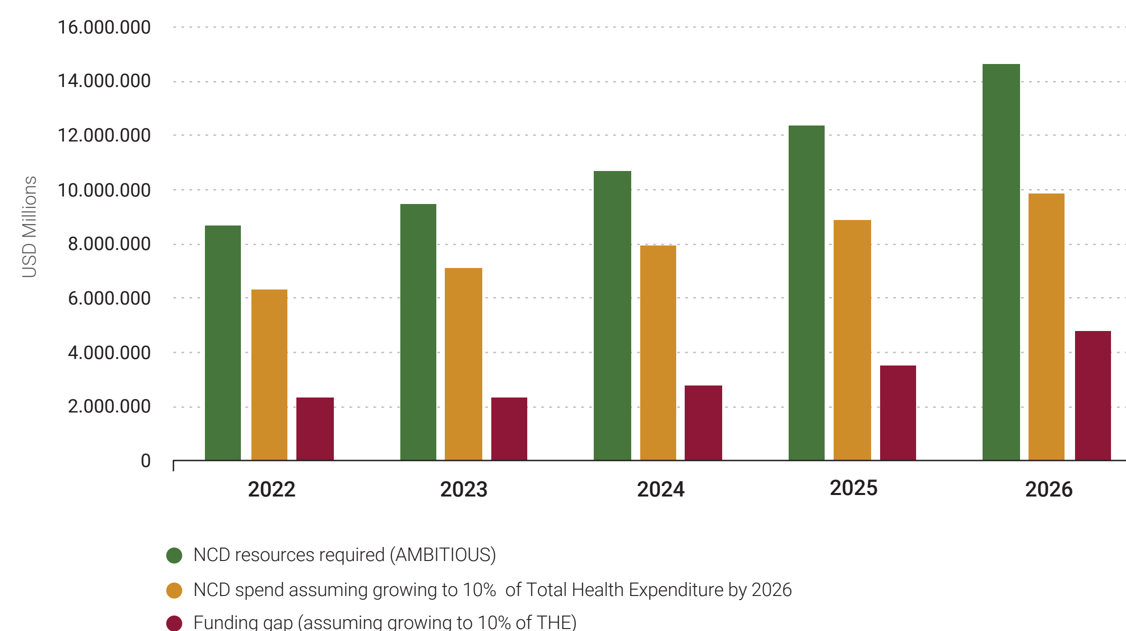
1 https://www.state.gov/reports/2020-investment-climate-statements/gambia/, https://www.imf.org/en/Countries/GMB#countrydata

TABLE 9: Estimates of available funding for NCD financing (USD, excl MNS): Increasing to 10% of THE by 2026

Source	2020	2021	2022	2023	2024	2025	2026
WHO	192,209	200,115	225,512	253,098	283,035	315,501	350,681
IDA/WB	252,419	262,801	296,154	332,381	371,697	414,332	460,533
HH	2,473,756	2,575,508	2,902,374	3,257,404	3,642,708	4,060,541	4,513,318
EMPLOYER	924,249	962,266	1,084,390	1,217,037	1,360,995	1,517,107	1,686,274
GOV'T	1,507,051	1,569,040	1,768,172	1,984,462	2,219,195	2,473,746	2,749,584
INSURANCE	45,801	47,685	53,736	60,310	67,444	75,180	83,563
Total	**5,395,484**	**5,617,414**	**6,330,338**	**7,104,691**	**7,945,074**	**8,856,407**	**9,843,952**

Planned expenditures are expected to increase from USD5.3 million in 2020 to just under USD 10 million by 2026/27. While these planned expenditures nearly double, due to both the growth in GDP and the increasing share of NCD funding in overall THE, a significant funding gap for the "prioritized" scenario remains, reaching almost USD5 million by 2026/27 (see Figure 8):

FIGURE 8: Funding needs and gap (USD) (Ambitious scenario, growing to 10% of THE by 2026)



Due to this funding gap, and the priority that is being placed on addressing NCDs by the government in The Gambia, the NCD team explored other possible funding sources. After consultation with the government, a financing scenario was developed incorporating new financing from existing taxes on tobacco, and potential taxes on sugar-sweetened beverages (SSB). The financing scenario below assumes that 5% of tax revenue from tobacco products will be directed towards NCD funding, with the further assumption that taxes on SSBs will be levied to match (see Table 10). Note that projected tobacco/SSB tax revenues are assumed to remain a constant percentage of overall tax revenues (using a base value of the average of 2020 and 2021 values, due to COVID), which in turn are assumed to grow at the same rate as GDP:

TABLE 10: Bridging the funding gap (USD). Assume 5% of tobacco/new SSB taxes applied to NCD funding

Source	2020	2021	2022	2023	2024	2025	2026
WHO	192,209	200,115	225,512	253,098	283,035	315,501	350,681
IDA/WB	252,419	262,801	296,154	332,381	371,697	414,332	460,533
HH	2,473,756	2,575,508	2,902,374	3,257,404	3,642,708	4,060,541	4,513,318
EMPLOYER	924,249	962,266	1,084,390	1,217,037	1,360,995	1,517,107	1,686,274
GOVNT	1,507,051	1,569,040	1,768,172	1,984,462	2,219,195	2,473,746	2,749,584
INSURANCE	45,801	47,685	53,736	60,310	67,444	75,180	83,563
Additional tax revenue (5%)			793,282	836,912	882,942	931,504	982,737
NEW TOTAL	**5,395,484**	**5,617,414**	**7,123,620**	**7,941,603**	**8,828,016**	**9,787,911**	**10,826,689**

With this additional tax revenue, although a funding gap remains for the "Ambitious" scenario of just under USD 4 million, the funding gap disappears for the "Prioritized" scenario (Figure 9 and Figure 10).

FIGURE 9: Remaining funding gap for ambitious scenario (USD)

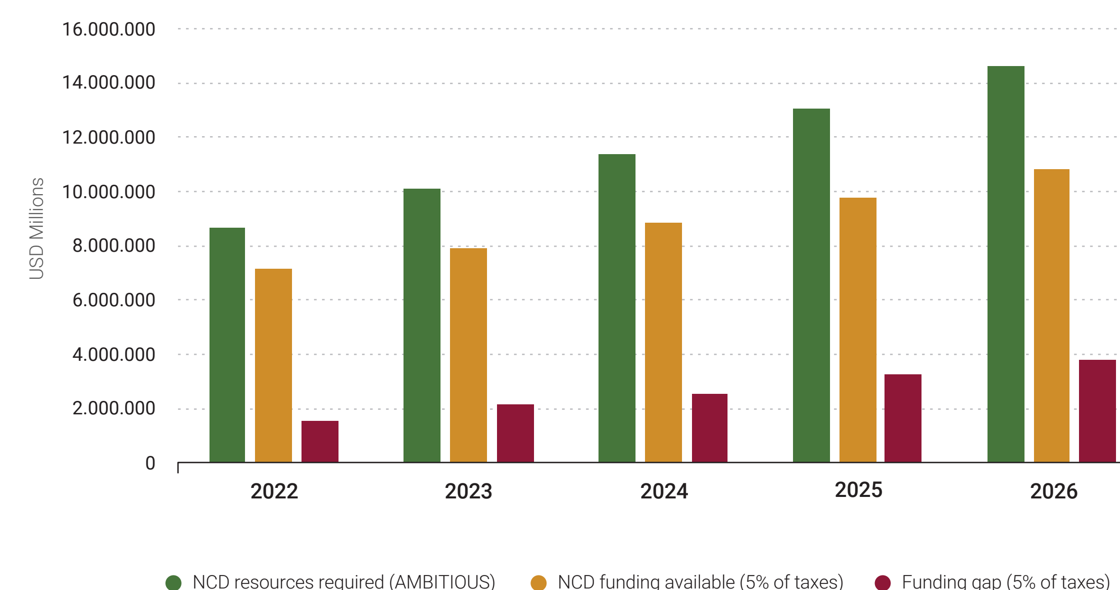
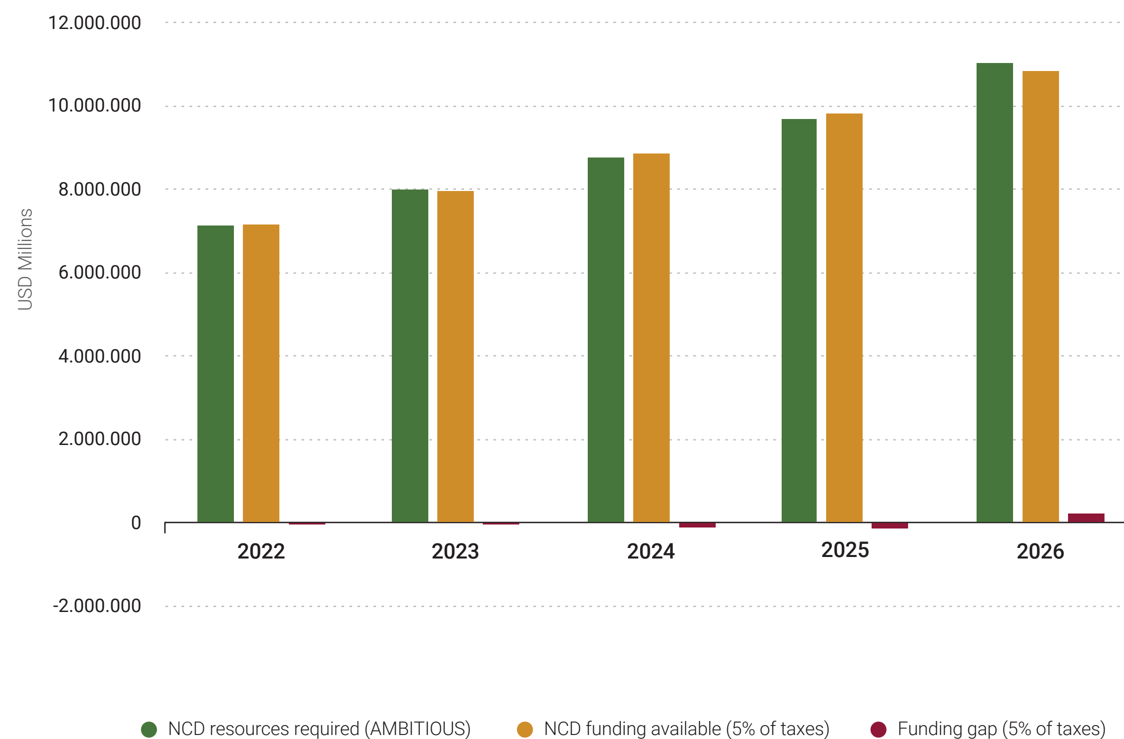


FIGURE 10: Remaining funding gap for Prioritized scenario



7.5 Potential health impact of the plan

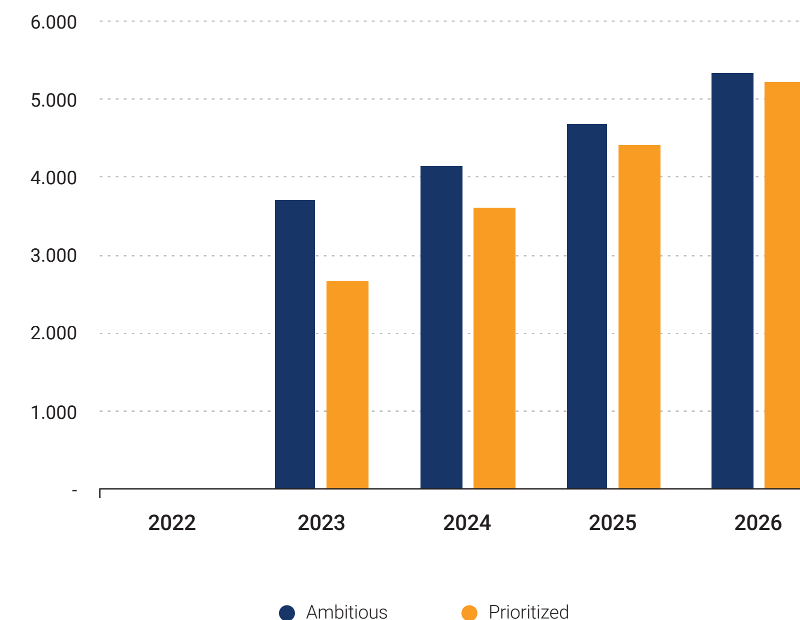
The potential health impact of the plan was estimated using the Spectrum NCD component of the One Health Tool. The tool estimates these impacts based on both estimates of mortality and morbidity.

