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MINISTRY OF HEALTH-ETHIOPIA
የዜጎች ጤና ለሃገር ብልጽግና!
HEALTHIER CITIZENS FOR PROSPEROUS NATION!

NATIONAL STRATEGIC PLAN FOR THE PREVENTION AND CONTROL OF MAJOR NON-COMMUNICABLE DISEASES

2013-2017 EFY (2020/21-2024/25)

Strategy on Prevention and Control of Cardiovascular Diseases, Diabetes Mellitus, Chronic Kidney Diseases and ChronicRespiratory Diseases

July 2020
Addis Ababa, Ethiopia

FOREWORD

Ethiopia is one of the fastest growing economies in Africa with a vision to reach a middle-income status by 2035. Realization of this vision requires a healthy and productive population. Improving the health status of the population is among the key priorities of the Government of Ethiopia. As a result of its robust health policy and innovative strategies, the country has made huge strides in improving universal access to health services through rapid expansion of primary health care that resulted in impressive gains in health status of the population. Most of these health gains are related to achievements in communicable, maternal, childhood, nutritional disorders and hygiene and environmental health programs.

Despite substantial strides made in improving population health status in Ethiopia, still a lot is required in creating a resilient health system that can withstand all adversities. Ethiopia is still one of the countries with a high morbidity and mortality from triple burden of diseases consisting of Group I diseases: Communicable, maternal, neonatal and nutritional diseases (unfinished MDG agendas); Group II Diseases: Non-communicable diseases, mental, neurological and substance use disorders; and Group III conditions: Injuries and other related disorders. According to 2016 estimates, non-communicable diseases and injuries represented 46% of the total disease burden in Ethiopia, which is expected to rise rapidly in the coming decades along with economic development, urbanization and life style changes. There are ongoing efforts to curtail the epidemic of non-communicable diseases and injuries (NCDI) in the country, but the magnitude of the problem calls for a multi-sectoral mechanism and a considerable increase in our effort to control and avert these conditions.

Cognizant to this, the Ministry of Health has produced the second version of the national strategic action plan to curb public health challenges caused by major non-communicable diseases. This national strategic plan outlines the NCDs and their associated risk factors which should receive due priority in Ethiopia. These are cardiovascular diseases, chronic respiratory diseases and diabetes and their shared risk factors including tobacco, physical inactivity, unhealthy diet and excessive alcohol use, as well as khat consumption and indoor air pollution. The NSAP for NCDs includes plans for the national coordination mechanisms and the multi-sectoral response that must operate for effective prevention and control of NCDs and their risk factors. The action plan is focused on the delivery of essential and quality promotive, preventive, curative and rehabilitative health services integrated within the three-tiered healthcare system of the country. Health services will be provided integrated within the primary level of care extended to the health post as well as in secondary and tertiary health facilities. Besides, the private sector and civic society will be engaged in delivering health services for NCDs and their associated risk factors. Mechanisms will be devised to avail essential medical technologies and generic medicines.

This strategic action plan, which is developed, based on Global Action plan on Control of NCDs 2013-2020 and the Sustainable Development Goals 2030, and which is a follow up plan to the 1st NSAP on Prevention and control of NCDs in Ethiopia 2014-2016, is the road map for the prevention and control of NCDs in Ethiopia. It comprises fundamental population level and clinical "best-buy" interventions and describes the resource needs. It is designed to curb the challenges posed by NCDs and their associated risk factors and aimed to register improved health outcomes in Ethiopia if implemented effectively and in a timely fashion. It calls for a collective multi-sectoral response, resource mobilization and collaboration among all stakeholders. Strong national and sub-national political commitment and government leadership is fundamental for the success of this action plan.

Cancer, Mental, neurological and substance use disorders that also make a large contribution to NCDs burden in Ethiopia are dealt with separately in the National Cancer Control Plan and National Mental Health Strategy.

It is my firm belief that with implementation of this strategy, NCDs and their associated risk factors will get due attention by all concerned stakeholders and the unnecessary suffering of the population will start to be addressed. It is hoped that this NCD strategic plan will be adopted by RHBs to develop their own strategic and annual plans on prevention and control of NCDs and their risk factors. Using this opportunity, I call up on all stakeholders to use this strategic action plan while implementing NCD prevention and control interventions.

Dr. Dereje Duguma (MD, MPH)
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ACRONYMS AND ABBREVIATIONS

AAU	Addis Ababa University
ARF	Acute Rheumatic Fever
CRD	Chronic Respiratory Diseases
CKD	Chronic Kidney Disease
COPD	Chronic Obstructive Pulmonary Diseases
CMNN	Communicable, Maternal, Neonatal and Nutritional
CVDs	Cardio-vascular Diseases
DALYs	Disability-adjusted Life Years
DM	Diabetes Mellitus
Echo	Echocardiography
ECG	Electrocardiography
EDA	Ethiopian Diabetes Association
EDHS	Ethiopia Demographic and Health Survey
EPHI	Ethiopian Public Health Institute
EPHA	Ethiopian Public Health Association
FCTC	Framework Convention on Tobacco Control
MOH-E	Ministry of Health-Ethiopia
EFDA	Ethiopia, Food and Drug Control Authority
GABHS	Group A Beta Hemolytic Streptococci
GBD	Global Burden of Disease
GNI Per capita	Gross National Income per capita
HIV	Human Immuno-Deficiency Virus
HBV	Hepatitis B-Virus
HCV	Hepatitis C-Virus
HEP	Health Extension Program
HEWs	Health Extension Workers
HPV	Human Papilloma Virus
HSDP	Health Sector Development Program
HSTP	Health Sector Transformation Plan
IHD	Ischemic Heart Disease
IHME	Institute of Health Metrics and Evaluation, University of Washington
IPD	In-patient Department
LMICs	Low-and Middle-Income Countries
MDG	Millennium Development Goals
MNS	Mental, Neurological and Substance Use
NCDs	Noncommunicable Diseases

NCDIs	Non-communicable Diseases and Injuries
NGOs	Non-governmental Organizations
NSC	National Steering Committee (Multisectoral)
NHA	National Health Accounts
NHL	Non-Hodgkin's Lymphoma
NSAP	National Strategic Action Plan
OOP	Out-of-Pocket
OPD	Out Patient Department
EPSA	Ethiopian Pharmaceutical Supply Agency
PHC	Primary Health Care
PSI	Population Service International
RHB	Regional Health Bureau
RHD	Rheumatic Heart Disease
RTA	Road Traffic Accident
SARA	Service Availability and Readiness Assessment
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
STEPS	STEPwise approach to Surveillance
SWOT	Strengths, Weakness, Opportunity, Threats
TB	Tuberculosis
UHC	Universal Health Coverage
USD	US Dollars
UN	United Nations
VIA	Visual Inspection with Acetic Acid (cervical cancer)
WB	World Bank Group
WHF	World Heart Federation
WHO	World Health Organization
YLD	Years Lived with Disability

Executive Summary

Non-communicable diseases, such as cardiovascular diseases, cancer, chronic respiratory diseases and diabetes, are the leading causes of morbidity and mortality globally. Evidences are emerging that Ethiopia is in a state of "epidemiologic transition", and it is now facing a triple burden of diseases; with the mix of still pervasive CMNN conditions, increasing non-communicable diseases and injuries.

Despite the high burden of NCDs and its complex economic and social impact, NCDs have been neglected for too long both from the global and national health agenda. The SDGs have for the first time increased global attention to NCDIs. To this end, SDG 3 outlines the importance of ensuring healthy lives and promoting wellbeing for everyone at all ages and includes specific sub target on NCDs (target 3.4).

Understanding the disease burden and the global direction Ethiopia recognized the potential health and economic impact posed by NCDs. The country was implementing its first NCD Strategic plan 2014-2016.

The Ministry of Health-Ethiopia developed this second national strategic plan for the prevention and control of NCDs with the overall goal envisioned to reduce the burden of NCDs by promoting healthy lifestyles, reducing the prevalence of common risk factors and providing integrated evidenced based treatment and care to those diagnosed with NCDs in the most cost-effective manner. This action plan is thus the road map for the prevention and control of NCDs in Ethiopia. It comprises fundamental public health and clinical "best-buy" interventions and describes resource needs. It calls for a collective multi-sectoral response, strategic policy changes, resource mobilization and collaboration among all stakeholders. Strong national and sub-national political commitment and government leadership is fundamental for the success of this action plan.

Scope of the national NCD Strategic Plan:- Major NCDs (CVDs, DM, CRDs, CKD) and Risk Factors (tobacco use, harmful use of alcohol, khat use, unhealthy diet, physical inactivity, air pollution, infectious causes).

Vision of the national NCD Strategic Plan:- To see healthy, productive and prosperous Ethiopians free from preventable and avoidable non-communicable diseases.

Mission of the national NCD Strategic Plan:

- To promote health and wellbeing of Ethiopians through providing a comprehensive package of promotive, preventive, curative and rehabilitative NCD services of the highest possible quality in an equitable manner.

Goal of the national NCD Strategic Plan:

- To reduce the burden of NCDs by promoting healthy lifestyles, reducing common risk factors and providing integrated, evidenced based, innovative and cost effective clinical interventions.

Objectives of the national NCD Strategic Plan:

1. Strengthen national capacity, public policies through health in all policies, leadership, governance, multi-sectoral action and partnership to accelerate country response for prevention and control of non-communicable diseases.

2. Reduce exposure to modifiable risk factors for non-communicable diseases and promotion of health throughout the lifecycle through the creation of health-promoting environments.
3. Strengthen and reorient health systems to address prevention and control of non-communicable diseases through people-centered primary health care and universal health coverage.
4. Strengthen national capacity for NCD surveillance and high-quality research for prevention and control of non- communicable diseases
5. Strengthen international cooperation and advocacy to raise the priority accorded to prevention and control of non-communicable diseases in the development agenda and in internationally agreed development goals.

Targets to Monitor the National NCD Strategic Plan:

- Reduction in premature mortality
- Reduction on behavioral, environmental and infectious risk factors
- Increase coverage and quality of services

Priority Areas for of the national NCD Strategic Plan:

1. *Priority Area One: Strengthen the national response through policy, governance, leadership and coordination.*
2. *Priority Area Two: Health promotion and disease prevention targeting behavioral, infectious and environmental risk factors.*
3. *Priority Area Three: Comprehensive and Integrated Screening, Diagnosis, Treatment, Care and Support for NCDs and their risk factors.*
4. *Priority Area Four: Monitoring, evaluation and research.*

Implementation of the National NCD Strategic plan

- Prong One: The Multisectoral Response For Ncds
- Prong Two: The Health Sector Response For Ncds
- Roles And Responsibilities And Coordination

Costing and financing of the National NCD strategic Plan

- A total of USD 258,539,000 will be required for the coming 5 years to implement these highest priority interventions.