Healthy life years and deaths (with and without scaled-up intervention) are computed with reference to standard life tables that are already built into the model, and reflect the time spent by the population in a particular state of health with a known degree of disability. Implementation or scale-up of an effective intervention in the population reduces the time spent in a disabling state, either by reducing the number of cases with the disorders (e.g. by decreasing the number of new cases or by increasing the rate of remission), or by improving the level of functioning of people with the condition in question. Both mechanisms increase the number of healthy life years in the population. Similarly, implementation or scale up of an effective intervention can lead to fewer cases or reductions in the case fatality rate, ultimately reducing the numbers of deaths associated with non-communicable disease in the population.

Estimates of the potential health impact of the plan show the importance of investing in both reduction of risk factors, as well as preventive and curative care. These estimates are relatively conservative, as prostate and liver cancer impact cannot yet be modeled with the software available. These results compare deaths and healthy life years in the two plan scenarios (ambitious and prioritized) to a counterfactual in which current coverage is maintained.

Nearly 1,000 deaths would be averted by the plan as compared to the status quo, driven primarily by risk factor reduction, hypertension management, and cardiovascular disease treatment. Diabetes, chronic respiratory disease, and cancer screening and treatment also play a strong role. For cancers in particular, screening results in earlier treatment and improved outcomes for the population. As seen in Figure 11, 16,000-18,000 healthy life years would be gained over the course of the plan, driven by similar factors.

FIGURE 11. Healthy life years gained, compared to status quo



7.6 Summary findings

This chapter details the estimated cost and financing options, and the potential impact of the NCD plan. There are many competing priorities for scarce resources, hence the importance of discussion on whether the NCD plan would be a cost-effective investment. If we look at the incremental costs and incremental effectiveness, measured in healthy life years gained, we can calculate the incremental cost effectiveness ratio (ICER), a metric which is used to compare health interventions or packages. As seen in Table 11, the ICER for this plan is between 0.72 and 1.6 times the GDP, well within the one to three times the GDP which WHO refers to as cost effective. In combination with the indications that an investment of 5% of SSB and tobacco taxes, along with current trends for NCD spending, could finance the prioritized scenario, this plan seems both feasible and cost effective, and well worth the investment.

TABLE 11. Incremental cost effectiveness ratio by scenario

	Prioritized	Ambitious
ICER	USD 567	USD1255
GDP per capita (USD)	787	787
Ratio to GDP	0.72	1.6

ANNEX

Annex 1. Detailed implementation plan

OBJECTIVE 1:

To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.

Advocacy and strategic level engagement to prioritise NCDs prevention and control.

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
Advocate to national and regional government legislature to prioritise and increase allocation of resources for NCDs **Advocate for allocation of resources for NCDs**	1. Engagement of National assembly members 2. Conduct policy dialogue with policy makers. 3. Develop a business plan	Increased budgetary allocations for NCDs	% Increase in budgetary allocation to NCDs	Annually, MOFEA reports on increase in NCD budgetary allocation to the chair of the multi-sectoral committee.	USD 6 million annually	USD 12 million annually	MOFEA	MOH, WHO, DNCD, National Assembly
Conduct NCD impact assessment of different sector policies on NCDs. Generation and dissemination of evidence or influence linkages of policies in other sectors with NCDs	1. Desk review of sectoral policies relevant to NCDs 2. Stakeholders' engagement to understand strategic focus for NCDs 3. Validation of the findings 4. Develop advocacy kits 5. Conduct advocacy visits to relevant sectors on NCDs prevention and control in all policies 6. Conduct periodic national forums on NCDs	Evidence on impact of sectoral policies on NCDs generated and disseminated	Availability of evidence of impact of sectoral policies on NCDs	Annually, MOH reports on the number of sectoral policies reviewed with evidence of negative impact on NCDs to the chair of the multi-sectoral committee	MOH	0	1	Ministry Department and Agencies (MDA), WHO, DNCD,
Advocate and engage MOICI, PURA and GSM operators on mHealth	1. Develop policy brief 2. Engagement with MOICI on mHealth 3. Advocacy meeting with GSM operators for mHealth 4. Annual feedback forums for GSM operators on impacts of mHealth	The population has access to digital solutions to support awareness and prevention of NCDs	Number of mHealth solutions available Number of SMS	Annually MoH reports on the number of implemented mHealth solutions to the chair of the NCD multi-sectoral committee	0 N/A	4 12million	MOH	MOIC, PURA, GSM operators
Advocate for development of regulatory framework for traditional medicine	1. Engagement of Traditional Healers Assoc. (TRAHASS). 2. Engagement meetings with traditional medicine unit on the development of a regulatory framework 3. Support the development of a traditional medicine regulatory framework	Regulations on the activities of the traditional healer or alternative medicine	Regulatory framework for the traditional healers or alternative medicine available	Annually, MOH reports on the availability of and compliance to the regulatory framework for traditional healers and alternative practitioners to the chair of the multi-sectoral committee	0	1	MOH	OP, WHO, DNCD, ministries, CSOs, media

Integrate NCD prevention and control into the broader health and development agenda	1. Promote Universal Health Coverage and advocate for integration of NCDs into national development planning processes/agenda 2. Engagement with UN agencies to include NCDs in United Nations Development Assistance Framework (UNDAF)	NCD integrated into development agenda	Increase international partners funding for NCDs	Annually, MOH reports on the percentage increase in donor funding for health to the chair of the multi-sectoral committee. NHA	N/A	10%	MOH	MOFEA, GRA, WHO, WB, DNCD
Promote universal health coverage and integration of NCDs into national development planning processes/agenda	1. Conduct advocacy meetings with relevant stakeholders.	NCDs integrated into NDP planning process	NCDs captured in the NDP	National Development Plan (NDP)	0	1	MOH	OP, WHO, DNCD, ministries, CSOs, media
Build strong Partnerships for NCDs prevention and control	1. Engagement meeting with public private partnerships for the prevention and control of NCDs 2. Conduct working sessions to develop joint activities on NCDs 3. Collaborate with all governmental agencies, intergovernmental organizations, nongovernmental organizations, civil society, communities and the private sector to prevent and control NCDs 4. Commemoration of international days for NCDs and risk factors - *1. World Cancer Day* *2. World No Tobacco Day* *3. World Diabetes Day* *4. World Health Day* *5. World Heart Day* *6. World Sickle Cell Day* *7. World Hepatitis Day.* *8. World Sight Day* *9. World Obesity Day* *10. Road Safety Week*	Increased partnership for NCD and NCD awareness creation	Number of private partners supporting NCDs Number of NCD international days commemorated	Annually, MOH reports on the number of partnerships for NCDs and international days for NCDs supported and commemorated	N/A 4	10 10	MOH	WHO, WB, DNCD, private sector, CSOs

STRATEGIC OBJECTIVE 2:

To strengthen national NCD capacity, leadership, governance, multi-sectoral action and partnerships to accelerate country response for the prevention and control of non-communicable diseases

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
Establish a multi-sectoral committee on NCDs prevention and control chaired by the Office of the President	1. Conduct Stakeholder mapping 2. Develop TOR for members. 3. Set up criteria for Nominees 4. Conduct inaugural meeting 5. Conduct quarterly multi-sectoral meetings on NCDs	Functional multi-sectoral committee in place	Multi-sectoral committee for NCDs established TOR for members developed Inauguration ceremony report and meetings reports	MOH reports on the functional multi- sectoral committee	0	1	MOH	WHO, DNCD, OP
Establish a Multi-sectoral Technical Working Group (MTWG) for NCD prevention and control	1.Conduct Stakeholder mapping. 2.Develop TOR for members. 3. Nomination of members 4.Inaugural meeting 5. Conduct biannual multi-sectoral Technical Working Group meeting on NCDs	Functional MTWG in place	MTWG established	Number of meetings conducted	0	1	MOH	WHO, DNCD, CSO, MDA, NGOs, training institutions
Advocate for innovative and sustainable financing schemes for NCD prevention and control	1. Develop policy brief on NCDs 2. Develop a business plan for financing. 3. Identify goodwill ambassadors for NCDs. 4. Inaugurate goodwill ambassador	Existence of sustainable finance scheme for NCDs	1. Policy brief on NCD developed 2. Business plan for financing developed 3. Number of engagement meetings with parliamentarians 4. Number of engagement meetings with relevant ministries 5. Number of engagement meetings with civil society 6. Goodwill Ambassador for NCDs identified	1. Copy of the policy brief 2. Developed business plan 3. Meeting reports and attendance from engagement meetings	0	6	MoH	WHO, DNCD, CSO, MDA, NGOs
Conduct an impact assessment of policies and regulations of other sectors on NCDs prevention and control. Create a database of policies and regulations of other sectors relevant to NCDs	1. Conduct an impact assessment of policies and regulations of other sectors on NCDs prevention and control 2. Create a database of policies and regulations of other sectors relevant to NCDs 3. Advocate for inclusion of NCD prevention and control in all policies	All policies capture NCD prevention and control	1. Impact assessment report 2. Established database of sectoral policies and regulations 3. NCD prevention and control included in all policies	1. Assessment Report 2. Established data base 3. Policies with NCD included	0	1	MOH	WHO, DNCD, CSO, MDA, NGOs

Conduct periodic needs assessments of workforce, institutional and research capacities	1. Conduct needs assessment on NCD prevention and control in workforce and institutions	Needs assessment Report		1. Needs assessment report	1. Needs assessment report	0	1	MOH	WHO, DNCD, CSO, MDA, NGOs
Strengthen NCD programme	1. Capacity development for NCD staff 2. Refurbish, expand and equip NCD office 3. Procurement of office laptops, stationery and other office equipment 4. Procurement of vehicles 5. Maintenance of vehicles 6. Internet connection and ICT accessories	Strengthen systems and structures for NCD response in the country		Availability of suitable infrastructures and manpower for leading NCD response	Annually, MOH reports on the availability of suitable structures and manpower for NCD response to the chair of the multi-sectoral committee	N/A	TBD	MOH	MOFEA, WB, MDAs
Strengthen structures and capabilities for prevention and early detection of NCDs at all levels	1. Conduct training of healthcare providers on NCD prevention and control (public health officers, doctors and nurses, village health workers) 2. Conduct training of community structures on NCD prevention and control (drama groups and traditional communicators, MDFTs, religious leaders, women's groups, youth groups and peer health educators)	NCD prevention and control strengthened		1. Training reports	1. Number of healthcare providers trained 2. Number of community structures trained 3. Number of peer health educators trained 4. Number of health facilities established, strengthened and conducting weekly NCD clinics	N/A	100 doctors, 200 nurses and midwives, 200 public health officers 950 village health workers	MOH	WHO, DNCD, CSO, MDA, NGOs
Train or orient personnel of other sectors on the complexities of NCDs	1. Conduct training and orientation of personnel of other sectors (government and nongovernment) on NCD complications	Working population of other sectors informed on NCD complications		1. Training reports	1. Number of training or orientation meetings conducted	0	21	MOH	WHO, DNCD, CSO, MDA, NGOs

STRATEGIC OBJECTIVE 3:

To reduce risk factors for non-communicable diseases and underlying social determinants through health-promotion and education-strengthened cooperation and advocacy.

TOBACCO CONTROL								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
3.1 Reinforce and finance the implementation of tobacco control (TC) policy and action plan through the introduction of tobacco levy	3.1.1 Conduct advocacy meeting with the SMT of Ministry of Health, 3.1.2 Conduct advocacy meeting with parliament, 3.1.3 Conduct advocacy meeting with Ministry of Finance (including GRA) 3.1.4 Conduct advocacy meeting with civil society organizations	Tobacco levy approved and accessible for tobacco control implementation	% Of tobacco tax allocated as tobacco levy for tobacco control implementation	MOFEA reports on the % of tobacco tax allocated as resource for tobacco control and the actual % released for tobacco control implementation to the chair of the multi-sectoral committee	0	5% of the total TC tax	MOFEA	MOH, WHO, civil society
3.3 Develop and disseminate social and behavioural change educational material to raise public awareness about the consequences of tobacco use, exposure to tobacco smoke, and encourage smokers to quit by providing a step-by-step guide on how to stop tobacco use	3.3.1 Assessment of knowledge on tobacco control 3.3.2 Conduct workshop to develop community engagement tools on tobacco 3.3.3 Training of tobacco control law enforcers (police, Gambia Revenue Authority (GRA), Public Health Officers (PHOs) & Education Inspectors (EIs) 3.3.4 Conduct joint operations to enforce TC laws & regulations 3.3.5 Develop messages and communication support materials on tobacco use prevention and control 3.3.6 Print the communication support materials 3.3.7 Distribution of printed materials 3.3.8 Development of TV and radio spots 3.3.8 Airing of TV and radio spots 3.3.9 Conduct live and interactive radio and TV programmes on NCD risk factor reduction 3.3.10 Disseminate mHealth messages through mobile operators 3.3.11 Orientation meeting with students and teachers on dangers of tobacco use 3.3.12 Community dialogue on dangers of tobacco use	Improved public awareness of the dangers of smoking	The proportion of smokers who quit smoking	1. Number of law enforcers trained on tobacco control 2. Number of communication support materials printed and distributed 3. Number of health workers trained 4. Number of live and interactive radio and TV programmes conducted on NCD risk factor reduction 5. Number of radio and TV spots aired	WHO STEP 16.7%	11.70%	MoH MoI, MOICI	WHO, CTCA, TOPAFA, DNCD
3.4 Conduct mass media campaigns to discourage tobacco use through graphic warning signs and health education	1. Musical caravan on new graphic health warnings and messages 2. Radio and TV panel discussions on graphic health warnings (GHWs) 3. Media briefing on GHWs	Improved public awareness on the dangers of smoking	Number of musical caravans conducted; Number of radio and TV panel discussions conducted	Number of musical caravans conducted; Number of radio and TV panel discussions conducted	Number of illicit trades reported by July 2021	TBD	NCD	
3.5 Strengthen an intersectoral collaboration on the implementation of measures to minimise illicit trade in tobacco products	1. Orientation meeting with border security on illicit trade of tobacco protocol 2. Cross-border meeting with neighbouring countries on strengthening the illicit trade protocol 3. Support quarterly meeting of the Tobacco Industrial Monitoring Team 4. Quarterly monitoring of tobacco industry interference	Improved vigilance for illicit tobacco trade	Number of illicit trades reported	Number of illicit trades reported	Number of illicit trades reported by April 2022		MoH,	Ministry of investment, Ministry of interior

UNHEALTHY DIET								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
	1. Conduct engagement meetings with relevant ministries on subsidizing commodities for production of fruits and vegetables 2. Conduct engagement meetings with Food Safety Quality Authority (FSQA) on food safety standards	Subsidies to improve affordability, accessibility and availability of fruits and vegetables are in place	Availability of subsidies for fruits and vegetables	NaNA reports on the availability of subsidies for fruits and vegetables to the chair of the multi-sectoral committee	0	TBD	NaNA	MOH, WHO, FAO, DNCD
			% of population consuming appropriate quantities of fruits and vegetable	Every five years, report on the % of the population consuming appropriate quantities of fruits and vegetables as part of the STEP surveys	77.6% (STEP survey 2010)	98%	MOH	WHO, FAO, DNCD
3.7 Strengthen mass media campaigns and social marketing initiatives that inform and encourage consumers about healthy dietary practices	1. Increase availability of fruits and vegetables through home gardening 2. Develop policies on tax and subsidies to ensure availability and consumption of healthy diets. 3. Validation of the policy 3. Conduct mass media campaigns on healthy diets and promote the intake of fruits and vegetables 4. Review and update communication support materials on healthy diets. 5. Validation of documents and printing	Increased intake of healthy foods including fruits and vegetables	Number of mass media and social marketing initiatives to encourage healthy dietary practices	MOH reports on mass media campaigns and social marketing initiatives to encourage consumers on healthy dietary practices to the chair of the multi-sectoral committee	0	20	MOH	WHO, WB, FAO, DNCD
3.8 Increase availability and affordability of heathy foods through appropriate policy and fiscal measures	1. Identify and engage relevant stakeholders 2. Develop a policy brief with relevant stakeholders 3. Advocacy visit to policy makers on need for fiscal measures for availability of healthy foods 4. Develop fiscal policy measures to address availability and affordability of healthy foods 5. Validation of documents and printing	Policies and fiscal measures in place to make healthy foods available and affordable	Number of policies and fiscal measures in place to enhance availability and affordability of healthy foods	NaNA reports on the availability of an appropriate policy and fiscal measures to increase availability and affordability of healthy foods to the chair of the multi-sectoral committee	0	1	NaNA	WHO, WB, FAO, DNCD
3.9 Create health- and nutrition-promoting settings through implementation of nutrition education and counselling in schools, workplaces and hospitals	1. Advocate for the establishment of healthy workplace settings 2. Orientation meeting with regional directors and SMT to incorporate nutrition education and counselling in schools 3. Capacity building for clusters monitors and health/science clubs to facilitate nutrition education and counselling 3. Orientation meetings with Mother's Clubs for nutrition education in the community 4. Capacity building of MDFT on nutrition education and counselling in the workplace. 5. Capacity building of health care providers on nutrition education and counselling in hospitals and health facilities	Health- and nutrition-promoting settings for nutrition education and counselling in place in schools, workplaces and hospitals	% of schools, workplaces and hospitals with health- and nutrition-promoting settings for nutrition education and counselling	NaNA reports on the % of schools, workplaces and hospitals with health- and nutrition-promoting settings for nutrition education and counselling	0	50%	NaNA	MOH, WHO, FAO, DNCD

3.10 Control inappropriate marketing of unhealthy products through the mass media	1. Develop protocols and guidelines on the advertisement of foods 2. Monitoring of media advertisements on foods and beverages	Control mechanisms to mitigate against inappropriate marketing of unhealthy products through mass media in place	Availability of the control mechanisms for inappropriate marketing of unhealthy food through mass media	MOH reports on the control mechanisms to prevent inappropriate marketing of unhealthy foods to the chair of the multi-sectoral committee	N/A	50% reduction in inappropriate advertisements	MOH	Broadcasting control agencies
3.11 Engage food retailers, caterers and restaurant owners to progressively improve the availability and affordability of healthier foods	1. Conduct orientation meetings with food handlers' associations 2. Conduct orientation meetings with hoteliers and restaurant owners 3. Conduct orientation meetings with school vendors and cooks 4. Conduct orientation meetings with bakers' association	Food retailers, caterers and restaurant owners improved availability and affordability of healthier foods	Number of food retailers, caterers and restaurant owners engaged to improve the availability and affordability of healthier foods	NaNA reports on the number of food retailers, caterers and restaurant owners engaged to improve the availability and affordability of healthier foods to the chair of the multi-sectoral committee	0	30%	NaNA	MOH, WHO, FAO, DNCD
			% Of food retailers, caterers and restaurant owners engaged who have improved the availability and affordability of healthier foods	NaNA reports on the % of food retailers, caterers and restaurant owner engaged who have improved the availability and affordability of healthier foods to the chair of the multi-sectoral committee	0	15%	NaNA	MOH, WHO, FAO, DNCD
3.12 Advocate for standardized targets for the amounts of salt in foods and meals	1. Conduct workshops with relevant stakeholders to develop standards 2. Develop communication support materials on salt intake 3. Production of communication support materials 4. Distribution of communication support materials 5. Community engagement on unhealthy salt intake and additives	Standard amounts of salt in foods and meals available	Availability of standard amounts of salt in food and meals	NaNA reports on the availability of standard amounts of salt in foods and meals to the chair of the multi-sectoral committee	0	1	NaNA	MOH, WHO, FAO, DNCD
3.13 Advocate for the implementation of front-of-packet labelling on food products to reduce total energy intake, sugars, sodium and fats	1. Conduct population's baseline salt intake assessment 2. Set target levels for the amount of salt in foods and meals and enforce reformulation of food products and meals to contain less salt/sodium 3. Enforce front-of-packet labelling 4. Establish policies for food procurement that encourage the purchase of products with lower salt/sodium content 5. Conduct behaviour change communication and mass media campaigns on salt reduction 6. Engage food producers, processors, retailers, restaurants and catering services to progressively reduce salt in their products	Front of packet labelling of food products with energy content available	% of food products with front-of-packet labelling of energy content	NaNA reports on the % of food products with front-of-packet labelling of energy content to the chair of the multi-sectoral committee	0	40%	NaNA	MOH, WHO, FAO, DNCD, CSOs

3.15 Advocate for the introduction and implementation of sugar sweetened beverage tax	1. Establish regulatory measures on sugar sweetened beverages 2. Set target levels for the amount of sugar sweetened beverages in foods and meals and enforce reformulation of food products and meals to contain less sugar sweetened beverages 3. Reduce sugar consumption through effective taxation on sugar sweetened beverages 4. Establish policies for food procurement that encourage the purchase of products with lower sugar sweetened beverages 5. Conduct behaviour change communication and mass media campaigns on sugar sweetened beverages reduction 6. Engage food producers, processors, retailers, restaurants and catering services to progressively reduce sugar sweetened beverages in their products	Increased taxation on locally produced and imported sugar sweetened beverages	New sugar taxation scheme issued	Annually, GRA reports on the progress towards implementation of a new sugar taxation scheme to the chair of the NCD multi-sectoral committee	0	1	GRA	MOH, WHO, FAO, DNCD, CSOs
3.16 Conduct school SBCC programmes to reduce the consumption of salt, saturated fat and sugar	1. Orientation meeting with PTA on the consumption of salt, saturated fat and sugar 2. Orientation meeting with SMC on the consumption of salt, saturated fat and sugar 3. Orientation meeting with Mothers' Clubs on the consumption of salt, saturated fat and sugar 4. Orientation meeting with school cooks on the consumption of salt, saturated fat and sugar 5. Orientation meeting with cluster monitors on the consumption of salt, saturated fat and sugar	SBCC programmes to reduce consumption of salt, saturated fat and sugar available in school	% Of schools where awareness to reduce salt consumption, saturated fat and sugar have been conducted	MOE reports on the % of schools reporting programmes to reduce consumption of salt, saturated fat and sugar	0	40%	MOE	MOH, WHO, UNICEF and DNCD
3.18 Conduct community behaviour change communication and mass media campaigns on consumption of salt, saturated fat and sugar	1. Conduct radio and TV panel discussions on salt, saturated fat and sugar 2. Conduct media briefing meetings with the AOHJ 3. Develop radio and TV spots on salt, saturated fat and sugar 4. Air radio and TV spots on salt, saturated fat and sugar 5. Conduct interactive film shows on salt, saturated fat and sugar	SBCC programmes to reduce consumption of salt, saturated fat and sugar available in communities	% of communities where awareness of reducing consumption of salt, saturated fat and sugar have been conducted	MOH reports on the % of schools reporting programmes to reduce consumption of salt, saturated fat and sugar	0	40%	MOH	WHO and DNCD

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
3.20 Advocate for the inclusion of NCD education in the school curriculum	1. Engagement meeting with senior management teams of the MOBSE and MOHERST on the inclusion of NCD education in the school curriculum	NCD education integrated into primary and secondary school curriculum	Availability of curriculum with NCD Education	Ministry of Education reports on the update of the primary and secondary school curriculum with NCDs education section to the chair of the multi-sectoral committee	0	1	Ministry of Education	MOH, WHO, UNICEF, DNCD