CHAPTER ONE: BACKGROUND

1.1 COUNTRY PROFILE

Ethiopia is a federal republic made up of 10 Regional States and two city administrations found in the horn of Africa. The country shares borders with Sudan and South Sudan on the west; Kenya on the south; Eritrea in the North, Djibouti in the East and Somalia in the East and South East. It has an estimated population of about 114 million in 2019. The male to female ratio is 0.96 to 1. Ethiopia has a very young population with 47 % of its population between 0-14 years and 48% between 15-64 years of age. The proportion of the population 65 years and above is nearly 5%. The population of Ethiopia is estimated to reach 140 million by 2037.

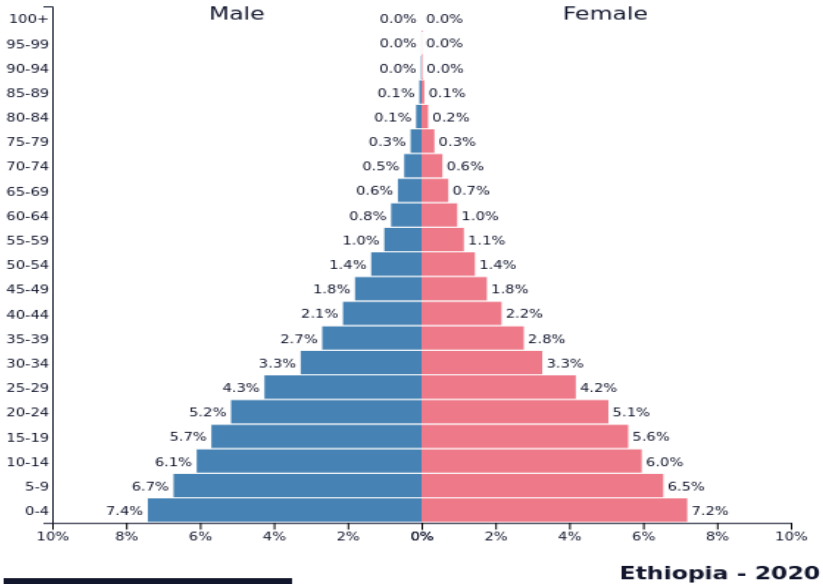

Figure 1: The Population Pyramid of Ethiopia, 2020 (Source: Population Pyramid.net)

Ethiopia is one of the fastest growing economies in Africa, and the nation is undergoing a rapid economic transformation. If the current trend is maintained, the country is expected to become a lower-middle-income country by 2025. The major driver of the economy is agriculture, which employs more than 80% of the population. There was an expansion of schools and Universities in the past two decades. Despite that the literacy rate stands at a national average of 50%. The country is still a very low-income country with GNI per capita of $740 USD in 2017, and the poverty headcount ratio at $1.90 USD a day (2011 PPP) was 26.7%. Using the multi-dimensional poverty index (MPI), which includes education, health and living standards in addition to income, 79.2% of the population is classified as impoverished. In urban areas, 4.4 million people (27% of urban population) were among the global poorest billion, however in rural areas, 66.4 million people (90% of rural population) were among the poorest billion. Currently, the urban population is about 20.9% and is growing at 3.8 % rate annually and according to CSA projections the urban population will triple and reach 30% by 2037.

1.2 THE HEALTH POLICY AND THE HEALTH CARE SYSTEM

The Health Policy of the Transitional government of Ethiopia which was developed in early 1993 placed promotive and preventive health care as the main priority through democratization and decentralization of health care delivery as its pillars. Mental health and prevention of chronic

conditions were mentioned in the policy as secondary priorities to communicable, maternal, neonatal, and nutritional (CMNN) disorders. The Health policy is under revision and its focus areas will include NCDs and their risk factors.

Health services are mainly delivered by the government, particularly in the rural part of the country, where an estimated 82% of the total population resides.

In the past couple of decades, major health care reforms were introduced, resulting in exponential expansion of infrastructure and human resources that led to a significant improvement of the health status of the people.

In 2015 the country finalized a 20-year National Health Sector Development Program (HSDP) and started the Health Sector Transformation Plan (HSTP) which is running from 2016 to 2020. The HSDP was launched in 1997 and has been implemented in four phases focusing on prioritized disease prevention and control, decentralization of the delivery of health services, strengthening partnerships between the government and non-governmental organizations to implement basic health care packages and achieve universal primary health care coverage, and with increasing national health spending.

The Health Service is organized into three levels. Level one is a Woreda/District health system comprised of primary hospital (to cover 60,000- 100,000 population), health centers (1 to 15,000-25,000 population) and their satellite health Posts (1 to 3,000-5,000 population) connected to each other by a referral system. The primary hospital, 5 health center and 25 health posts form a Primary Health Care Unit (PHCU). Level two is a General Hospital covering a population of 1-1.5 million people; and level three is a Specialized Hospital covering a population of 3.5-5 million people. Primary health coverage has now reached more than 95%.
By the end of 2015, the country had achieved most of the health related MDGs. Life expectancy at birth increased from 45 years in 1990 to 51 years in 2000 to 65 years in 2015, and over the same period, the under-five, infant and neonatal mortality rate decreased from 166, 97 and 49 to 67,48 and 29 per 1000 live births respectively. Total fertility dropped from 5.5 to 4.6 and the maternal mortality ratio to 412 per 100,000 live births. The immunization coverage and skilled delivery improved markedly. Morbidity and mortality from TB, HIV and malaria dropped dramatically.

Since 2015/16 the country is implementing the health sector transformation plan 2015/16-2019/20. The sector envisioned transformation in four areas – access and equity; information revolution; Compassionate respectful and caring professionals, woreda transformation. Multiple initiatives have been initiated across these four transformation areas, which are unique to the HSTP – they were not present in the sector previously.

There was positive movement of sector financing moving towards domestic financing. Although the share of health in domestic financing remains at 7.7%, the government was able to fund more than what is projected in the HSTP framework. Domestic financing was increasing in absolute amounts and as share of total sector financing (share of domestic funding increasing from 50% to 64% and share of external financing declining from 50 to 36%). There is good progress in expanding prepayment mechanisms for non-formal sector (CBHI) to more than 39% of woredas although enrolment rates in these woredas remain only 44% and nationally 15%.

Ethiopia developed its essential health service package in 2005 and was implementing until now. The package lacks clear comprehensive interventions at different levels of the health sector on NCD and their risk factors. The country has launched its second Essential Health Service Package with expanding set of interventions for NCDs. In HSTP 2 which will be running from EFY 2013-2017, NCDs and their risk factors are expected to be accorded their proper attention as they are recognized to be not only a health but a development agenda.

CHAPTER TWO:
NON-COMMUNICABLE DISEASES AND THEIR RISK FACTORS

2.1 INRODUCTION TO NON-COMMUNICABLE DISEASES

A noncommunicable disease (NCD) is a medical condition or disease that is by definition noninfectious and non-transmissible among people. It has a prolonged course, that does not often resolve spontaneously, and for which a complete cure is rarely achieved. They are the result of a combination of genetic, physiological, environmental and behavioral factors.

These diseases are driven by forces that include aging, rapid unplanned urbanization, and the globalization of unhealthy lifestyles. Unhealthy lifestyles may cause raised blood pressure, increased blood glucose, elevated blood lipids, and obesity which again predispose to NCDs. All age groups and all regions of the world are affected by NCDs.

The most common NCDs include cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma), and diabetes. NCDs share several common, modifiable risk factors – tobacco use, harmful alcohol use, physical inactivity, and unhealthy diet (high consumption of sugar, salt, saturated fats, and Trans fatty acids). Mitigating the effects of these common risk factors is critical to combatting NCDs worldwide.

Other NCDs of public health importance in Ethiopia include mental, neurological and substance use (MNS) disorders, chronic kidney disease, injuries, eye diseases, oral-dental diseases, thyroid disorders, musculoskeletal disorders, plus chronic diseases of an infective origin like rheumatic heart diseases and chronic liver disease.

The chronic nature of NCDs means patients are sick, suffer longer and require more medical care. Consequently, family members often have to care for loved ones who are unable to work due to illness or disability, resulting in additional lost productivity and wages. In 2011, the World Economic Forum estimated that the combined global economic impact of cardiovascular disease, chronic respiratory disease, cancer, diabetes, and mental health will be more than $47 trillion dollars over the next 20 years.

2.2 NON-COMMUNICABLE DISEASES – GLOBAL PERSPECTIVE

NCDs are by far the leading cause of death worldwide. In 2016, they were responsible for 71% (41 million) of the 57 million deaths which occurred globally. The NCDs responsible for these deaths included cardiovascular diseases (17.9 million deaths, accounting for 44% of all NCD deaths and 31% of all global deaths); cancers (9 million deaths, 9% of all NCD deaths and 16% of all global deaths); chronic respiratory diseases (3.8 million deaths, 9% of all NCD deaths and 7% of all global deaths); and diabetes (1.6 million deaths, 4% of all NCD deaths and 3% of all global deaths) (Figure 2). An even higher proportion (75%) of premature adult deaths (occurring in those aged 30–69 years) were caused by NCDs, demonstrating that NCDs are not solely a problem for older populations. The global probability of dying from one of the four main NCDs in 2016 was 18%, with a slightly higher risk for males (22%) than for females (15%).

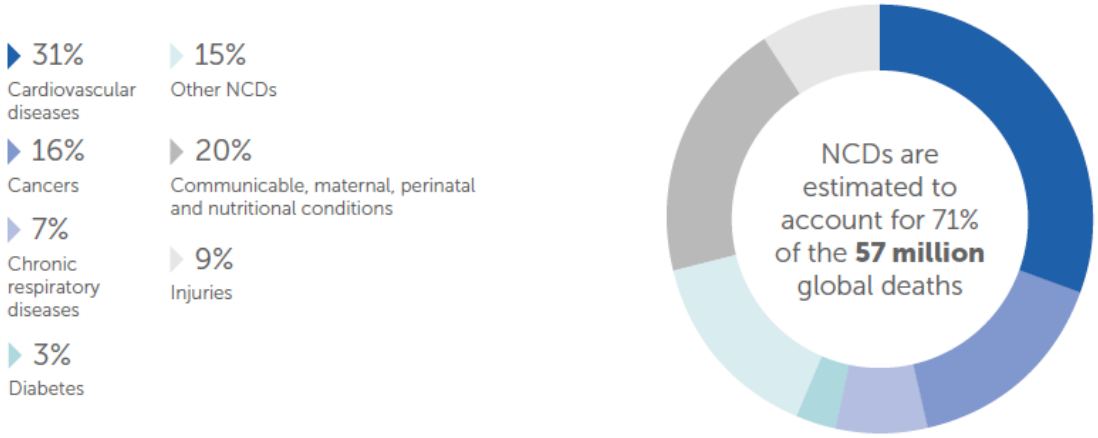

Figure 2: GLOBAL MORTALITY (% OF TOTAL DEATHS), ALL AGES, BOTH SEXES, 2016 (Source: Global NCD Report 2018)

A clear relationship is evident between premature NCD mortality and country income levels. In 2016, 78% of all NCD deaths, and 85% of premature adult NCD deaths, occurred in low- and middle-income countries (LMICs). Adults in low and lower-middle-income countries faced the highest risk of dying from an NCD (21% and 23% respectively) – almost double the rate for adults in high-income countries (12%).