PROMOTING PHYSICAL ACTIVITY

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
3.25 Advocate for quality physical education from primary to tertiary level with practice opportunities for physical activities before, during and after school days	1. Advocacy visits to goodwill ambassador, celebrities and OAPs to solicit their support for the campaign for physical activity 2. Advocacy visits to schools to strengthen quality physical education in all schools.	Quality physical education integrated into school activities with practical opportunities	% of schools that have integrated quality physical education into regular school activities	Annually, Ministry of Education reports on the % of schools that have integrated quality physical activities into regular school activities to the chair of the multi-sectoral committee	0	50%	MOE	MOH, WHO, DNCD, private sector
3.26 Engagement of corporate organizations to sponsor periodic mass physical activity programmes as part of their corporate social responsibility	1. Identify all corporate organizations in the country 2. Advocacy visits to corporate organizations to solicit support for mass periodic physical activity programmes	Corporate organization sponsors periodic mass physical activity campaign	Number of corporate organizations sponsoring periodic mass physical activity campaign activities	Annually, Ministry of Youth and Sports reports on the number of corporate organizations sponsoring periodic mass physical activities to the chair of the multi-sectoral committee	1	7	Ministry of Youth and Sport	MOH, WHO, DNCD, private sector

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
3.27 Engage communities and encourage them to institute local programmes that increase physical activity	1. Engagement of district authorities and heads of villages on the benefit of physical activities 2. Soliciting local commitment and programmes that increase physical activities	Communities engaged. They institute their traditional activities to improve physical activities	% of communities engaged in local physical activities. % of communities that have instituted local activities after engagement	Annually, Ministry of Youth and Sports reports on the % of communities engaged and who have instituted local physical activities to the chair of the multi-sectoral committee	0	50%	Ministry of Youth and Sport	MOH, WHO, DNCD, private sector
ALCOHOL USE CONTROL								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
3.28 Develop and implement a multi-sectoral approach alcohol policy	1. Engagement meeting with alcohol committee on the development of alcohol policy 2. Develop alcohol policy 3. Print and disseminate alcohol policy.	National alcohol policy and action plan developed and disseminated	Alcohol policy developed and disseminated	MoH reports on the progress towards developing and disseminating the national alcohol policy	0	1	MOH	NCD, WHO, DNCD, CSOs, private sector
3.29 Develop SBCC material to discourage harmful use of alcohol.	1. Development of SBCC messages and material 2. Production and dissemination of SBCC materials 3. Orientation of frontline communicators SBCC messages	SBCC materials discouraging harmful use of alcohol developed and disseminated	Number of SBCC materials on harmful use of alcohol developed and disseminated	Annually, MOH reports on the number of SBCC materials developed to discourage harmful use of alcohol to the chair of the multi sectorial committee	0	4	MOH	WHO, DNCD, CSOs
3.30 Support, empower and provide services to individuals or communities engaged in harmful alcohol use	1. Advocate for establishment of alcohol counselling centres in existing health facilities	Alcohol abuse counselling and therapy programmes established and functioning	Number of facilities providing alcohol abuse counselling and therapy services	Annually, MoH reports on the number of facilities providing alcohol abuse counselling and therapy services to the chair of the NCD multi-sectoral committee	0	7	MOH	WHO, DNCD, CSOs

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
3.31 Strengthen community awareness and ownership of actions against harmful use of alcohol	1. Orientation meeting with faith-based organizations. 2 Orientation meeting with MDFTs 3. Engagement meeting with VDC and ward counsellors	Communities aware and strengthened to own actions against harmful use of alcohol in their communities	Number of communities aware and willing to own action against harmful use of alcohol in their communities	Annually, the Ministry of Health reports on the number communities that have awareness creation and are willing to own action against harmful use of alcohol in their communities to the chair of the multi-sectoral committee	0	50%	MOH	MOFEA, Ministry of Culture, Ministry of Information, WHO, DNCD, CSO
3.32 Set up taskforce to prevent illicit alcohol trade with monitoring for compliance	1. Advocacy meeting with SMT of Ministries of Finance, Trade, Interior and Health 2 Orientation meeting with border securities on illicit alcohol trade	Task force to prevent illicit alcohol trade is constituted and functional	Availability of a functional task force against illicit alcohol trade	Annually, Ministry of Trade and Investment reports on the activities of task force to prevent illicit alcohol trade to the chair of the multi-sectoral committee	0	1	Ministry of Trade and Investment	MOH, law enforcement agencies, WHO, DNCD, private sector, CSOs
REDUCTION OF AIR POLLUTION								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
3.33 Develop guidelines to regulate air pollution	1. Advocacy meeting with Ministry of Environment and Climate Change on the need for guidelines to regulate air pollution 2. Development of guidelines to regulate air pollution 3. Print and disseminate guidelines on air pollution	Regulations on air pollution developed	Availability of regulations on air pollution	Ministry of Environment and Climate Change reports on the availability of regulations on air pollution to the chair of the multi-sectoral committee	0	1	Ministry of Environment and Climate Change	MOH, WHO, DNCD, CSO
3.34 Sensitization of communities on air pollution guidelines	1. Develop key messages on air pollution 2. Organise community outreach programmes 3 Conduct awareness activities on air pollution on radio and TV	Guidelines on use of modern fuel and technologies well disseminated	% of population aware of the benefit of using modern fuels and technologies for cooking and heating	Ministry of Environment and Climate Change reports annually on % of population aware of the benefit of using modern fuels and technologies for cooking and heating to the chair of the multi-sectoral committee	0	70	Ministry of Environment and Climate Change	MOH, WHO, DNCD, CSO
			% of the population using modern fuels and technologies for cooking and heating	Ministry of Environment and Climate Change reports annually on % of population using modern fuels and technologies for cooking and heating to the chair of the multi-sectoral committee	0	30%	Ministry of Environment and Climate Change	MOH, WHO, DNCD, CSO
3.35 Support creating awareness of benefit of using modern fuels and technologies for cooking, heating	Sensitization campaign	Awareness created of the benefit of using modern fuels and technologies	% of people using modern fuels and technologies for cooking and heating	Every five years, report on the % of citizens that are aware of the benefit of using modern fuels and technologies and using same as part of the STEP survey.	N/A	30%	Ministry of Environment and Climate Change	MOH, WHO, DNCD, CSO

3.36 Reinforce continuous vaccination against Hepatitis B	Advocacy meeting with EPI	Hepatitis B vaccination in infants is optimised	% of infants that receive Hepatitis B vaccination	Annually, MoH reports on the % of infants that have received Hepatitis B vaccinations to the chair of the NCD multi-sectoral committee	93	93%	MOH	
3.38 Support early detection, quality treatment and care of Hepatitis B and C infections through awareness creation	Develop communication support material to advocate for early screening and detection of infection	High-risk population is screened for Hepatitis B and C infections	% of the population (older than 15 years) screened for Hepatitis B and C infections	Annually, MoH reports on the % of target population screened for Hepatitis B and C infections to the chair of the NCD multi-sectoral committee	0	40%	MOH	
3.39 Reinforce continuous vaccination programme against HPV while developing communication strategy for addressing vaccine rejection	Community engagement on HPV vaccination	Young girls aged 12 years are vaccinated against HPV	% of young girls aged 12 years that have received HPV vaccine	Annually, MoH reports on the % of target population that has received HPV vaccines to the chair of the NCD multi-sectoral committee	X	95%	MOH	
3.40 Strengthen routine liver, breast and cervical cancer screening and management of early stages	1. Support TWG meeting to increase early screening 2. Support awareness on how to conduct self-breast examinations 3. Mass community screening of cervical and breast cancer through outreach activities 4. Training health care workers on cervical and breast cancer screening	Eligible women (30-49 years) are screened for cervical cancer Cervical cancer screening and treatment of pre-cancerous lesions General screening for liver and breast cancers	% of target population screened for cancers	Annually, MoH reports on the % of target population screened for cancers to the chair of the NCD multi-sectoral committee	10%	40%	MOH	Hospitals, MRC, CSOs, WHO, DNCD
3.41 Screening, diagnosis and treatment of rheumatic fever and RHD	1. Conduct awareness creation on risk factors (especially sore throats, etc.) and misconceptions on rhematic fever with parents and teachers 2. Train health workers to conduct rhematic heart disease screening 3.Conduct outreaches to schools and communities to screen for rheumatic heart disease	Decreased rates of rheumatic fever diseases leading to chronic diseases	% of target population screened for rheumatic fever and RHD	Annually, MOH reports on the % of target population screened for rheumatic fever and RHD to the chair of the NCD multi-sectoral committee	N/A	40%	MOH	Hospitals, MRC, CSOs, WHO, DNCD
3.42 Continuous vaccination for COVID 19	Strengthen awareness activities that encourage high risk groups to accept COVID vaccination and dispel misconceptions on COVID 19	COVID 19 vaccination for the high-risk groups is optimised	% of high-risk groups vaccinated against COVID 19	Annually, MOH reports on the % of high-risk groups that received the COVID 19 vaccine to the chair of the multi-sectoral committee	13%	70%	MOH	Hospitals, MRC, CSOs, WHO, DNCD

PROMOTE ROAD SAFETY FOR THE PREVENTION OF INJURIES AND DISABILITIES								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
3.43 Advocate for the development and implementation of comprehensive laws (drink driving, mobile phone use, child restraint, speed limits in residential areas) that address risk factors for road traffic accidents (RTAs)	1. Conduct engagement meetings with National Assembly Select Committee on road safety on the review of the Motor Traffic Act 2. Conduct engagement meetings with the Ministry of Interior and the police high command on the review of the Motor Traffic Act 3. Advocacy meetings with Ministry of Interior for the enforcement of motor traffic laws	Comprehensive laws (drink driving, mobile phone use, child restraint, speed limits in residential areas) to address the risk factors of road traffic accidents available	Availability of a comprehensive law to address risk factors for RTAs	Ministry of Transport reports on the availability of a comprehensive law to address the risk factors of RTAs to the chair of the multi-sectoral committee	0	1	Ministry of Transport	MOH. WHO
3.44 Advocate for creation of a national emergency care toll free number	1. Conduct engagement meetings with the Ministry of Information and Communication Infrastructure (MoICI), Public Utility Regulatory Authority (PURA) and the telecommunication companies on a synchronized emergency trauma response mobile number for the police, fire and rescue service, the Red Cross and the ambulance services of the Ministry of Health	Toll-free number for national emergency care available	Availability of a national toll-free line for emergencies	MOH reports on the availability of a toll-free emergency number for emergencies to the chair of the multi-sectoral committee	0	1	MOH	Telcos, private sector, WHO, WB, MOFEA
3.45 Advocate for the development of harmonised tools for trauma cases	1. Conduct a stakeholder's workshop to develop standardised trauma data collection tools 2. Engage the management of hospitals and major health facilities (public & private) for the institution of a standardized and harmonized data collection tool for trauma cases 2. Engage the Directorate of Health Information and Planning for the creation of data management system for trauma cases 3. Support the creation and establishment of trauma registries in all major health facilities	Trauma registry available at all major health facilities	% of major health facilities with trauma registers	MOH reports on the % of major health facilities with trauma registers to the chair of the multi-sectoral committee	5	70	MOH	WHO, DNCD, regional health directorates
3.46 Create a national emergency care response system	1. Engage the Ministries of Interior, Transport, Works and Infrastructure and the Red Cross for the creation of a national emergency care system	National emergency care system available	Availability of a national toll-free line for emergencies	MOH reports on the availability of a toll-free emergency number for emergencies to the chair of the multi-sectoral committee	0	1	MOH	Ministries of Interior, Transport, Works and Infrastructure, Red Cross
3.48 Increased awareness among motorcyclists and other public road users on the proper use of roads	1. Creation of regional safety champions on road safety 2. Engagement meetings with regional transport unions on road safety 3. Community engagement on road safety 4. Conduct training of trainers for road safety champions on road safety 5. Conduct TV and radio awareness creation activities on road safety	Increased awareness and knowledge of motorcyclists about the proper use of roads	Number of awareness campaigns conducted	Annually, Ministry of Transport reports on the number of awareness campaigns conducted to the chair of the NCD multi-sectoral committee	N/A	80%	Ministry of Transport	MOH, WHO, DNCD, CSOs