Likewise, in high-income countries, the proportion of all NCD deaths that were premature was almost half (25%) that of low-income (43%) and lower-middle-income (47%) countries.
Globally, raised blood pressure is responsible for 13% of deaths; while, tobacco use causes 9%, raised blood glucose 6%, physical inactivity 6%, overweight and obesity 5% and alcohol 3.8% deaths.

The global tobacco epidemic kills more than 7 million people each year, of which close to 900 000 are non-smokers dying from breathing second-hand smoke. Nearly 80% of the more than 1 billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest.

Globally nearly 2.3 million people die each year from the harmful use of alcohol (3.8% of all deaths in the world). More than half of these deaths occur from NCDs caused by alcohol, including cancers, cardiovascular disease and liver cirrhosis.

Encouragingly, the risk of dying from any one of the four main NCDs for those aged 30–69 years, decreased from 22% in 2000 to 18% in 2016. To address the growing burden of NCDs, WHO identified a package of 16 "best buy" interventions that are cost-effective, affordable, feasible and scalable in all settings.

Implementing all 16 "best buys" in all countries between 2018 and 2025 would avoid 9.6 million premature deaths, thus moving countries appreciably towards the NCD mortality reduction targets.

2.2.1 Global Commitments on Non-communicable Diseases

Non-communicable diseases have been neglected for too long. The UN High level meeting in 2011 acknowledged that the global burden and threat of non-communicable diseases constitutes one of the major challenges for development in the twenty-first century and passed a Political Declaration on the Prevention and Control of Non-communicable Diseases through its General Assembly and WHO was

tasked to lead this global commitment. The WHO developed NCD Global Action plan 2013-2020 and the comprehensive global monitoring framework for the prevention and control of non-communicable diseases. The Global NCD Monitoring framework has 9 targets and 25 indicators.

The Sustainable Development Goals (SDGs) have increased global attention on the neglected non-communicable disease (NCD) pandemic. SDG 3, to ensure healthy lives and promote wellbeing for everyone at all ages, includes a specific sub target on NCDs (target 3.4), to reduce premature mortality from NCDs by a third.

The United Nations General Assembly in its Third High-Level Meeting on Noncommunicable Diseases on September 27,2018 has adopted an ambitious political declaration, entitled, "Time to Deliver: Accelerating our response to address NCDs for the health and well-being of present and future generations." The political declaration includes commitments to reduce NCD mortality by one-third by 2030, and to scale-up funding and multi-stakeholder responses to treat and prevent NCDs.

2.3 BURDEN OF NONCOMMUNICABLE DISEASES IN ETHIOPIA

Available evidences show Ethiopia is in epidemiologic transition. In the context of this epidemiological transition, a triple burden of disease is already emerging with the mix of persistent infectious diseases, increasing non-communicable diseases and injuries.

Non-communicable Diseases Country Profiles 2018 Report by the World Health Organization indicated there were a total of 700,000 deaths in Ethiopia in 2016 (Figure 3). Among these deaths 39 % was attributed to non-communicable diseases (NCDs), 12% to Injuries and 49% to Communicable, maternal, perinatal and nutritional (CMNN) conditions Overall cardiovascular diseases accounted for 16%, cancers for 7% and respiratory disease for 2% of all causes of death. Furthermore, diabetes accounted for 2%, injuries for 12% and other NCDs for 12% of causes of deaths in the same year.

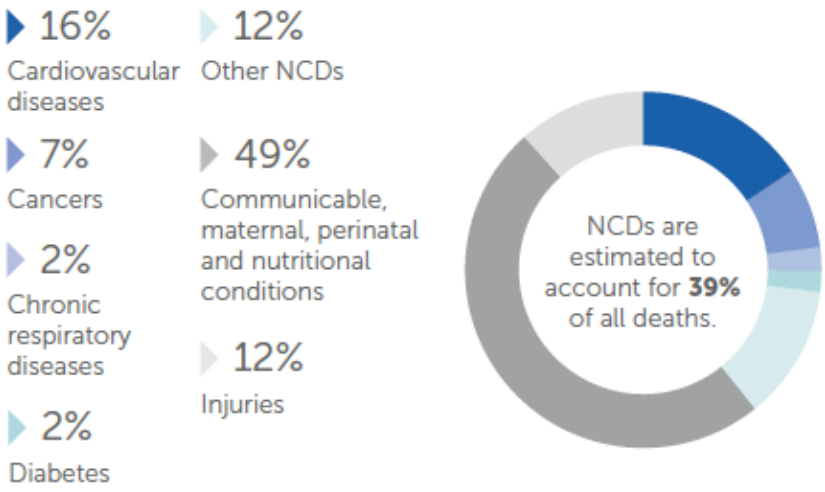

Figure 3: Proportional Mortality in Ethiopia, 2016 (n=700,000) (Source: WHO Global NCD Report 2018)

The Ethiopia NCDI Commission report launched in November 2018 has interestingly shown very similar results to the WHO report shown above. According to the Commission's report, NCDs and injuries cause 43.5% and 8.5% of the deaths in Ethiopia in 2016 respectively. Cardiovascular diseases (35%) and cancer (19%) contribute to an estimated 54% of the overall NCDIs mortality. More than half (51%) of the NCDI mortality occurs before age 40, and 63% occurs before age 50. Deaths alone are not good measures of diseases burden. Disability Adjusted Life Years (DALYs) measure both death and life years lived with disability. In this regard, NCDIs were found to contribute to the substantial loss of total

DALYs in Ethiopia in 2016 (46.1%). Among the NCDIs, injuries (19%), cardiovascular diseases (17%); mental, neurological and substance use disorders (16%) and cancer (11%) contribute to the highest loss of DALYs. Over 60% of DALYs lost due to NCDIs in Ethiopia occurred before age 40 showing a very high burden in the productive age group.

2.4 MAGNITUDE OF SELECTED NCDs AND INJURIES IN ETHIOPIA

1. CARDIOVASCULAR DISEASES

Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels and they include:

- Coronary heart disease– disease of the blood vessels supplying the heart muscle;
- Cerebrovascular disease (Stroke) – disease of the blood vessels supplying the brain;
- Peripheral arterial disease – disease of blood vessels supplying the arms and legs;
- Rheumatic heart disease – damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria;
- Congenital heart disease – malformations of heart structure existing at birth;
- Deep vein thrombosis and pulmonary embolism – blood clots in the leg veins, which can dislodge and move to the heart and lungs.

CVDs are the number one cause of death globally: more people die annually from CVDs than from any other cause. An estimated 17.9 million people died from CVDs in 2016, representing 31% of all global deaths. Of these deaths, 85% are due to heart attack and stroke. Over three quarters of CVD deaths take place in low- and middle-income countries. Out of the 17 million premature deaths (under the age of 70) due to non-communicable diseases 37% are caused by CVDs.

The most important behavioral risk factors for heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. The effects of behavioral risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight and obesity. These "intermediate risks factors" can be measured in primary care facilities and indicate an increased risk of developing a heart attack, stroke, heart failure and other complications.

Most cardiovascular diseases can be prevented by addressing behavioral risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol using population-wide strategies.

People with cardiovascular disease or who are at high cardiovascular risk (due to the presence of one or more risk factors such as hypertension, diabetes, hyperlipidemia or already established disease) need early detection and management using counselling and medicines, as appropriate.

1.1 HYPERTENSION

Hypertension is when blood pressure in the arteries is persistently elevated. It is defined as systolic blood pressure 140mmHg and above or diastolic blood pressure 90mmHg and above in 2 or more occasions.

Hypertension is an important risk factor for CVD and remains the single biggest risk factor for stroke. Based on the National NCD STEPS Survey conducted in Ethiopia in 2015, the prevalence of hypertension is reported as 16%, with higher prevalence among urban dwellers (22% urban versus 13% rural) and older adults. There was no marked difference between the sexes or between income quintiles.

A Meta-analysis of several studies showed the mean prevalence of hypertension in Ethiopia to be 19.6 % (23.5 % in urban population and 14.7 % in rural/urban population). The study also showed that the prevalence of hypertension in males and females was 20.6 % and 19.2 % respectively. Hospital based studies have shown that hypertension was the cause of 70% of the strokes in Ethiopia. Additionally, the studies indicated hypertension and hypertensive heart disease are second commonest causes of cardiac follow ups in Hospitals in Ethiopia.

Approximately 60% of patients with high blood pressure in Ethiopia were never diagnosed and among those identified cases, only 28% were taking medications. Of those on treatment 74% had poorly controlled hypertension.

1.2 CORONARY HEART DISEASE

Among the STEPS Survey participants 3.4% of participants reported ever having had a heart attack or chest pain from heart disease (angina) or a stroke. The highest prevalence was found to be 5.6% in the age group of 60–69 years. The prevalence of a 10-year CVD risk of ≥30% for the age group 40–69 years was 4.7% showing that coronary heart disease is an emerging but under recognized health problem in Ethiopia especially in urban settings. Hospital based studies also showed the increasing trend in coronary heart disease.

1.3 STROKE

The prevalence of stroke in Ethiopia is unknown. Global burden of diseases study estimates that stroke is the second highest cause of Cardiovascular death next to Coronary Heart disease in Ethiopia. Forty-four percent of the strokes in Ethiopia were hemorrhagic stroke in contrast to that seen in western countries (<15%) due to the fact that the prevalence of undetected or uncontrolled hypertension is very high. More males than females were affected in Ethiopia with a male-to-female ratio of 1.28 to 1.

1.4 RHEUMATIC HEART DISEASE

Rheumatic heart disease is caused by damage to the heart valves and heart muscle from the inflammation and scarring caused by rheumatic fever. Rheumatic fever is caused by an abnormal response of the body to throat infection with streptococcal bacteria (GABHS Tonsillopharyngitis).

Rheumatic fever mostly affects children in developing countries, especially where poverty is widespread. Globally, about 2% of deaths from cardiovascular diseases is related to rheumatic heart disease.