3. 49 Introduce mandatory first aid training for public transport and truck drivers	1. Conduct regional training of drivers on first aid	Increased number of drivers trained on first aid as a condition for acquiring or renewing a driving licence	% of drivers with proper first-aid training	Annually, Ministry of Transportation reports on % of drivers with proper first aid training to the chair of the NCD multi-sectoral committee	N/A	80%	Ministry of Transport	MOH, WHO, DNCD, CSOs
3.50 Identify and improve accident prone sites or 'black spots'	Conduct mapping of accidents prone sites and black spots for crashes	Accident prone sites are identified	Number of accident-prone sites identified	Annually, Ministry of Transport reports on the number of accident-prone sites identified to the chair of the multi-sectoral committee	N/A	TBD	Ministry of Transport	MOH, WHO, DNCD, CSOs
		Plans to reduce accidents in such sites put in place	Availability of strategies to reduce accidents in identified accident prone sites	Annually, Ministry of Transport reports on strategies to reduce accidents in identified accident prone sites to the chair of the multi-sectoral committee				
3.52 Enforce mandatory medical check-ups (e.g. sight, hearing, disabilities) before issuing or renewing driver's license	Conduct engagement meeting with the relevant stakeholders on mandatory medical check-ups	Increased safety and reduced unintentional injuries	% of drivers completing medical check-ups when acquiring or renewing their driving licence	Annually, Ministry of Transport reports on % of drivers completing medical check-ups when acquiring or renewing their driving licence to the chair of the NCD multi-sectoral committee	0	50%	Ministry of Transport	MOH, WHO, DNCD, CSO
3.53 Road safety awareness campaign in schools	1. Conduct an assessment of the knowledge and perception of students on road safety 2. Conduct orientation meetings with MOBSE & MOHRST and other relevant partners on possible inclusion of road safety education in the school curriculum 3. Conduct engagement meetings with the Ministry of Works, Transport and Infrastructure and NRA on road safety signs and road markings around school zones 4. Develop road safety education support materials 5. Print road safety education support materials 6. Disseminate road safety education support materials 7. Engagement of school management, students and PTAs on their role in road safety education	Road safety awareness campaign conducted in schools	Number of schools where road safety awareness campaign was conducted	Annually, Ministry of Transport reports on number of schools where road safety awareness campaign was conducted to the chair of the multi-sectoral committee	0	40%	MOE	MOH, Ministry of Transport
3.54 Road safety awareness campaign in communities	1. Conduct community engagement meetings on the role of the community in road safety 2. Conduct training of basic first aid treatment for victims of road traffic accidents	Road safety awareness campaign conducted in communities	Number of communities where road safety awareness campaign was conducted	Annually, Ministry of Transport reports on number of communities where road safety awareness campaign was conducted to the chair of the multi-sectoral committee	0	30%	Ministry of Transport	

STRATEGIC OBJECTIVE 4:

To strengthen health systems to address the prevention and control of non-communicable diseases and the underlying social determinants through people-centred primary health care and universal health coverage.

EXPAND QUALITY NCD SERVICE DELIVERY								
Strategic Actions	**Activity**	**Expected Outputs**	**Indicators**	**Indicator Measurement**	**Lead Agency**	**Baseline**	**Target**	**Partners**
Pilot WHO-PEN in public health facilities	4.1 Conduct training of doctors on WHO-PEN in selected facilities in all health regions, provision of medicine and essential equipment and supplies 4.2 Conduct training of nurses on WHO-PEN in selected facilities in all health regions, provision of medicine and essential equipment and supplies 4.3 Conduct training of PHOs on WHO-PEN in selected facilities in all health regions, provision of medicine and essential equipment and supplies	Doctors, nurses and PHOs to be trained on WHO-PEN	Number of doctors, nurses and PHOs trained on WHO-PEN	Report of the number of doctors, nurses and PHOs trained	MoH	0	300	DNCD, WHO
Strengthen the implementation of WHO PEN in primary health care facilities	1. Train VSGs, on WHO-PEN 2 Train CBCs on WHO-PEN 3 Train VHWs on WHO-PEN	Increased geographical access to quality NCD services nationally	Number of VSGs, CBCs and VHWs with full implementation of WHO PEN interventions	Training reports of number of VSGs, CBCs and VHWs with full implementation of WHO PEN interventions to the chair of the NCD multi-sectoral committee	MOH	0%	TBD	DNCD, WHO, WDF, CSOs
Expand the implementation of complementary PEN-Plus services, which focus on severe chronic NCDs, at district hospitals	Implement WHO-PEN services in district hospitals	District hospital implemented WHO-PEN plus on chronic NDCs	Number of district hospitals that provide echocardiography-based management of heart failure	% of diabetic patients with controlled disease (fasting blood glucose level, random glucose level below 200, HbA1c below 7%)	MoH	N/A	TBD	DNCD, WHO, WDF, CSOs
Develop integrated WHO-PEN clinical guidelines for use at all health facilities and train heath workers on the WHO-PEN guideline	1. Develop integrated clinical guidelines and protocols for all levels of care, especially referral facilities 2. Train doctors on NCDs treatment guidelines 4. Train nurses on NCDs treatment guidelines	National NCD prevention, early detection, care and treatment guidelines are integrated into teaching curricula of medical, midwifery and nursing school undergraduate students	Number of annual graduates from medical and nursing schools trained in national NCD prevention, early detection, care and treatment guidelines	MOE reports on the number of graduates trained in national NCD prevention, early detection, care and treatment guidelines annually to the chair of the NCD multi-sectoral committee	MoH	0	1	MoH, DNCD, higher learning institutions with medical and nursing schools
Integrate NCD screening, treatment and care into other services, focusing on HIV/AIDS, TB and maternal, child and community health (MCCH) services	Develop guidelines for integration of services Training of healthcare workers on integrated screening for NCDs at RCH, HIV/TB clinics Engagement meetings with other programme areas	Palliative care and end-of-life care integrated into primary health care	Guidelines on end-of-life and rehabilitation care developed - health workers trained on end-of-life care and rehabilitation Number of PHC facilities implementing palliative and end-of-life care	% of health workers trained on palliative care- reports on number of PHC facilities implementing palliative care	MoH/Health training institutions	N/A	60%	DNCD, WHO, MoH

Strengthen an integrated model of care that includes facility and home visits for all.	Provide palliative care services to the health facilities and conduct home visits for other NCDs	Increased access to palliative care services	Number of health facilities and homes with functional palliative care services	Annually, MoH reports on the number of health facilities and homes with palliative care services	MOH	N/A	20%	Directorate of health services, CSOs, DNCD, WHO, regional health directorate
Strengthen community-based screening for diabetes and hypertension	Conduct community-based screening for diabetes and hypertension.	Community-based screening conducted	Proportion of people screened per community	Reports on community-based screening	MoH, DCND	N/A	60%	
Strengthen community-based structures on NCD prevention and control	Train TCs, drama groups, VHWs, CBCs and VSGs on NCD prevention and control	Number of TCs, drama groups, VHWs, CBCs and VSGs trained on NCD prevention and control	Number of community structures trained.	Training reports of number of community structures to provide support to NCD patients and persons with disabilities during emergencies annually to the chair of the NCD multi-sectoral committee	MOH	N/A	TBD	DNCD, WHO, WDF, CSO

HUMAN RESOURCES DEVELOPMENT ON EARLY DETECTION, MANAGEMENT AND CARE OF NCDS

Strategic Actions	Activities	Expected output	Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
Capacity strengthening of health care providers to readily screen for NCDs to facilitate early detection, diagnosis and management of NCDs at all levels	Trainings and seminars	Increased number of qualified, trained healthcare providers at all levels to provide NCD early detection, diagnosis and management	Number of health care providers trained in NCDs management by disease category: integrated NCD management, injuries and disabilities, cancer early detection, and treatment and palliative care	Annually, MoH reports on the number of healthcare providers trained to the chair of the NCD multi-sectoral committee	MOH	300	2,000	MoH, DNCD, WHO, EFSTH, CSOs, WDF
Establish and implement a strong NCD clinical mentorship system, cascaded throughout health system tiers	Supportive supervision visits	Increased quality of NCD services provided at all levels of care	% of hospitals with at least bi-annual mentorship visits % of health centres with quarterly mentorship visits	Bi-annually, MoH reports on the % of hospitals with regular mentorship visits to the chair of the NCD multi-sectoral committee	MOH	N/A	50%	MoH, DNCD, WHO, EFSTH, CSOs, WDF
Develop NCD e-learning modules targeting health care providers at all levels to serve as CMEs for licensing renewal processes		Four NCD e-learning modules available	% of healthcare providers that completed NCD- related e-learning modules, focused on cancer, integrated NCD management, palliative care, and injuries and disabilities	Annually, MoH reports on the % of healthcare providers that have completed NCD-related e-learning modules, focused on cancer, integrated NCD management, palliative care, and injuries and disabilities, to the chair of the NCD multi-sectoral committee	MOH	0	4	DNCD, WHO, WDF, CSOs

STRENGTHEN THE SUPPLY CHAIN OF NCD MEDICATIONS, LABORATORY COMMODITIES, AND TECHNOLOGIES/MEDICAL EQUIPMENT.								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
Advocate for the continuous availability of essential NCD medicines, supplies and technologies for screening, diagnosis, treatment and monitoring at all levels	Advocacy Meeting to ensure that essential medicines for NCDs clinics are available	Stock outs of essential NCD medicines reduced at all levels, across central stores and health facilities (for national package of services by level of health care delivery)	% of facilities reporting frequent stock outs of NCD drugs and supplies	Annually, MoH reports on the % of facilities reporting frequent stock outs of NCD drugs and supplies to the chair of the NCD multi-sectoral committee	N/A	TBD	MOH	CMS, Directorate of pharmaceutical services, DNCD, WHO, WDF
Regularly update a list of essential NCD drugs, supplies and equipment at different levels of care, based on the national NCD prevention and treatment guidelines	Routine activities on essential NCD drugs, supplies and equipment at different levels of care, based on the national NCD prevention and treatment guidelines	The list of essential NCD medicines, supplies and equipment is available and updated regularly	Updated list of essential NCD medicines, supplies and equipment	Annually, MoH reports on the updated essential NCD medicines, supplies and equipment from an updated list to the chair of the NCD multi-sectoral committee	N/A	1	MOH	CMS, Directorate of pharmaceutical services, DNCD, WHO, WDF
Upgrade to digital essential medicine inventory management systems with structured minimum stock and timeline for placing order and delivery	Build capacity in quantification and rational use of medicines	Digital inventory management system with structured minimum stock and timeline for delivery of essential medicines and supplies available	Availability of digital inventory system for stock management	Annually, MOH reports on digital stock management to the chair of the NCD multi-sectoral committee.	N/A	100	MOH	MOFEA, WHO, WB, CSOs

ESTABLISH SPECIALIZED NCD DIAGNOSTIC AND TREATMENT CENTRES, INCLUDING INJURIES AND DISABILITIES.								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
Develop business plans for establishing a multi disease priority specialized centre in NCD diagnostic and treatment, in order to attract funding and private investment	1. Develop a business plan and disseminate 2. Conduct a desk review 3. Organize a stakeholder forum to review assessment 4.Validation of the findings	Business plans for specialised NCD diagnostic and treatment centres are developed	Number of business plans developed to attract investment	Annually, MoH reports on the number of business plans developed to attract investment to the chair of the NCD multi-sectoral committee	0	5	MOH	DNCD, WHO, WDF, CSO, IsDB
Build and equip new specialized NCD diagnostic and treatment centres	Build and equip new specialized NCD diagnostic and treatment centres	The general population has increased access to specialised NCD diagnostic and treatment services	Number of new, functional, specialised NCD diagnostic and treatment centres	Annually, MoH reports on the number of new, functional, specialised NCD diagnostic and treatment centres to the chair of the NCD multi-sectoral committee	N/A	5	MOH	DNCD, IsDB, private sector, investors