The Ethiopia NCDI Commission report indicated the prevalence of RHD to be 17/1000 children and young adults aged 4-24 years based on school-based studies. Community Based estimates for age groups 6-25 years are higher at 37.5/1000. More than 500,000 Ethiopians are estimated to be living with RHD. It is the commonest cause of heart failure and is the second commonest cause of stroke in Ethiopia. In the country 46.6 % all cardiovascular follow ups are for RHD.

RHD is fatal disease in Ethiopia with annual mortality rate reaching 12.5% (compared with 1.5% elsewhere). More than 10,000 patients are on surgical waiting list.

2. DIABETES MELLITUS

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose, which leads over time to serious damage to the heart, blood vessels, eyes, kidneys, and nerves. The most common is type 2 diabetes (>90%), usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. In the past three decades the prevalence of type 2 diabetes has risen dramatically in countries of all income levels. Type 1 diabetes is a chronic condition in which the pancreas produces little or no insulin by itself.

The National NCD STEPS survey demonstrated a prevalence of diabetes in adults to be 3.2% (3.5% males and 3.0% females) in Ethiopia. International Diabetes Federation Estimates for 2017 however showed a much higher prevalence of 5.2% (with 2.6 million with DM now. Ethiopia is now 1st in SSA). A systematic review of other studies reported prevalence of diabetes ranging from 0.3% to 7.0% in the general population, and up to 8.5% in patients with HIV or TB. The review also showed up to 84% of individuals (particularly in rural areas) with diabetes remained undiagnosed. Among identified cases as having DM and received treatment, only 24% achieved blood sugar control. Patients were found to have high rates of complications.

3. CHRONIC RESPIRATORY DISEASES

Asthma is a fairly common health problem in Ethiopia, affecting 1.5-3% of the population. The prevalence of COPD is unknown in Ethiopia even though hospital-based studies showed the problem to be fairly common. The majority of households use biomass fuel which exposes women and children to excessive amounts of particulate matter. Indoor air pollution in Ethiopia is a known cause of COPD and other respiratory and cardiovascular diseases.

4. CANCER

Cancer, especially breast and cervical cancers, is a staggering public health problem in Ethiopia. An estimated 65,000 people develop cancer annually in Ethiopia. Two-third of the incident cases occurred in females (43 thousand) while the rest were in males (22 thousand) with female-to-male ratio of 2:1. The most common cancers in women were breast (takes 23% of all cancers) and cervix followed by ovary, colorectal, leukemia, thyroid, Non-Hodgkin's lymphoma (NHL), skin, uterus and liver while the top ten cancers in men were colorectal, NHL, prostate, leukemia, lung and bronchus, urinary bladder, stomach, liver, skin and connective & soft tissue.

Nearly four thousand cancer cases were expected in the age group below 15 years in 2015 in Ethiopia. Leukemia was the most common cancer in children 0-14 years of age (representing nearly 30% of all cancers in children) followed by NHL, Wilm's tumor and Retinoblastoma.
Most patients with cancer in Ethiopia present at a very late stage, treatment facilities are limited and are often poorly staffed and equipped which results in very poor outcomes. Scale-up of cost-effective preventive, screening, and treatment approaches targeting the most common cancers in Ethiopia could ameliorate morbidity and improve cancer survival.

5. CHRONIC KIDNEY DISEASES

Chronic Kidney Diseases (CKD) are characterized by irreversible damage to the nephrons of the kidney with resultant diminishing of the kidney functions. Chronic kidney disease is an important and common public health problem. It has a prevalence rate of 5 to 10% of the population. Chronic kidney disease is increasing in prevalence in Ethiopia. In 2016 there were an estimated 6701 deaths due to CKD. The majority of CKDs in Ethiopia occur due to hypertension, diabetes and glomerulonephritis.

6. INJURIES

Based on the National NCD STEPS Survey about 3% of respondents were involved in a road traffic crash as a passenger, driver, or pedestrian during the past 12 months preceding the survey. Nearly 3% of the respondents had sustained injury other than road traffic accident in the past 12 months preceding the survey. From all injuries other than road traffic accident, fall is the leading cause, 40.2%, followed by cut, which was 31.5%.

7. MENTAL, NEUROLOGICAL AND SUBSTANCE USE DISORDERS

The burden of mental health disorders in Ethiopia is high accounting for 19% of all years lived with a disability (YLD) in 2015. It afflicts close to 30% of the Ethiopian population at any one point in time. Common mental disorders are the commonest mental health problems (21.56%), followed by major depression (6.8%). Even though schizophrenia (0.5%), bipolar disorder (0.5%) and epilepsy (0.52%) are less common mental health problems their severity puts them top in the agenda of mental health problems. Substance use disorders are emerging mental, social, security and economic problems in Ethiopia.

Mental health services in Ethiopia are poorly resourced and generally accessible to only the most severely ill. Most of the facilities, especially inpatient settings are located in urban areas. Mental health care provided at primary health care (PHC) facilities and social workers based in the community are scarcely available in Ethiopia.

8. EYE HEALTH

Eye health problems are also major causes of disability in Ethiopia. According to the 2005/6 National Survey on Blindness, Low Vision and Trachoma, the prevalence of blindness was 1.6% and low vision 3.7%, which represents one of the highest prevalence rates in the world. It is estimated that 87% - 91% of blindness and low vision in Ethiopia is avoidable (either preventable or treatable). The main causes of blindness were: cataract (49.9%), trachoma (11.5%), other corneal opacities (7.8%), refractive errors (7.8%) and glaucoma (5.2%). Similarly, the major causes of low vision were: cataract (42.3%), refractive errors (33.4%) and trachoma (7.7%). Estimates show that, nearly 640 thousand blind people and an additional 1.25 million people with low vision are due to cataract; nearly 150 thousand are blind due to trachoma, more than 50 thousand are blind due to glaucoma and nearly 1 million people have low vision due to refractive errors.

9. SURGICAL CONDITIONS

According to global estimates, East Africa has one of the highest needs for surgical procedures with a reported 6,145 procedures per 100,000 population. Surgical conditions are among the most common causes of admissions to secondary and tertiary hospitals in Ethiopia. Most surgeries were related to injuries, malignancies and acute abdominal emergencies for adults, and congenital abnormalities and acute abdominal emergencies in children.

2.5 MAGNITUDE OF NCDI RISK FACTORS IN ETHIOPIA

2.5.1 Risk Factors for NCDIs

Risk factor is an aspect of personal behavior or lifestyle, an environmental exposure, an infection or a hereditary characteristic that is associated with an increase in the occurrence of a particular disease, injury, or other health condition.

The underlying causes of the main NCDs are complex. They include genetic predispositions, as well as modifiable risk behaviors (such as tobacco use, harmful use of alcohol, physical inactivity and unhealthy diets), environmental risks (such as air pollution), and infections (like hepatitis B and C, HIV, HPV, EBV, Group A beta hemolytic streptococci).

Fig. 1. Determinants of NCDs and responsibilities for response

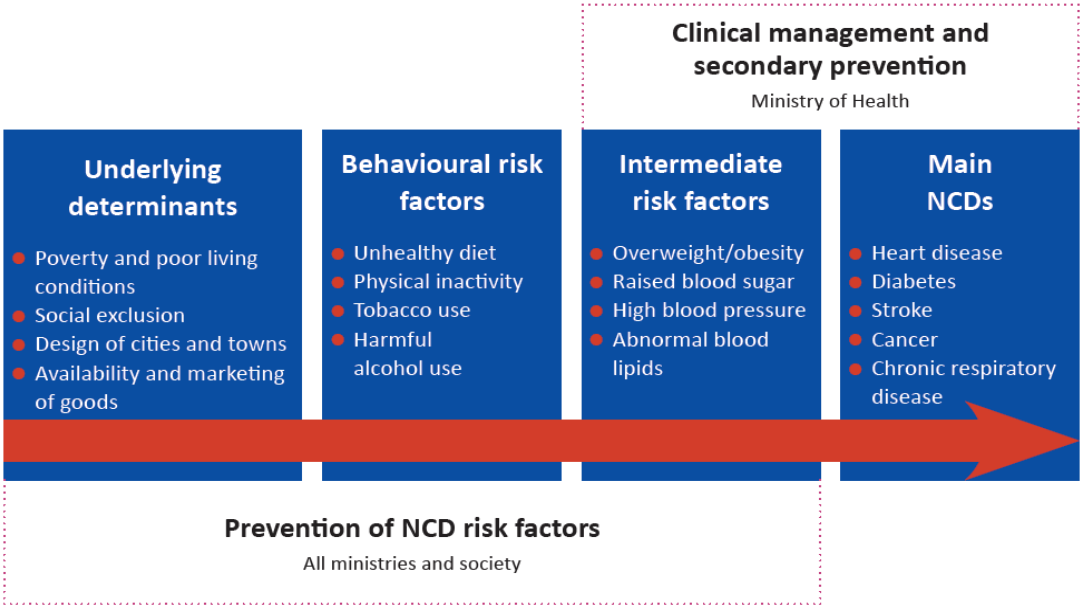

Figure 4: Determinants of NCDs and responsibilities for response (Source: The Case for Investment on NCDs in Ethiopia 2018, WHO)

As shown in the framework (figure 4) underlying determinants predispose to behavioral and environmental risk factors and these in turn result in intermediate or metabolic risk factors. The final result in the cascade are the Major NCDs.

NCD Risk factors can be classified as modifiable and nonmodifiable risk factors. Non-modifiable risk factor is a risk factor that cannot be reduced or controlled by intervention; Among these factors are age, gender, race/ethnicity and genetics.

A modifiable risk factor is a behavioral risk factor that can be reduced or controlled by intervention, thereby reducing the probability of disease.

- Physical inactivity,
- Tobacco use,
- Harmful use of Alcohol, and
- Unhealthy diets (trans fat consumption, high saturated fat, high sodium, high sugar foods and sugary drinks, and low fruit and vegetable intake).

Other risk factors include:

- Air pollution (indoor and outdoor)
- Khat use
- infections and infestations
- Stress

Behavioral risk factors can lead to metabolic/physiologic changes or intermediate risk factors. WHO has prioritized the following four metabolic risk factors:

- Raised blood pressure
- Elevated plasma glucose
- Raised total cholesterol
- Overweight and obesity.

The World Health Organization (WHO) identified four main NCDs as leading causes of mortality: cardiovascular disease (CVD), diabetes mellitus, chronic respiratory diseases, and cancers. These four diseases share four modifiable risk factors: physical inactivity, unhealthy diet, harmful alcohol use, and tobacco use. Studies showed that the modifiable risk factors are usually established during adolescence and are then carried to adulthood (hence life course approach to NCDs). Based on this model up to 80% of CVD and type 2 diabetes mellitus; and over one-third of cancers can be prevented by reducing or eliminating the four modifiable shared risk factors globally.

However, based on the GBD study 2017 estimates for Ethiopia only 47% of the NCDs mortality is attributable to metabolic, behavioral and environmental/occupational risk factors. The top five risk factors for NCDs related death and disability in Ethiopia are dietary risks, high systolic blood pressure, high fasting plasma glucose, air pollution and impaired kidney function which constitute two-thirds of the attributable risk.

Additionally, infection-related NCDs are ubiquitous and significant causes of suffering and death in Ethiopia. The prevalence of both Hepatitis B and Hepatitis C viruses are very high and is so for the associated chronic liver diseases and liver cancer. Helicobacter pylori is a bacterial infection that causes peptic ulcer disease and several gastrointestinal cancers. Its prevalence is very high in Ethiopia, explaining the high prevalence of these conditions in Ethiopia. Rheumatic heart disease, which is a chronic sequelae of a Beta hemolytic group A streptococcal bacterial sore throat, affects more than 500,000 children and young adults in Ethiopia. RHD is rare in the western world, but in Ethiopia and other Sub-Saharan African countries, it continues to be a significant cause of premature death and suffering. HIV itself is associated with a myriad of noncommunicable diseases and cancers. Several other viral infections like human papillomavirus, Epstein-Barr virus, human herpes viruses are also associated with many cancers. Table 1 below shows the list of risk factors and associated NCDIs.

Table 1: Shared risk factors for common NCDIs

NCDI >>>> Risk factor	Cardiovascular disease	Diabetes	Cancer	Chronic Respiratory Disease	Mental Disorder	Eye Diseases	Chronic Kidney Disease	Musculo skeletal Diseases	Oral-Dental Diseases	Injuries
Unhealthy Diet	X	X	X		X	X	X	X	X	
Tobacco Use	X	X	X	X	X	X	X	X	X	
Harmful use of Alcohol	X	X	X		X		X	X	X	X
Physical Inactivity	X	X	X	X	X		X	X		X
Khat	X	X			X				X	X
Indoor Air Pollution	X		X	X		X				
Overweight Obesity	X	X	X	X			X	X		X
Raised Blood Pressure	X	X				X	X			
Raised Blood Glucose	X	X	X			X	X	X	X	
Raised Blood Cholesterol	X	X	X				X			
Infections (Viruses, bacteria, protozoa)	X		X	X	X	X	X	X	X	

NB: Adapted from multiple sources

2.5.2 Prevalence of NCD Risk Factors in Ethiopia

Based on data from nationally representative population-based surveys (National NCD STEPS Survey 2015 and Ethiopian Demographic and Health Survey 2016) and from global databases the prevalence of NCD risk factors is summarized in the table below.

Table 2: Prevalence of NCD risk factors in Ethiopia

NCD Risk factors	Description	Male	Female	Total	Data Year
Harmful use of alcohol	Total alcohol per capita consumption, adults aged 15+ (liters of pure alcohol)	5	1	3	2016
Harmful use of alcohol	Current Alcohol Use, Adults aged 15+ (%)	46.6	33.5	40.7	2015
Physical Inactivity	Physically inactive based on WHO Criteria, Adults aged 15+ (%)	4	7.9	5.8	2015
Salt Intake	Mean population salt intake, adults aged 15+ (g/day)	9	7.4	8.3	2015
Salt intake	Daily consumption >5g/day			96.2	2015
Tobacco Use	Current tobacco use, Adults aged 15+ (%) (GATS Survey 2016)	8.1	1.8	5	2016
Khat Use	Current Khat Chewing, Adults aged 15+(%)	21.1	9.4	15.8	2015
Low Vegetable and Fruit consumption	Vegetable and fruit consumption less than recommended by WHO, Adults aged 15+ (%)	98	97.1	97.6	2015
Ambient Air Pollution	Exceedance of WHO guidelines level for annual PM2.5 concentration (by a multiple of)	-	-	3	2016
Household air pollution	Population with primary reliance on polluting fuels and technologies (%)	-	-	93	2016
Overweight or Obesity	Overweight or Obesity, adults aged 15+ (%)	4.4	8.8	6.3	2015
Raised Total Serum Cholesterol	Serum total cholesterol >200mg/dl, adults aged 15+ (%)	3.9	6.8	5.2	2015
Raised TG	Serum Triglyceride level >150mg/dl, Adults aged 15+ (%)	21.7	20.2	21	2015
Raised LDL	Serum LDL level >130mg/dl, Adults aged 15+ (%)	10.3	18.8	14.1	2015
Low HDL Cholesterol	Serum HDL level <40mg/dl men; Women <50mg/dl, Adults aged 15+ (%)	64.8	73.5	68.7	2015
HBV Prevalence	Adults 15+ (%)			9.4	2015
Raised Blood pressure	Raised blood pressure, adults aged 15+ (%)	15.7	16.5	16	2015
Diabetes	Raised blood glucose, adults aged 15+ (%)	3.5	3.0	3.2	2015

Sources: National NCD STEPS Survey, GATS Survey, Ethiopia NCDI Commission Report 2018, EDHS 2016 Report, Global NCD Report 2018.

Based on the National NCD STEPS Survey ~ 98% of adults have at least one NCD risk factor and about 4.5% of adults have 3 or more risk factors indicating the potential for rising of NCDs in the near future.

2.6 SERVICE AVAILABILITY AND READINESS

Provision of quality care and treatment services depends on the availability of basic infrastructure, diagnostics and medical supplies.
The number of health facilities in Ethiopia is expanding and it is expected to increase more in the coming 5 years, especially with the number of hospitals to increase dramatically.
Currently the number of facilities is as shown in table 6 below.

Table 6: Number, types and functional status of health facilities and health posts in Ethiopia, Health and Health Related Indicators 2019

Health facility type	Fully Functional	Under Construction	Total
Health Posts	17,162	425	17,587
Health Centers	3,678	86	3,764
Hospitals	425	108	533

However, the readiness of health facilities to deliver health services are severely limited by a complex list of challenges. Top on the list based on the National SARA Survey 2018 are unavailability of basic amenities (mean availability was 39%), basic equipment (mean availability was 60%), standard precautions (mean availability was 42%), diagnostics (mean availability was 40%) and essential medicines (mean availability was 28%).

The situation is even worse for NCDs service delivery. Even though 49%, 48%, 53% and 9% of health facilities claimed to provide diagnosis and management of CVD, DM, CRD and Cervical Cancer respectively, the mean availability of tracer items for the above services was only 42%,48%,27% and 52% respectively indicating that almost half of the facilities which reported delivering an NCD service are not well prepared to do so.

2.7 IMPACT OF NCDIs IN ETHIOPIA

NCDs pose a significant threat to Ethiopia's health and economic development. NCDs are not only major causes of premature death, disease and illness but also threaten to slow Ethiopia's rapid economic growth.

Ethiopian citizens face the financial burden through out-of-pocket health spending and lost income from breadwinners who leave the labor force. This burden undermines efforts to improve nutrition and education and the initiative to reduce poverty and narrow inequalities to leave no one behind.

According to a report by WHO in 2018, the risk of premature mortality from noncommunicable diseases (NCDs) in Ethiopia was 20% in 2016. The report indicated the economic costs of NCDs were significant and were due principally to their impact on the non-health sector (reduced workforce and productivity). It was estimated that NCDs cost Ethiopia at least 31.3 billion Ethiopian Birr (US$ 1.1 billion) per year, equivalent to 1.8% of the gross domestic product (GDP) as shown figure 5 below. Less than 15% of the costs is for health care (See figure below).

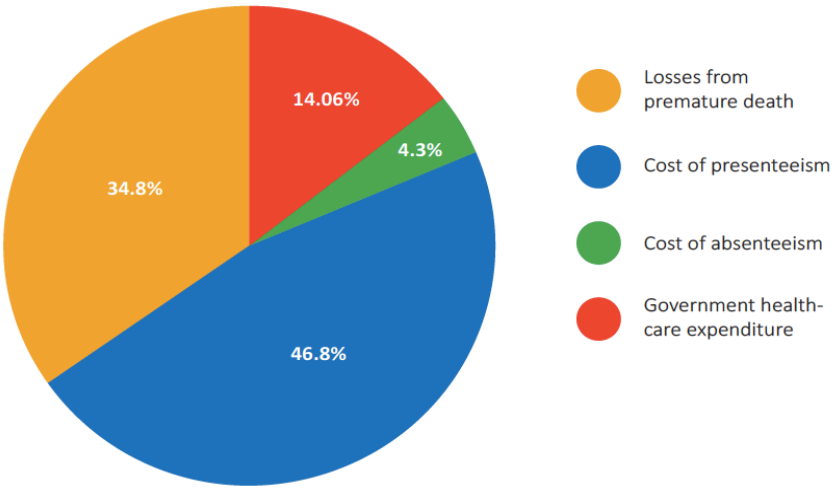

Figure 5: Structure of the economic burden of NCDs in Ethiopia, 2017 (Source: WHO 2018. The case for Investment for NCDs in Ethiopia)

Thus, the impact of NCDs goes beyond increasing the cost of health services. Significant costs to individuals, families, businesses, the health systems and the government and adds up to major macroeconomic impacts.

Poverty is closely linked with NCDs. NCDs and poverty create a vicious cycle whereby poverty exposes people to behavioral risk factors for NCDs and, in turn, the resulting NCDs become an important driver of families towards poverty.

According to National Health Accounts 6th report, 68% of NCDI services in Ethiopia were financed by Out of Pocket (OOP) expenditures from households. Government was responsible for nearly 30% of NCDIs expenditure, while the contribution of donors for such services was negligible at only 1%.

Overall, 23% of total OOP expenditures in Ethiopian households are due to NCDs. Renal failure accounted for 10% of all OOP expenditures, the second highest proportion of all conditions, and significant household spending goes to other NCDs, such as mental disorders (6%), cancers (5%), diabetes (2%), and injuries (2%). Among patients with cardiovascular diseases in Addis Ababa who sought care in health facilities, 27% had experienced catastrophic health expenditures, and was even higher in low-income households of patients residing outside of Addis Ababa.

Additionally, evidence is mounting that an individual's NCDs may put the person at higher risk for key infectious diseases. For example, the risk of developing TB in diabetes very high. Patients with NCD who acquire COVID-19 are at increased risk of severe illness and death.
Patients with NCDs are also at higher risk of depression and anxiety which worsens the death and disability associated with NCDs.

2.8 THE NATIONAL RESPONSE TO THE NCDs EPIDEMIC

Despite the remarkable successes in the prevention and control of communicable, maternal and child health diseases and conditions the prevention and control of Non-Communicable Diseases appears to be neglected for too long. It first appeared in the Health Sector Development Program (HSDP) III which spanned from 2005-2010, though there was no meaningful implementation of the NCD Program at that time. The NCD Program evolved in in the subsequent HSDP IV which was from 2010-2015. During this time the NCD Strategic framework was developed in 2010 and the NCD Case Team was established in 2013 under the Diseases Prevention and Control Directorate for the first time.