FINANCING OF NCD PREVENTION AND CONTROL								
Strategic Actions	**Activities**	**Expected output**	**Indicators**	**Indicator measurement**	**Baseline**	**Target**	**Lead Agency**	**Partners**
Adapt innovative, sustainable and equitable financing mechanisms to ensure UHC for NCD prevention and control	1. Engagement meetings with parliamentarians on domestic financing of NCDs 2. Develop a business plan for different financing models for engagement with stakeholders 3. Engagement with the MOFEA for resource mobilization and allocation from tax levied on NCD risk factors	Equitable and sustainable funding innovation for UHC available	Percentage of government allocation to health insurance funding for UHC	NHA reports	N/A	2% annual increase	Ministry of Finance	MOH, Directorate of planning, private sector
Advocate for strong UHC initiatives through health insurance schemes to facilitate affordability and sustainable financing of NCD services	Advocate for strong UHC initiatives through health insurance schemes to facilitate affordability and sustainable financing of NCD services	The population has increased financial access to NCD prevention and control services	Number of new NCD services included in insurance benefit packages to include chemotherapy, and screening for cervical and colon rectal cancers	Annually, MOH reports on the number of new essential NCD services included in insurance benefit packages to the chair of the NCD multi-sectoral committee	N/A	4	MOH	MoH, NCD unit, Directorate of planning, WHO, DNCD
Development of proposals for funding specialized NCDs services	Development of proposals for funding specialized NCDs services	Funding for specialised NCDs services available	Number of specialised NCDs services funded	Annually, MOH reports on the number of specialised NCDs services that are funded from developed proposals to the chair of the NCD multi-sectoral committee	0	2 per year	MOH	Donors, DNCD

STRATEGIC OBJECTIVE 5:

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

Strategic Actions	Activities	Expected output		Indicators	Indicator measurement	Baseline	Target	Lead Agency	Partners
Establish and implement a national NCD research agenda	1. Stakeholder meeting to brainstorm on research priorities 2. Stakeholder forum for presentation of research priorities and setting of the national NCD research agenda 3. Validation of the research agenda by the multi-sectoral committee for onward implementation	NCD national research agenda is developed and disseminated		Research priorities and agenda developed and adapted	Annually, MoH reports on the progress and implementation of identified priorities to the chair of the NCD multi-sectoral committee	0	5	MOH	Educational institutions, MRC, WHO, DNCD
Advocate and engage MOICI, PURA and GSM operators on mHealth	1. Develop a policy brief 2. Conduct engagement meetings	mHealth services integrated into NCDs health services		Availability of mHealth services	Reports on mHealth messages	0	TBD	MOH	MOIC, PURA, GSM operators
Strengthen research for NCD and risk factors	1. Conduct global youth tobacco survey 2. Conduct global adult tobacco survey 3. Conduct a national economic impact study of NCDs 4. Dissemination of research findings 5. Advocate for inclusion of NCD research into curricula of health training institutions 6. Conduct a STEP survey	Reports of NCD risk factors assessment conducted including STEP survey		Number of risk factors assessments conducted and the availability of one STEP survey	Annually, MoH reports on progress on the number of risk factor assessments conducted and one STEP surveys conducted during the life cycle of the strategy plan to the chair of the NCD multi-sectoral committee	0	5	MOH	Educational institutions, MRC, WHO, DNCD
Collaborate and strengthen research on NCDs with Directorate of Research, Medical Research Council, University of The Gambia and other training institutions, NPHL	1. Conduct advocacy to the Directorate of Research on the need for collaboration in NCDs research 2. Organise working meetings with research unit and team	NCD research incorporated into the activities of the Research Directorate		Number of NCDs research conducted collaboratively with the Research Directorate	Reports of joint committee work	0	1	MOH	Educational institutions, MRC, WHO, DNCD
Build capacity in NCD clinical research for health professionals at all levels	1. Build capacity of clinical staff on NCD data collection and analysis Advocate for funding for NCD research Engage partners to train Gambian researchers	Funds for NCD research and capacity building in place		Available financial, material and human resources for NCD research	% increase in budget allocation and number of trained clinical researchers	0	5%	MOH	Educational institutions, MRC, WHO, DNCD
Build capacity around grant and manuscript writing for knowledge sharing	1. Organise seminars on grant and manuscript writing	NCD staff and researchers' capacity built in grant writing and reports		Number of manuscripts and grant proposals developed and published	Annually, MoH reports on the number of manuscripts and grant proposals developed and published to the chair of the NCD multi-sectoral committee	0	10	MOH	Educational institutions, MRC, WHO, DNCD
Conduct a comprehensive situational analysis of NCD data availability, accessibility and affordability for planning, including data on injuries, disabilities and geriatric services	1. Development of TOR for the data situational analysis 2. Recruitment of consultant to lead the situational analysis process 3. Field visits and data collection for data situational analysis 4. Dissemination of report on situational analysis	Situational analysis report available		One situational analysis report published before the completion of the national strategic plan	MoH reports on progress towards publishing a situational analysis report in 2026 to the chair of the NCD multi-sectoral committee	0	1	MOH	Directorate of educational institutions, MRC, WHO, DNCD

STRATEGIC OBJECTIVE 6:

To raise priority for NCD prevention and control at national and regional levels through strengthened cooperation and advocacy.

Strategic Actions	Activities	Expected Outputs	Indicators	Indicator Measurement	Lead Agency	Baseline	Target	Partners
Develop M&E guidelines for NCDs	1. Conduct a workshop to develop M&E guidelines for NCDs 2. Validation and printing of the NCD M&E guidelines 3. Dissemination of M&E guidelines for NCDs	NCD M&E guidelines developed	Number of NCD M&E guidelines produced and disseminated	Total number of NCD M&E guidelines printed and disseminated	MOH M&E	0	1	MOH, WHO
Develop national targets and indicators based on national monitoring framework and linked with the National Development Plan (NDP)	1. Conduct a workshop to develop NCD indicators 2. Review and update the HMIS data collection tool to capture the core NCD incorporated indicators 3. Validate both the selected indicators and the data collection tools	NCD indicators developed and incorporated into the District health management information system (DHIS2)	% of health facilities reporting NCD data to DHIS2	Number of facilities reporting through DHIS2	MOH M&E	0	1	MOH, WHO
Strengthen human resources and institutional capacity for surveillance, and monitoring and evaluation.	1. Review and harmonize the data collection tools 2. Train health staff on NCD surveillance 3. Establish a core team at all levels 4. Provide additional financial support for the implementation and monitoring of NCD surveillance activities 5. Conduct quarterly integrated surveillance monitoring and supportive supervisory field visits 6. Conduct quarterly disease surveillance meetings 7. Purchase a vehicle and provide fuel and maintenance for NCD disease surveillance	Health workers trained on NCD surveillance and data collection processes	Number of health workers trained	Total number of health workers vs. number of health workers trained on NCD surveillance and M&E	HMIS	0		MOH, WHO
Establish and/or strengthen a comprehensive NCD surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response	1. Conduct a workshop to review all protocols and tools for verbal autopsy 2. Train health workers on verbal autopsy 3. Strengthen the cancer registration process	NCD disease surveillance incorporated into the national system	% of reports submitted on time	Total number of health facilities reporting on time.	HMIS	1	12	MOH, WHO
Monitor trends and determinants of NCDs and evaluate progress in their prevention and control.	1. Build the capacity of health workers on NCD determinants and M&E 2. Train health workers on data analysis and management, forecasting on NCD prevention and control	Health workers trained on NCD M&E	Number of NCDs tracked and monitored	Total number of NCDs tracked and monitored	HMIS	0	4	MOH, WHO

Support the development of an NCD M&E dashboard (preferably electronic) that provides basic information that empowers decision making to improve implementation at each level of access	1. Conduct a workshop to develop NCD M&E dashboard into the MOH database (DHIS2) 2. Conduct training of health workers on the use of NCD dashboard	NCD M&E dashboard developed and operational		To monitor the functionality of NCD M&E dashboard	NCD M&E dashboard to be developed into DHIS2 platform	HMIS	0	1	MOH, WHO
Develop a robust data quality assurance mechanism to facilitate data completeness and accuracy at all levels	1. Review and update the national data management guidelines to include NCDs 2. Sensitize all stakeholders on the data management guidelines 3. Print, disseminate and distribute the data management guidelines 4. Train health staff on the data management guidelines	Data management guidelines developed and disseminated		Total number of data management guidelines distributed		HMIS	0	1	MOH, WHO
Strengthen the NCD data quality for effective decision making	1. Formation of national data quality team to support NCD programme 2. Build capacity of data quality team 3. Conduct periodic data quality assessment using the WHO data quality App tools 4. Build capacity of data quality team 5. Conduct quarterly data quality assurance meetings 6. Conduct annual NCD data review meeting	Periodic data quality audit successfully conducted		Data quality review meetings conducted	Total number of data quality review meetings conducted	NCD/HMIS	0	4	MOH, WHO

Annex 2. Coverage assumptions

	2022	Ambitious coverage target	Prioritized coverage target
Non-communicable diseases			
CVD & diabetes			
Screening for risk of CVD/diabetes	11	33	33
Follow-up care for those at low risk of CVD/diabetes (absolute risk: 10-20%)	11	33	11
Treatment for those with very high cholesterol but low absolute risk of CVD/diabetes	8.5	26	17.25
Treatment for those with high blood pressure but low absolute risk of CVD/diabetes	3	35	19
Treatment for those with absolute risk of CVD/diabetes (20-30%)	3	14	14
Treatment for those with high absolute risk of CVD/diabetes	3	35	35
Treatment of new cases of acute myocardial infarction (AMI) with aspirin	8	33	33
Treatment of cases with established ischaemic heart disease (IHD)	8	33	33
Treatment for those with established cerebrovascular disease and post stroke	8	33	33
Treatment of cases with rheumatic heart disease (with benzathine penicillin)	0.02		0.02
Standard glycemic control	21	50	50
Intensive glycemic control	21	33	33
Retinopathy screening and photocoagulation	0.1	0.3	0.2
Neuropathy screening and preventive foot care	12	17	14.5
Respiratory disease			
Asthma: Inhaled short acting beta agonist for intermittent asthma	2	20	20
Asthma: Low dose inhaled beclometasone + SABA	2	15	15
Asthma: High dose inhaled beclometasone + SABA	2	5	3.5
Asthma: Theophylline + High dose inhaled beclometasone + SABA	2	5	2
Asthma: Oral Prednisolone + Theophylline + High dose inhaled beclometasone + SABA	2	2	2
COPD: Smoking cessation	15	25	20
COPD: Inhaled salbutamol	11	22	22
COPD: Low dose oral theophylline	9.5	19	14.25
COPD: Ipratropium inhaler	3.5	7	5.25
COPD: Exacerbation treatment with antibiotics	5	5	5
COPD: Exacerbation treatment with oral prednisolone	5	5	5
COPD: Exacerbation treatment with oxygen	5	5	5
Liver cancer			
Liver cancer screening	0.12	10	10
Liver cancer treatment	30	40	35
Prostate cancer			
Prostate cancer screening	0.09	8	8
Prostate cancer treatment: early stage	1	2	1.5
Prostate cancer treatment: late stage	1	2	1.5
Breast cancer			
Basic breast cancer awareness	42	50	50
Screening: Clinical breast exam	34	50	50
Screening: Mammography	10	15	10
Diagnosis: Screened with clinical breast exam	34	50	50
Diagnosis: Screened with mammogram	10	15	15
Diagnosis without screening for breast cancer	5	5	5
Breast cancer treatment: Stage 1	5	10	10
Breast cancer treatment: Stage 2	20	30	30
Breast cancer treatment: Stage 3	25	25	25
Breast cancer treatment: Stage 4	25	25	25
Trastuzumab	0	10	5
Post-treatment surveillance for breast cancer patients	50	50	50
Basic palliative care for breast cancer	0	10	5
Cervical cancer			
Visual inspection with acetic acid (VIA)	29	43	43
HPV DNA + Pap smear	0.2	5	5
Biopsy & histopathology	1	5	3
Cryotherapy	11	15	15
Loop Electrosurgical Excision Procedure (LEEP)	11	15	13
Cervical cancer treatment: Stage I	10	15	15
Cervical cancer treatment: Stage II	15	25	25
Cervical cancer treatment: Stage III	50	35	35
Cervical cancer treatment: Stage IV	20	10	10
Post treatment surveillance for cervical cancer	0	50	25
Basic palliative care for cervical cancer	0	10	5

Colorectal cancer			
Screening: Fecal immunochemical test	0	1.5	0.75
Screening: Fecal occult blood testing	0	1.5	0.75
Screening: Sigmoidoscopy	0	1.5	0
Screening: Colonoscopy	0	1.5	0
Diagnosis for colorectal cancer screened with FIT	0	1.5	0
Diagnosis for colorectal cancer screened with FOBT	0	1.5	0
Diagnosis for colorectal cancer screened with sigmoidoscopy	0	1.5	0
Diagnosis without screening for colorectal cancer (symptom based)	0	1.5	0
Colorectal cancer treatment: Stage I	0	1.5	0
Colorectal cancer treatment: Stage II	0	1.5	0
Colorectal cancer treatment: Stage III	0	1.5	0
Colorectal cancer treatment: Stage IV	0	1.5	0
Post treatment surveillance for colorectal cancer	0	1.5	0
Basic palliative care for colorectal cancer	0	1.5	0