NCDs were considered as one of the major disease control priorities in the Health Sector Transformation Plan 2015/16-2019/20, with elaborate strategies and costed interventions. It attempts to address the four NCDs (namely cardiovascular disease [CVD], chronic respiratory disease [CRD], diabetes mellitus [DM)] and cancer) and the four main risk factors for NCDs (namely physical inactivity, unhealthy diet, harmful use of alcohol, and tobacco use) as the main strategy. Twelve out of 176 indicators were included to monitor the epidemiology and service coverage for NCDs.

Some of the Initiatives and successes of the HSTP on NCDs were:

- Establishing NCDs Units/positions with required man power under DPCD in Ministry of Health and NCD Focal persons in RHBs,
- Developed and launched first National Strategic Action Plan for the prevention and control of non-communicable diseases (NCDs) 2014-2016.
- It also developed National Eye Health Strategic Plan 2016-2020, National Cancer Control Plan 2016-2020, National Hepatitis Prevention and Control plan 2016-2020 and National Mental Health Strategic Plan 2012/13-2016.
- National Childhood and Adolescent Cancer Control Plan Of Ethiopia 2019-2023.
- Successfully conducted the National NCD STEPS survey in 2015/16 to generate evidences to guide the national responses and report launched September 2017.
- National NCDI Commission was established to study the NCDI burden and recommend cost effective interventions and released its report on Nov 27,2018.
- Developed different guidelines and manuals on diseases management and trainings on NCDs (NCDs, Cervical cancer, RHD, Hepatitis, Breast cancer)
- Integrated NCDs indicators into the revised national HMIS indicators list,
- Developed different screening and treatment registers, M & E tools and job aids,
- Working to Integrate supply issues management through assigning Pharmacy professional for NCDs logistics also started to work with pharmaceutical partners to address affordable drugs with low price and consistently to our citizen.
- Establishing national working and advisory groups (DM, HTN, Cancer, CVD, Eye health, CRD, Hepatitis, Mental Health).
- Capacity building for hospital and health center staff and program staff.
- Tobacco control initiative started by endorsing FCTC.
- Stringent Alcohol and FCTC compliant Tobacco control proclamation 1112/2019 issued by Ethiopian Parliament in Feb 2019.
- Cervical Cancer Screening with Visual Inspection with Acetic Acid (VIA) and cryotherapy for VIA Positive lesions being implemented country wide.
- Radiotherapy Center expansion to six additional sites underway and will be finalized soon.
- Viral Hepatitis treatment program initiated and being scaled up.
- Decentralization of care for Diabetes, Hypertension, Rheumatic heart disease and CRD underway in collaboration with Addis Ababa University, RHBs and implementing partners like PSI-Ethiopia Healthy Heart Africa Initiative, Friends of Children's Heart fund of Ethiopia and others.

- The Ministry of health was implementing the National Strategic Action Plan on Prevention and control of NCDs 2014-2016. A detailed analysis of the NCD response at national and regional level has been done and the results are summarized in the SWOT Analysis table below.

Table 3: SWOT ANALYSIS OF NCD PROGRAM IN ETHIOPIA

STRENGTH	**OPPORTUNITIES**
• Dedicated and functional National and Regional NCDs Units, • Evolving interest and commitment of the MOH-E and RHBs on prevention and control of NCDs • Expanded NCDs agenda incorporated within HSTP2 • Strategic plans, annual plans being regularly developed • Guidelines, training materials and client and provider education materials developed • Awareness raising campaigns being conducted though not in a structured manner • NCDs issues integrated into the Health Extension program • NCD program integrated into the Ethiopian Primary Health care guideline • National NCD STEPS Survey and GATS Survey Conducted and result launched. • National NCDIs Commission established and assessed NCDIs Situation and developed recommendations and cost-effective interventions	• Strong primary healthcare structure especially designed for disease prevention and health promotion through the Health Extension Program • The four NCDs are preventable by addressing their shared risk factors ("best buy" intervention through population-wide approach) • Recent initiative for high level political commitment at the global and regional levels • NCDI Commission report with cost effective interventions recommended. • The health policy and Essential health service packages are under revision. • Growing role of the private health sector in the clinical care of non-communicable diseases, • Growing number of health professional training institutions (colleges of health sciences, universities), • Cumulative experience in HIV/AIDS, MCH and other communicable diseases- conducting training, developing training material, mentoring, supportive supervision, task shifting and task sharing. • UN Agencies including WHO, as well as growing international interest on NCDs

WEAKNESS	THREATS
• Poor prioritization of NCD prevention and control at all levels of the health system especially in Regions and Woredas. • Inadequate high-level advocacy for political leaders on NCDs and risk factors • Lack of financial and technical resources for program implementation • Poor capture and reporting of NCD related indicators in the HMIS with resultant paucity of planning data. • Low Awareness of the community, health care providers and the political leaders on NCDs • Poor availability and affordability of high quality, safe and effective basic technologies and medicines for screening, diagnosis, treatment and monitoring of NCDs. • Inadequate mix and capacity of the health workforce • Poorly staffed RHBs • Limited number of HFs providing integrated management of NCDs at primary health care level and poor referral networks • Poor partnership between the public and private health systems. • Poor or No regulation on Khat, Oils and fats, Sugar, salt and environmental pollution	• Lower awareness and misconceptions about the burden and consequences of NCDs, among the policy makers, health professionals and the general public • Weak multi-sectoral coordination mechanism for prevention and control of NCDs • Lack of resources for NCDs (competing priorities from triple burden of diseases) • Limited number of national and international partners for technical and financial support of the NCD program • Unregulated transnational (global) trade leading to imported products and behaviors, • Proliferation of industrial/commercial food processing and brewery- promoting unhealthy • Globalization with resultant lifestyle changes (smoking, alcohol, physical inactivity, foods with added salt, sugar and saturated or trans-fat) • Low health seeking behavior among the public often due to asymptomatic nature of NCDs. • Economic gain by the government from the booming industry which predisposes to NCD risk factors (alcohol, Khat, soft drinks). • Rapidly expanding urban centers and industries.

CHAPTER THREE:
NATIONAL STRATEGIC PLAN FOR THE PREVENTION AND CONTROL OF NONCOMMUNICABLE DISEASES

3.1 SCOPE, VISION AND MISSION

3.1.1 SCOPE

Cardiovascular diseases (CVD), chronic respiratory diseases (CRD), Chronic Kidney Diseases and Diabetes Mellitus (DM) are included in this National Strategic Action Plan. These four categories of NCDs make the largest contribution to morbidity and mortality among the non-communicable diseases especially in low and Low-middle income countries (LMIC). Even though cancer is the other major contributor to NCDs morbidity and mortality it is not included in this strategy as it has been addressed separately in the National Cancer Control Plan 2016-2020. The other major contributors to NCDs morbidity, namely mental, neurological and substance use (MNS) disorders, Hepatitis and eye health problems, are covered in their respective National Mental Health Strategy, National Hepatitis Prevention and control and National eye health strategic plans.

This NSP will focus on the aforementioned four NCDs and their shared risk factors. As per the national health policy and health sector transformation plan 2 of Ethiopia, this NSP for the prevention and control of NCDs will focus on prevention and control activities for the population at large as well as provision of quality NCDs services in an equitable manner for individuals with NCDs or at high risk of developing NCDs.

3.1.2 VISION

To see healthy, productive and prosperous Ethiopians free from preventable and avoidable non-communicable diseases.

3.1.3 MISSION

To promote health and wellbeing of Ethiopians through providing a comprehensive package of promotive, preventive, curative and rehabilitative NCD services of the highest possible quality in an equitable manner."

3.2 GOAL, OBJECTIVES AND TARGETS

3.2.1 GOAL

To reduce the burden of NCDs by promoting healthy lifestyles, reducing common risk factors and providing integrated evidenced based, innovative and cost-effective public health and clinical interventions.

3.2.2 OBJECTIVES:

1. To strengthen national capacity, public policies through health in all policies, leadership, governance, multi-sectoral action and partnership to accelerate country response for prevention and control of non-communicable diseases.
2. To reduce exposure to modifiable risk factors for non-communicable diseases and promotion of health throughout the lifecycle through the creation of health-promoting environments.
3. To strengthen and reorient health systems to address prevention and control of non-communicable diseases through people-centered care with financial risk protection and universal health coverage.

4. To enhance national capacity for NCDs and risk factors surveillance and research for prevention and control of non- communicable diseases
5. To foster international cooperation and advocacy to raise the priority accorded to prevention and control of non-communicable diseases in the development agenda and in internationally agreed development goals.

3.2.3 TARGETS OF THE NATIONAL STRATEGIC PLAN

The WHO global action plan on NCDs 2013 - 2020, outlines nine voluntary targets (see Annex 4) for the prevention and control of non-communicable diseases by the year 2025.The current national strategic plan clearly defines targets for prevention and control of NCDs and their risk factors in the Ethiopian context as has been included in the Health Sector Transformation Plan 2 (2020-25). The 2015 National NCD risk factors STEPS survey, Global NCD Report 2018, GATS Survey 2016, EDHS Survey 2016 and SARA Survey 2016 have been used as a baseline for the target setting.
The targets are listed in the table below.

Table 4: Selected NCDs Targets for 2020 - 2025

Ser. No.	Indicators	Baseline	Target by 2025
1	Reduce overall premature mortality from Non-communicable Diseases	20% (WHO 2016 for Ethiopia)	25% relative reduction
2	Reduce prevalence of current tobacco use in persons aged 15+ years	5 % GATS Survey 2016	30% relative reduction
3	Reduce harmful use of alcohol in persons aged 15+ years	12.5% NCD STEPS by 2015	10% relative reduction
4	Reduce prevalence of current khat use in persons aged 15+ years	16% NCD STEPS by 2015	20% relative reduction
5	Reduce prevalence of insufficient physical activity in persons aged 15+ years	5.8% NCD STEPS by 2015	10% relative reduction
6	Reduce mean population salt intake to <5 grams per day in persons aged 15+ years	96.2% STEPS Survey in 2015	30% relative reduction
7	Reduce insufficient fruit and vegetable consumption in persons aged 15+ years	97.6% STEPS by 2015	25 % relative reduction
8	Reduce the percentage of people who are obese or overweight	6.3% STEPS in 2015	15% relative reduction
9	Reduce the age-standardized prevalence of raised total cholesterol among persons aged 18+ years	5.6% STEPS in 2015	10% relative reduction
10	Reduce prevalence of raised blood pressure in persons aged 15+ years	16% STEPS in 2015	25% relative reduction
11	Reduction in the prevalence of ARF/ RHD in age group 4-24 years old	17/1000 school children and young adults (NCDI Commission Report 2018)	25% relative reduction

12	Increase treatment (pharmacologic and nonpharmacologic) coverage for patients with hypertension	3% STEPS Survey 2015	50%
13	Increase the proportion of people with hypertension with controlled blood pressure	30% based on pilot Study by MOH-E 2016	60 %
14	Halt raise in prevalence of raised blood sugar in persons aged 15+ years	3.2 % STEPS in 2015	zero percent increase
15	Increase the proportion of people with diabetes with controlled blood glucose level	30% based on pilot Study by MOH-E 2016	60%
16	Increase treatment coverage for patients with diabetes (pharmacologic and nonpharmacologic).	3% STEPS Survey 2015	50%
17	Increase availability of basic technologies and essential medicines including generics, required to treat NCDs in both public and private facilities;	28% availability based on SARA 2018 Report	80%
18	All health centers and hospitals provide routine and emergency asthma care	Baseline 27% readiness for asthma care	100%
19	Decrease household air pollution from biomass fuel use	Baseline > 95% households use biomass fuel (based on EDHS 2016)	< 60%

3.3 GUIDING PRINCIPLES FOR THE NSAP ON NCDS AND RISK FACTORS

The development and recommended implementation of this strategic plan was based on the following guiding principles and approaches:

1. **Multi-sectoral approach:-** NCDs are both a health and a development agenda. Social, economic, behavioral and environmental determinants expose people to high risk factors such as tobacco smoking, unhealthy diet, physical inactivity, harmful use of alcohol, khat, and environmental pollution.
   The nature of NCDs and their risk factors calls for the involvement of both health and non-health sectors in prevention and control measures. Mechanisms will be put in place to ensure that there is a coordinated multi-stakeholder engagement and multisectoral action for health both within government and by nongovernment actors. Health should be incorporated in all policies and a whole of government approach where appropriate should be considered.
2. **Life-course approach:-** the risk of non-communicable diseases may occur at critical periods of human growth and development or risk may accumulate with age and be influenced by factors acting at all stages of the life span.
   With the trajectory of NCD risk starting early in the life-course, early intervention will have the greatest impact. (figure 4)

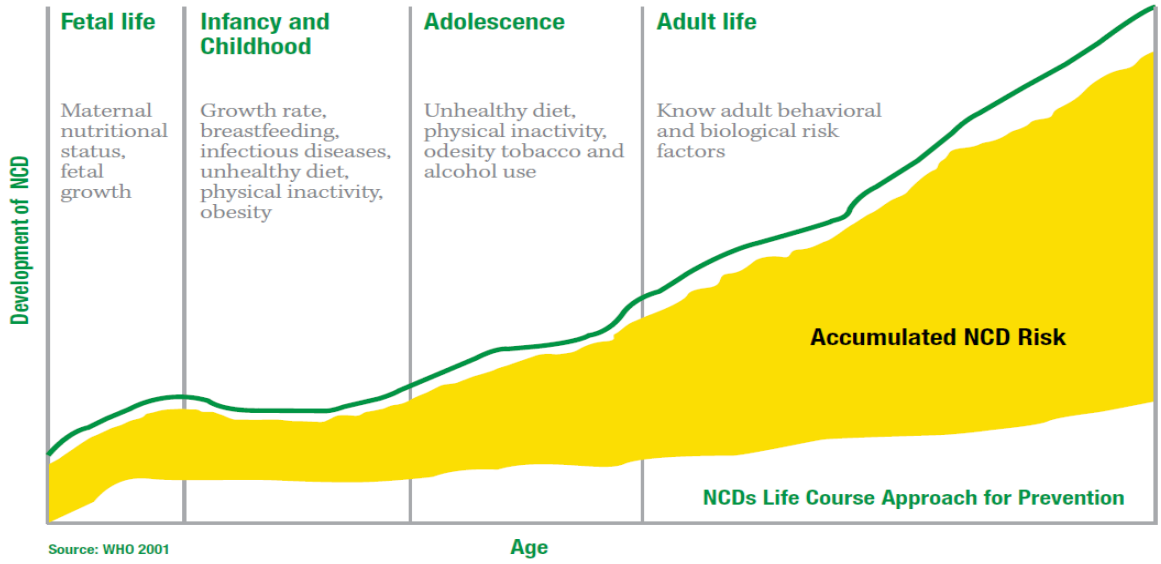

Figure 6: A life course approach for NCD prevention (Source: NCD Strategic plan 2014-16)

Opportunities to prevent and control non-communicable diseases occur at multiple stages of life; interventions in early life often offer the best chance for primary prevention. Policies, plans and services for the prevention and control of non-communicable diseases need to consider the health and social needs at all stages of life.

3. **Universal health coverage:-** achieving universal health coverage (UHC) without attaining NCDs prevention and control is impossible, hence NCDs have to be prioritized in UHC design and implementation. When achieved, UHC can provide a powerful vehicle to accelerate progress in NCDs outcomes, inequalities, and socio-economic impact. Quality health services and innovative approaches are key requisites for effective prevention and control of non-communicable diseases. The vicious link between non-communicable diseases and impoverishment cannot be severed in the absence of universal health coverage in national health systems. Ensure universal access to primary health care through expanded health insurance coverage.
4. **Decentralization and Integration:-** Intervention and approaches towards the prevention and control of NCDs should be integrated from policy development to service delivery with a focus on primary health care. NCDs prevention and curative services will be delivered integrated within the three-tiered health care system of the country (primary, secondary and tertiary). Services will be given at all levels ranging from the community, the health posts up to the tertiary referral hospitals.
5. **Human rights approach:-** The constitution of Ethiopia states that every citizen has the right to life, the right to the highest attainable standard of health and the right to access information. The National NCD Strategic Plan is firmly rooted in these rights.
6. **Equity-based approach:-** The disparity in occurrence of NCDs is due to unequal distribution of social determinants of health. Action on the determinants of health, both for vulnerable groups and the entire population, is essential to create inclusive, equitable, economically productive and healthy communities.
7. **Empowerment of Individuals and communities:-** Individuals and communities' participation should be anchored in information geared toward helping them make informed decisions. In addition, they should also participate in the prevention and control of non-communicable diseases through advocacy, policy development, planning, legislation, service provision, research, monitoring and evaluation.
8. **Evidence-based:-** Interventions should be based upon evidence and implementation should focus on the achievement of well-formulated objectives and targets.
9. **Management of real, perceived or potential conflicts of interest:-** Real, perceived or potential conflicts of interest in policy must be acknowledged and managed.

CHAPTER FOUR:
PRIORITY AREAS AND STRATEGIES FOR THE NSAP

The underlying risk factors of NCDs are largely preventable. Interventions are needed at population level (primordial prevention), at community level (primordial and primary prevention), through early diagnosis (primary prevention) and through comprehensive and cost-effective management (secondary prevention), palliative care and rehabilitation (tertiary prevention).

To address the growing burden of NCDs, WHO identified a package of 16 "best buy" interventions that are cost-effective (costing as little as $1 per person per year), affordable, feasible and scalable in all settings. See Annex 3 for details of the WHO Best Buys. According to WHO, implementing all 16 "best buys" in all countries between 2018 and 2025 would avoid 9.6 million premature deaths, thus moving countries appreciably towards the NCD mortality reduction targets.

The cost of inaction is unbearable to the individual, households, the health system and the nation at large. The case for investment on NCDs and their risk factors in Ethiopia developed by the joint WHO and UNDP mission in consultation with sectoral ministries in Ethiopia in 2018 has shown that 242.2 Billion Birr is the Investment required for selected best buys intervention packages over a 15-year period. The return on the investment for the same time period will be 62.1 billion Birr. The report estimates that full implementation of preventive and treatment interventions would prevent more than 1 million premature deaths over 15 years.

The Ethiopia NCDI Commission expanded on the WHO Best Buy interventions and has reviewed evidence for implementation of highest priority NCDI Interventions. Based on the WHO Best Buy Interventions and the recommendations stipulated by the Ethiopia NCDI Commission Report the National NCD Prevention and Control Strategic Plan is organized by priority area, consisting of four targeted areas of intervention that will guide the implementation of NCD activities and interventions.

These priority areas are:

1. **Priority Area One:-** Strengthen the national NCD response through policy, governance, leadership and coordination.
2. **Priority Area Two:-** Health promotion and disease prevention targeting behavioral, infectious and environmental risk factors.
3. **Priority Area Three:-** Comprehensive and Integrated Screening, Diagnosis, Treatment, Care and Support for NCDs and their risk factors.
4. **Priority Area Four:-** Monitoring, evaluation and research.

The objectives, initiatives and strategies of each priority areas are described in the subsequent sections of this document

Refer also to Annex 1 to see the detailed implementation log frame.

PRIORITY AREA 1: STRENGTHEN THE NATIONAL NCD RESPONSE THROUGH POLICY, GOVERNANCE, LEADERSHIP AND COORDINATION.

OBJECTIVE:- To strengthen the national capacity and country-wide ownership of NCD interventions through influencing policy formulation, leadership, governance, multi-sectoral action and partnerships. Strategic initiatives for Priority Area One are detailed below:

Strategic Initiative 1: Strengthen National health policy on NCDs and their risk factors.

The objective of this strategic initiative is to address the challenges posed by NCD risk factors and the diseases themselves through policy and regulation. Much of the NCD risk factors will be addressed through appropriate national policies and regulatory measures.

In Ethiopia, risk factors that will be given most attention includes: tobacco, unhealthy diet, physical inactivity, indoor and outdoor air pollution, harmful alcohol use and khat consumption.

Strategic interventions:

- Ensure Specific policies and legislation are developed to address the rising burden of NCD risk factors.
- Designed policies and legislation to prioritize medical intervention for people affected by NCDs
- Foster public participation in designing and implementation of NCD interventions (prevention and care) policies.

Strategic Initiative 2: Establish/Strengthen NCD governance at all levels .

The objective of this strategic initiative is to create a response to the high burden and multifaceted challenge of NCDs. An effective, proactive and evidence informed NCD governance should be established at all levels to address the burgeoning challenges the country faces regarding NCDs and their risk factors. Mainstreaming NCD agenda into all health and health-related policies, strategies and services is of paramount importance. Since NCDs accumulate through the life course interventions should begin before conception, continued during conceptions, childhood, adolescence and early adulthood.

Strategic interventions:

- Strengthen NCD Coordination and Governance at Federal and RHB levels by expanding structures and budgets.
- Mainstreaming of Noncommunicable diseases prevention and control in all health sector strategies and activities, and enhanced coordination of services
- Strengthening and/or establishing NCD coordinating structures at zonal, woreda and health facilities levels.
- Set up a national and sub national NCDs Advisory group and technical taskforce.
- Mobilize adequate resources for NCD programs at all levels.