Annex 3. Costs by Activity

OBJECTIVE 1

Strategic Action	2022	2023	2024	2025	2026
Advocate for allocation of resources for NCDs	25,977	25,977	25,977	25,977	25,977
Generation and dissemination of evidence or influence linkages of policies in other sectors with NCDs	25,534	25,534	25,534	25,534	25,534
Advocate and engage MOICI, PURA and GSM operators on mHealth	6,806	6,806	6,806	6,806	6,806
Advocate for development of regulatory framework for traditional medicine	20,620	2,510	2,510	2,510	2,510
Integrate NCD prevention and control into the broader health and development agenda	129	129	129	129	129
Promote universal health coverage and integration of NCDs into national development planning processes/agenda	2,853	2,853	2,853	2,853	2,853
Build strong partnerships for NCDs prevention and control	94,304	94,304	94,304	94,304	94,304

OBJECTIVE 2

Strategic Action	2022	2023	2024	2025	2026
Establish a multi-sectoral committee on NCDs prevention and control chaired by Office of the President	37,288	29,951	29,951	29,951	29,951
Establish a multi-sectoral Technical Working Group (MTWG) for NCD prevention and control	3,009	-	-	-	-
Advocate for innovative and sustainable financing schemes for NCD prevention and control	8,178	-	-	-	-
Strengthen NCD Programme	230,487	1,075,373	684,431	666,667	17,764
Strengthen structures and capabilities for prevention and early detection of NCDs at all levels	193,048	193,048	193,048	193,048	193,048
Train or orient personnel of other sectors on the complexities of NCDs	5,187	-	-	-	-

OBJECTIVE 3

	2022	2023	2024	2025	2026
Reinforce and finance the implementation of tobacco control policy and action plan through the introduction of tobacco levy	6,705	3,647	4,291	4,291	4,291
Sustain progressive increase to excise duty and prices for tobacco products, in line with WHO recommendations	1,078	-	-	-	-
Develop and disseminate social and behavioural change educational material to raise public awareness about the consequences of tobacco use, exposure to tobacco smoke, and encourage smokers to quit by providing a step-by-step guide on how to quit tobacco use	992,930	553,230	553,230	137,240	137,240
Conduct mass media campaigns to discourage tobacco use through graphic warning signs and health education	187,608	187,608	187,608	187,608	187,608
Strengthen an intersectoral collaboration on the implementation of measures to minimize illicit trade in tobacco products	14,111	14,111	14,111	14,111	14,111
Unhealthy diets	5,857	4,956	4,956	4,956	4,956
Strengthen mass media campaigns and social marketing initiatives that inform and encourage consumers about healthy dietary practices	33,090	-	-	-	-

Increase availability and affordability of heathy foods through appropriate policy and fiscal measures	17,402	1,255	1,255	1,255	857
Create health-and nutrition-promoting settings through implementation of nutrition education and counselling in schools, workplaces and hospitals	43,529	43,529	43,529	43,529	43,529
Control inappropriate marketing of unhealthy products through the mass media	-	-	-	-	-
Engage food retailers, caterers and restaurant owners to progressively improve the availability and affordability of healthier foods	-	-	-	-	-
Advocate for standardized targets for the amounts of salt in foods and meals	-	-	-	-	-
Advocate for the introduction and implementation of sugar sweetened beverage tax	-	-	-	-	-
Conduct school SBCC programmes to reduce the consumption of salt, saturated fat and sugar	53,085	53,085	53,085	53,085	53,085
Advocate for the replacement of trans and saturated fats with unsaturated fats through reformulation, labelling, fiscal policies by the Ministry of Agriculture and other relevant stakeholders	20,596	20,596	20,596	20,596	20,596
Conduct community behaviour change communication and mass media campaigns on consumption of salt, saturated fat and sugar	105,763	107,908	107,908	107,908	107,908
Advocate for the inclusion of NCD education in the school curriculum	1,142	1,142	1,142	1,142	1,142
Advocate for quality physical education from primary to tertiary level with practice opportunities for physical activities before, during and after school days	257	257	257	257	257
Engage communities and encourage them to institute local programmes that increase physical activity	13,234	13,234	13,234	13,234	13,234
Strengthen physical activity days	183,496	10,908	10,908	10,908	10,908
Develop and implement a multi-sectoral approach alcohol policy	16,362	-	-	-	-
Develop SBCC material to discourage harmful use of alcohol	25,901	10,016	10,016	10,016	10,016
Support, empower and provide services to individuals or communities engaged in harmful alcohol use	933	-	-	-	-
Strengthen community awareness and ownership of actions against harmful use of alcohol	2,682	4,023	4,425	4,023	4,023

Set up taskforce to prevent illicit alcohol trade with monitoring for compliance	5,473	4,046	4,046	4,046	4,046
Develop guidelines to regulate air pollution	47,767	56,782	-	-	-
Support creating awareness on benefits of using modern fuels and technologies for cooking and heating	-	30,068	-	-	-
Reinforce continuous vaccination against Hepatitis B	-	-	-	-	-
Reinforce continuous vaccination	-	-	-	-	-
Support early detection, quality treatment and care of Hepatitis B and C infections through awareness creation	24,312	-	-	-	-
Reinforce continuous vaccination programme against HPV while developing communication strategy for addressing vaccine rejection	33,074	53,671	33,074	33,074	33,074
Strengthen routine liver, breast and cervical cancer screening and management of early stages	48,083	48,263	48,263	48,263	48,263
Screening, diagnosis, and treatment of rheumatic fever and RHD	32,448	19,954	19,954	19,954	19,954
Continuous vaccination for COVID 19	20,596	20,596	20,596	20,596	20,596
Advocate for the development and implementation of comprehensive laws (drink driving, mobile phone use, child restraint, speed limits in residential areas) that address risk factors for road traffic accidents	4,296	4,296	4,296	4,296	4,296
Advocate for creation of a national emergency care toll free number	1,432	-	-	-	-
Advocate for the development of harmonized tools for trauma cases	1,432	-	-	-	-
Create a national emergency care response system	1,432	-	-	-	-
Increase awareness among motorcyclists and other public road users on the proper use of roads	63,750	63,750	63,750	63,750	63,750
Introduce mandatory first-aid training for public transport and truck drivers	93,431	93,431	93,431	93,431	93,431
Identify and improve accident prone sites or 'black spots'	9,655	-	-	-	-
Establish injury data sharing mechanisms between the various concerned stakeholders	6,243	6,243	6,243	6,243	6,243
Enforce mandatory medical check-ups (e.g. sight, hearing, disabilities) before issuing or renewing driver's license	1,570	1,570	1,570	1,570	1,570
Road safety awareness campaign in schools	188,147	181,739	181,739	181,739	181,739
Road safety awareness campaign in communities	56,432	56,432	56,432	56,432	56,432

OBJECTIVE 4

	2022	2023	2024	2025	2026
Pilot WHO-PEN in public health facilities	-	-	-	-	-
Strengthen the implementation of WHO PEN in primary health care facilities	60,648	60,648	60,648	60,648	60,648
Expand the implementation of complementary PEN-Plus services, which focus on severe chronic NCDs at general and district hospitals	4,322	4,322	4,322	4,322	4,322
Develop integrated WHO-PEN clinical guidelines for use at all health facilities and train heath workers on the WHO-PEN guidelines	31,262	31,262	31,262	31,262	31,262
Integrate NCD screening, treatment and care into other services, focusing on HIV/AIDS, TB and maternal, child and community health (MCCH) services	42,185	-	-	-	-
Strengthen an integrated model of care that includes facility and home visits for all	363,939	363,939	363,939	363,939	363,939
Strengthen community-based screening for diabetes and hypertension	393,564	393,564	393,564	393,564	393,564
Strengthen community-based structures on NCD prevention and control	86,531	86,531	86,531	86,531	86,531
Strengthen retention of skilled NCD workforce through career development opportunities and continuous learning	170,736	170,736	170,736	170,736	170,736
Establish and implement a strong NCD clinical mentorship system, cascaded throughout health system tiers	-	-	-	-	-
Develop NCD e-learning modules targeting health care providers at all levels to serve as Continuing Medical Education (CMEs) for licensing renewal processes	-	-	-	-	-
Advocate for the continuous availability of essential NCD medicines, supplies and technologies for screening, diagnosis, treatment and monitoring at all levels	1,899	1,899	1,899	1,899	1,899
Regularly update a list of essential NCD drugs, supplies and equipment at different levels of care, based on the national NCD prevention and treatment guidelines	-	-	-	-	-
Upgrade to digital essential medicine inventory management systems with structured minimum stock and timelines for placing orders and delivery of essential commodities	13,489	13,489	13,489	13,489	13,489
Develop business plans for establishing a multi disease priority specialized centre in NCD diagnostic and treatment, in order to attract funding and private investment	21,049	21,049	21,049	21,049	21,049
Build and equip new specialized NCD diagnostic and treatment centres	-	-	-	-	-
Adapt innovative, sustainable and equitable financing mechanisms to ensure UHC for NCD prevention and control	16,579	16,579	16,579	16,579	16,579
Advocate for strong UHC initiatives through health insurance schemes to facilitate affordability and sustainable financing of NCD services	-	-	-	-	-
Advocate for the increase in the number of NCD services in the benefit package covered by health insurance	-	-	-	-	-
Advocate to subsidise expensive NCD services for the most vulnerable/poor patients	-	-	-	-	-
Fund specialized NCD services	22,589	22,589	22,589	22,589	22,589
Build and equip new cancer centre	633,840				
Provide drugs and services for highest priority NCD services	3,040,601	4,945,096	6,921,130	9,024,255	11,261,612

OBJECTIVE 5

Strategic Action	2022	2023	2024	2025	2026
Establish and implement a national NCD research agenda	4,988	1,738	1,738	1,738	1,738
Advocate and engage MOICI, PURA and GSM operators on mHealth	2,864	2,864	2,864	2,864	2,864
Strengthen research for NCD and risk factors	123,215	286,389	61,118	61,118	61,118
Collaborate and strengthen research on NCDs with directorate of research, Medical Research Council, University of The Gambia and other training institutions, NPHL	-	-	-	-	-
Build capacity in NCD clinical research for health professionals at all levels	30,354	29,458	29,458	29,458	29,458
Build capacity around grant and manuscript writing for knowledge sharing	896	896	896	896	896
Conduct a comprehensive situational analysis of NCD data availability, accessibility and affordability for planning, including data of injuries, disabilities and geriatric services	3,285	12,939	12,939	12,939	12,939

OBJECTIVE 6

Strategic Action	2022	2023	2024	2025	2026
Develop M&E guidelines for NCDs	25,610	25,610	25,610	25,610	25,610
Develop national targets and indicators based on national monitoring framework and linked with the National Development Plan (NDP)	35,801	35,801	35,801	35,801	35,801
Strengthen human resources and institutional capacity for surveillance, and monitoring and evaluation	85,635	53,453	53,453	53,453	53,453
Establish and/or strengthen a comprehensive NCD surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response	12,201	12,201	12,201	12,201	12,201
Monitor trends and determinants of NCDs and evaluate progress in their prevention and control	103,242	103,242	103,242	103,242	103,242
Support the development of an NCD M&E dashboard (preferably electronic) that provides basic information that empowers decision making to improve implementation at each level of access	250,340	250,340	250,340	250,340	250,340
Develop a robust data quality assurance mechanism to facilitate data completeness and accuracy at all levels	19,483	19,483	19,483	19,483	19,483
Strengthen the NCD data quality for effective decision making	24,442	24,442	24,442	24,442	24,442

REFERENCES

[1] Bloch, M.J., 2016. Worldwide prevalence of hypertension exceeds 1.3 billion. Journal of the American Society of Hypertension: JASH, 10(10), pp.753-754.

[2] Centers for Disease Control and Prevention (CDC), 2017. The Gambia 2017 Global Youth Tobacco Survey (GYTS) Factsheet. CDC: Atlanta, GA, USA.

[3] Cham, B., Mdege, N.D., Bauld, L., Britton, J. and D'alessandro, U., 2021. Exposure to Second-Hand Smoke in Public Places and Barriers to the Implementation of Smoke-Free Regulations in The Gambia: A Population-Based Survey. International journal of environmental research and public health, 18(12), p.6263.

[4] Cham, B., Scholes, S., Groce, N.E., Badjie, O. and Mindell, J.S., 2020. High level of co-occurrence of risk factors for non-communicable diseases among Gambian adults: A national population-based health examination survey. Preventive Medicine, 141, p.106300.

[5] Cham, B., Scholes, S., Groce, N.E. and Mindell, J.S., 2019. Prevalence and predictors of smoking among Gambian men: a cross-sectional national WHO STEP survey. International journal of environmental research and public health, 16(23), p.4719.

[6] Cham, B., Scholes, S., Fat, L.N., Badjie, O., Groce, N.E. and Mindell, J.S., 2020b. The silent epidemic of obesity in The Gambia: evidence from a nationwide, population-based, cross-sectional health examination survey. BMJ open, 10(6), p.e033882.

[7] Cham, B., Scholes, S., Ng Fat, L., Badjie, O. and Mindell, J.S., 2018. Burden of hypertension in The Gambia: evidence from a national World Health Organization (WHO) STEP survey. International journal of epidemiology, 47(3), pp.860-871.

[8] Clark, H., 2013. NCDs: a challenge to sustainable human development. The Lancet, 9866(381), pp.510-511.

[9] Connor, M.D., Walker, R., Modi, G. and Warlow, C.P., 2007. Burden of stroke in black populations in sub-Saharan Africa. The Lancet Neurology, 6(3), pp.269-278

[10] Dalzell, S.E., Jarjou, L.M.A., Prentice, A., Ward, K. and Goldberg, G.R., 2018. Salt intakes of rural and urban Gambian women. Proceedings of the Nutrition Society, 77(OCE4).

[11] Garbusinski, J.M., van der Sande, M.A., Bartholome, E.J., Dramaix, M., Gaye, A., Coleman, R., Nyan, O.A., Walker, R.W., McAdam, K.P. and Walraven, G.E., 2005. Stroke presentation and outcome in developing countries: a prospective study in the Gambia. Stroke, 36(7), pp.1388-1393.

[12] Gouda, H.N., Charlson, F., Sorsdahl, K., Ahmadzada, S., Ferrari, A.J., Erskine, H., Leung, J., Santamauro, D., Lund, C., Aminde, L.N. and Mayosi, B.M., 2019. Burden of non-communicable diseases in sub-Saharan Africa, 1990–2017: results from the Global Burden of Disease Study 2017. The Lancet Global Health, 7(10), pp.e1375-e1387.

[13] Havens, D., Jary, H.R., Patel, L.B., Chiume-Chiphaliwali, M.E. and Mortimer, K.J., 2017. Strategies for reducing exposure to indoor air pollution from household burning of solid fuels: effects on acute lower respiratory infections in children under the age of 15 years. The Cochrane database of systematic reviews, 2017(1).

[14] Health Management Information System, (2019). Health Service Statistics Report, Ministry of Health, Banjul, The Gambia

[15] Hydara, A., Mactaggart, I., Bell, S.J., Okoh, J.A., Olaniyan, S.I., Aleser, M., Bobat, H., Cassels-Brown, A., Kirkpatrick, B., Kim, M.J. and McCormick, I., 2021. Prevalence of blindness and distance vision impairment in the Gambia across three decades of eye health programming. British Journal of Ophthalmology.

[16] IAPB 2017: Global status update, Vision Atlas. atlas.iapb.org

[17] INSTITUTE FOR HEALTH METRICS AND EVALUATION. 2019. Institute for Health Metrics and Evaluation (IHME) country proflie, The Gambia: Measuring what matters. [Online]. Available: http://www.healthdata.org/gambia [Accessed 17/07/2021].

[18] Jallow, I.K., Britton, J. and Langley, T., 2017. Prevalence and determinants of tobacco use among young people in The Gambia. BMJ global health, 2(4), p.e000482.

[19] Jasseh, M., Howie, S.R., Gomez, P., Scott, S., Roca, A., Cham, M., Greenwood, B., Corrah, T. and D'alessandro, U., 2014. Disease-specific mortality burdens in a rural Gambian population using verbal autopsy, 1998–2007. Global health action, 7(1), p.25598.

[20] Kandeh, A.M., Ceesay, A. and Colley, E., 2020. EXPLORING THE CAUSES OF ROAD TRAFFIC ACCIDENTS IN URBAN GAMBIA FROM 2014 TO 2018. GSJ, 8(10).

[21] National Nutrition Agency (NaNA)-Gambia, UNICEF, Gambia Bureau of Statistics (GBOS), Groundwork. Gambia National Micronutrient Survey 2018. Banjul, Gambia; 2019

[22] Nargis, N., Manneh, Y., Krubally, B., Jobe, B., Ouma, A.E.O., Tcha-Kondor, N. and Blecher, E.H., 2016. How effective has tobacco tax increase been in the Gambia? A case study of tobacco control. BMJ open, 6(8), p.e010413.

[23] National Health sector Strategy plan 2021-2025

[24] NHA 2015: Gambian National Health Accounts 2015

[25] NHA 2016: Gambian National Health Accounts 2016

[26] NHA 2017: Gambian National Health Accounts 2017

[27] Nugent, R. and Feigl, A., 2010. Where have all the donors gone? Scarce donor funding for non-communicable diseases. Center for global development working paper, (228).

[28] Omoleke, S.A., 2013. Chronic non-communicable disease as a new epidemic in Africa: focus on the Gambia. Pan African Medical Journal, 14(1).

[29] Oni, T. and Unwin, N., 2015. Why the communicable/non-communicable disease dichotomy is problematic for public health control strategies: implications of multimorbidity for health systems in an era of health transition. International health, 7(6), pp.390-399.

[30] Petry, N., Rohner, F., Phall, M.C., Jallow, B., Ceesay, A.A., Sawo, Y., Darboe, M.K., Barrow, S., Sarr, A., Ceesay, P.O. and Fofana, M.N., 2021. Prevalence and co-existence of cardiometabolic risk factors and associations with nutrition-related and socioeconomic indicators in a national sample of Gambian women. Scientific reports, 11(1), pp.1-11.

[31] Pullar, J., Allen, L., Townsend, N., Williams, J., Foster, C., Roberts, N., Rayner, M., Mikkelsen, B., Branca, F. and Wickramasinghe, K., 2018. The impact of poverty reduction and development interventions on non-communicable diseases and their behavioural risk factors in low and lower-middle income countries: a systematic review. PLoS One, 13(2), p.e0193378.

[32] Quansah, R., Ochieng, C.A., Semple, S., Juvekar, S., Emina, J., Armah, F.A. and Luginaah, I., 2015. Effectiveness of interventions to reduce indoor air pollution and/or improve health in homes using solid fuel in lower- and middle-income countries: protocol for a systematic review. Systematic reviews, 4(1), pp.1-5.

[33] Rolfe, M., Tang, C.M., Walker, R.W., Bassey, E. and George, M., 1992. Diabetes mellitus in the Gambia, West Africa. Diabetic medicine, 9(5), pp.484-488

[34] Rylance, J., Fullerton, D.G., Semple, S. and Ayres, J.G., 2010. The Global Burden of Air Pollution on Mortality: The Need to Include Exposure to Household Biomass Fuel–Derived Particulates. Environmental health perspectives, 118(10), pp.A424-A424.

[35] Saeedi, P., Petersohn, I., Salpea, P., Malanda, B., Karuranga, S., Unwin, N., Colagiuri, S., Guariguata, L., Motala, A.A., Ogurtsova, K. and Shaw, J.E., 2019. Global and regional diabetes prevalence estimates for 2019 and projections for 2030 and 2045: Results from the International Diabetes Federation Diabetes Atlas. Diabetes research and clinical practice, 157, p.107843.

[36] Sankaranarayanan, R., Swaminathan, R., Brenner, H., Chen, K., Chia, K.S., Chen, J.G., Law, S.C., Ahn, Y.O., Xiang, Y.B., Yeole, B.B. and Shin, H.R., 2010. Cancer survival in Africa, Asia, and Central America: a population-based study. The lancet oncology, 11(2), pp.165-173.

[37] Sanyang, E., Peek-Asa, C., Bass, P., Young, T.L., Daffeh, B. and Fuortes, L.J., 2017. Risk factors for road traffic injuries among different road users in the Gambia. Journal of environmental and public health, 2017.

[38] Sine, J., P.P. Saint-Firmin, and T. Williamson. 2019. Assessment of the Health System in The Gambia: Overview, Medical Products, Health Financing, and Governance Components. Washington, DC: Palladium, Health Policy Plus

[39] Smith, K.R., Bruce, N., Balakrishnan, K., Adair-Rohani, H., Balmes, J., Chafe, Z., Dherani, M., Hosgood, H.D., Mehta, S., Pope, D. and Rehfuess, E., 2014. Millions dead: how do we know and what does it mean? Methods used in the comparative risk assessment of household air pollution. Annual review of public health, 35, pp.185-206.

[40] The Gambia Bureau of Statistics (GBOS) and ICF International. 2014. The Gambia Demographic and Health Survey 2013. Banjul, The Gambia, and Rockville, Maryland, USA: GBOS and ICF International

[41] The Gambia Bureau of Statistics (GBOS) 2017. The Gambia integrated Household survey 2015/2017. Banjul, The Gambia,

[42] The Gambia Revenue Authority report 2018

[43] The Gambia Bureau of Statistics. 2019. The Gambia Multiple Indicator Cluster Survey 2018, Survey Findings Report. Banjul, The Gambia: The Gambia Bureau of Statistics

[44] The Gambia Bureau of Statistics (GBoS) and ICF. 2021. The Gambia Demographic and Health Survey 2019-20. Banjul, The Gambia and Rockville, Maryland, USA: GBoS and ICF

[45] UNDP. 2020. Human Development Reports : Latest Human Development Index (HDI) Ranking [Online]. Available: http://hdr.undp.org/en/content/latest-human-development-index-ranking [Accessed 15/07/2021 2021].

[46] Wall, S.R., Scherf, C.F., Morison, L., Hart, K.W., West, B., Ekpo, G., Fiander, A.N., Man, S., Gelder, C.M., Walraven, G. and Borysiewicz, L.K., 2005. Cervical human papillomavirus infection and squamous intraepithelial lesions in rural Gambia, West Africa: viral sequence analysis and epidemiology. British journal of cancer, 93(9), pp.1068-1076.

[47] Walraven, G.E.L., Nyan, O.A., Van Der Sande, M.A.B., Banya, W.A.S., Ceesay, S.M., Milligan, P.J.M. and McAdam, K.P.W.J., 2001. Asthma, smoking and chronic cough in rural and urban adult communities in The Gambia. Clinical & Experimental Allergy, 31(11), pp.1679-1685

[48] WHO. (2005). Preventing chronic diseases: a vital investment. World Health Organisation. https:// www.who.int/chp/chronic_disease_report/overview_en.pdf?ua=1

[49] WHO, 2016. WHO STEP Reports and Factsheets [Online]. Available: http://www.who.int/chp/steps/reports/en/ [Accessed 27/06/2016].

[50] WHO. 2018. World Health Organization - Non-communicable Diseases (NCD) Country Profiles, 2018. [Online]. Available: https://www.who.int/nmh/publications/ncd-profiles-2018/en/ [Accessed 25/07/2019]

[51] WHO. 2017. Monitoring non-communicable disease commitments in Europe. World Health Organization. https://www.euro.who.int/__data/assets/pdf_file/0005/351518/Monitoring-NCD.pdf. [Accessed 18/01/2019]

[52] WHO. 2018b. Global Status Report on Road Safety. Geneva: World Health Organization

[53] WHO, 2021. Non-communicable diseases Factsheet [Online]. Available: https://www.who.int/news-room/fact-sheets/detail/non-communicable-diseases [Accessed 15/07/2021].