Strategic Initiative 3: Establish Multisectoral Coordination Mechanism for prevention and control of NCDs and Risk factors at all levels of the government.

The objective of this strategic initiative is to strengthen multisectoral response at all levels involving all relevant sectors and stakeholders with clear roles and responsibilities on NCDS and their risk factors. This initiative will be implemented through the Woreda Transformation Platform (WTP) which is composed of the WTP Steering Committee and the WTP Technical Working group at all levels.

Strategic Interventions:

- Establish a functioning multi-sectoral coordinating body at all levels with a multi-sectoral accountability framework.
- Coordinate the development of the Multisectoral Action Plan (MSAP).
- Ensure Integration of prevention and control of NCDs and their risk factors in the multisectoral Woreda Transformation Platform.
- Monitor implementation of the Multisectoral Strategic Action Plan and
- Mobilize financial and technical resources for prevention and control of NCDs.

PRIORITY AREA 2: INTENSIFY HEALTH PROMOTION AND DISEASE PREVENTION TARGETING BEHAVIORAL, INFECTIOUS AND ENVIRONMENTAL RISK FACTORS

Objective:- Promote healthy lifestyles and reduce exposure to modifiable risk factors for non-communicable diseases.

Strategic Initiative 1: Increase public awareness on NCDs and their risk factors

The objective of this strategic initiative is to enhance knowledge to bring about behavioral changes on NCDs and their risk factors. Over 80% of CVDs and diabetes and nearly 40% of cancers are preventable through addressing their shared behavioral risk factors.

Strategic Interventions

- Develop NCD communication strategy and health education modules on NCDs and their risk factors (behavioral, infectious and environmental)
- Conduct Advocacy on NCDs and their risk factors to increase the awareness and commitment of policy makers, health managers and health care workers.
- Integrate Communication Packages on NCDs and their risk factors in School Health and Nutrition and the Health extension programs.
- Integrate NCD and risk factors messages into the routine health education program of health facilities
- Conduct Awareness raising programs on NCDs and risk factors in work places.

Strategic Initiative 2: Promoting Healthy Diet

The objective of this strategic initiative is to increase public awareness on healthy diet which includes adequate intake of vegetables, fruits and whole grains; limited intake of sugar, salt and saturated fat and avoidance of trans-fats. Healthy diet promotive services shall encompass all stages of life. The MOH-E should engage the non- health sectors that can contribute to the promotion of healthy diet.

Strategic Interventions

- Implementing public awareness activities on healthy diets during the life course
- Develop national dietary guidelines to promote healthy dietary habits.
- Collaborate with the national/regional nutrition council and task forces to address the dietary risk factors for NCDs.
- Liaise with the Ministry of Education to introduce healthy diet promotion in school curriculums and awareness creation activities.
- Develop and implement policies and legislations to promote healthy diet (reduction of salt, sugar, saturated fat, trans-fat; and promote regular fruit and vegetable consumption).

Strategic Initiative 3: Promoting Physical Activity

The objective of this strategic initiative is to create awareness on the benefits of physical activity and to create conducive environment for physical exercise.

Strategic Interventions

- Creating public awareness on the health benefits of physical activity in prevention and control of NCDs
- Liaise with the Ministry of Youth and Sports to develop/adopt a strategic implementation plan to enforce the national sport policy.
- Liaise with the Ministry of Education for the promotion of all-inclusive physical activity in schools.
- Engage the Ministry of Housing and Construction and the Ministry of Transport to create an enabling environment for physical activity including playgrounds, walkways, and cycling lanes.
- Promote mass sport including competitive sport events in collaboration with stakeholders.
- Promoting physical activity in the community, private and public institutions, workplaces and health facilities.
- Strengthen the Car free roads days initiative implementation in all urban areas in collaboration with other stakeholders.

Strategic Initiative 4: Reduce Harmful Use of Alcohol

The objective of this strategic initiative is to create awareness on harms of alcohol use and foster the full implementation of legislations and polices on production, sale and use of alcohol.

Strategic Interventions

- Creating public awareness on the health, security and economic harms of alcohol use.
- Implement and monitor enforcement of the EFDA proclamation 1112/2019 on prohibition of advertising, promotion and sponsorship of alcoholic beverages, and mandatory labelling of alcoholic beverages at the National and Regional levels.
- Liaise with Ministry of Finance, Ministry of trade and industry and other relevant sectors to regulate alcohol production, sale, use and taxation.

Strategic Initiative 5: Tobacco Use Reduction

The objective of this strategic initiative is to increase public awareness on the health hazards of use of tobacco and tobacco products and strengthen the implementation of legislations and directives on tobacco and tobacco products.

Strategic Interventions

- Creating public awareness on the health, societal and economic harms related to tobacco use.
- Monitor enforcement of the proclamation of articles on tobacco control in the EFDA proclamation 1112/2019 in accordance with the WHO framework convention for the control of tobacco (FCTC).
- Promote gradual substitution of tobacco farms with other income generating agricultural products.

Strategic Initiative 6: Reduction of Khat Use

The objective of this strategic initiative is to increase awareness on the health risks of Khat use. Considering the vicious cycle between khat use and other NCD risk factors (like concurrent alcohol use, sugar intake, physical inactivity and impaired judgment) the following strategic interventions are to be implemented.

Strategic Interventions

- Implement public awareness on the dangers of khat consumption and its related risks.
- Liaise with national Multisectoral Committee to develop legislations and regulation on domestic production, sale and use of khat.
- Liaise with the Ministry of Education and other sectors for developing access restrictive measures aimed at children and young people including in schools and higher education institutions.
- Evidence gathering
- Promote gradual substitution of khat farms with other income generating agricultural products.

Strategic Initiative 7: Promote interventions on the reduction of exposure to environmental and occupational risk factors.

This strategic objective aims to promote interventions to reduce exposure to contaminants arising from the environment (outdoor air pollution due to vehicle and factory exhaust fumes), home (Biomass fuel) and workplaces (e.g. Cobble stone, Mines, Cotton Mills, Cement) and strengthen the surveillance of these contaminants in order to mitigate the effects of exposure.

Strategic Interventions

- Create public awareness on prevention of exposure to environmental and occupational risk factors on NCDs
- Strengthening the implementation of the legal frameworks, policies, standards and guidelines to reduce exposure to environmental and occupational risk factors in collaboration with Ministry of Labor and Social Affairs, Ministry of Trade and Industry, Ministry of Transport, Ministry of Mines and Energy, Environmental Protection Agency and other relevant sectors.
- Initiate and promote programs aimed at protecting and reducing exposure to risk factors for NCDs at the workplace, public and home environment.

Strategic Initiative 8: Prevention of Rheumatic Heart Disease

Acute Rheumatic Fever (ARF) is an inflammatory disorder of the connective tissue of the heart and other body parts, triggered by a Group A Beta hemolytic streptococcal (GABHS) throat infection. This condition causes temporary, painful arthritis and other symptoms. Acute rheumatic fever primarily affects the heart, joints and central nervous system. But, the major importance of acute rheumatic fever is its ability to cause fibrosis of heart valves, leading to crippling valvular heart disease, heart failure and death. There are cost-effective, affordable and feasible interventions for the prevention and control of RHD.

Strategic Interventions

- Primordial Prevention activities such as personal hygiene and policy measures on avoidance of overcrowding.
- Primary prevention of RHD: is treatment of bacterial pharyngitis for prevention of acute sequalae of group A streptococcal throat infections.
- Secondary prevention of RHD: the continuous administration of specific antibiotics to patients with a previous attack of rheumatic fever, or well-documented rheumatic heart disease (RHD registry based).

PRIORITY AREAS 3: COMPREHENSIVE AND INTEGRATED CLINICAL INTERVENTIONS FOR NCDs AND THEIR RISK FACTORS

Objective:- To expand access to comprehensive, high quality and integrated services for the community on NCDs and their risk factors.

Strategic Initiative 1: Strengthening Health Service Delivery

The objective of this strategic initiative is to strengthen the health system for effective and integrated NCDs and risk factors service provision.
Services will be provided at all levels starting from the community, in health centers, primary hospitals, general hospitals and referral hospitals. Recommended Interventions that will be delivered at the different levels of the health care system are shown in Annex 2.

Strategic Interventions:

- Define essential package of care on NCDs and risk factors for each level of the health care system.
- Reorient and reorganize the health services in accordance with the NCDs and risk factors care package.
- Decentralize and Integrate NCDs services and prevention of NCDs risk factors into the primary health care through task shifting, task sharing and improved referral networks.
- Empower patients and families in the care of patients with NCDs.

Strategic Initiative 2: Develop the Human Resource for NCDs Service Delivery

The objective of this strategic intervention is to capacitate the health work force at the different levels of the heath service to provide quality NCD screening, diagnosis, care and treatment services.

Strategic Interventions:

- Ensure NCDs and their risk factors are given due attention in all health-related preservice training curricula.
- Ensure the assignment of appropriate mix of healthcare workers as per the minimum standard.
- Develop NCDs and risk factor guidelines, training materials, care and treatment protocols for health care providers and train health care workers.
- Develop NCDs Program Management training materials and train NCD Program Managers.
- Strengthen health facility level Mentorship Programs on NCDs and risk factors
- Ensure health facility level quality improvement system incorporates NCDs services.

Strategic Initiative 3: Improve Infrastructure, Diagnostics, Medical Supplies and Technologies.

The objective of this strategic initiative is to improve the quality of screening, diagnosis, treatment and care for NCDs and their risk factors through improved infrastructure and technologies.

Strategic Interventions:

- Define the components of the service standards (Infrastructure, screening tools, diagnostics, essential medicines, medical equipment, essential medicines, laboratory supplies and reagents) for delivery of NCDs services in the Ethiopian setup.
- Ensure health facilities fulfill minimum standards to deliver NCDs and risk factors screening, diagnosis, treatment and care services.

- Ensure uninterrupted supply of essential medicines and laboratory reagents for diagnosis and management of NCDs and risk factors
- Ensure continuous and sustainable availability of essential medical and lab equipment for diagnosis and management of NCDs and risk factors
- Strengthen laboratory networks and Lab Quality Assurance system.
- Strengthen the health insurance system to increase population service utilization.

PRIORITY AREA 4: RESEARCH, SURVEILLANCE, MONITORING AND EVALUATION

OBJECTIVE:- to increase the use data on NCDs and risk factors for evidence-based decision making.
A comprehensive monitoring framework should include relevant outcomes (mortality and morbidity), exposures (risk factors), and health system capacity and response – with emphasis on priorities in congruent with the UN political declaration of NCDs customized according to local context.
It follows the Monitoring framework depicted in the figure below (figure 7).

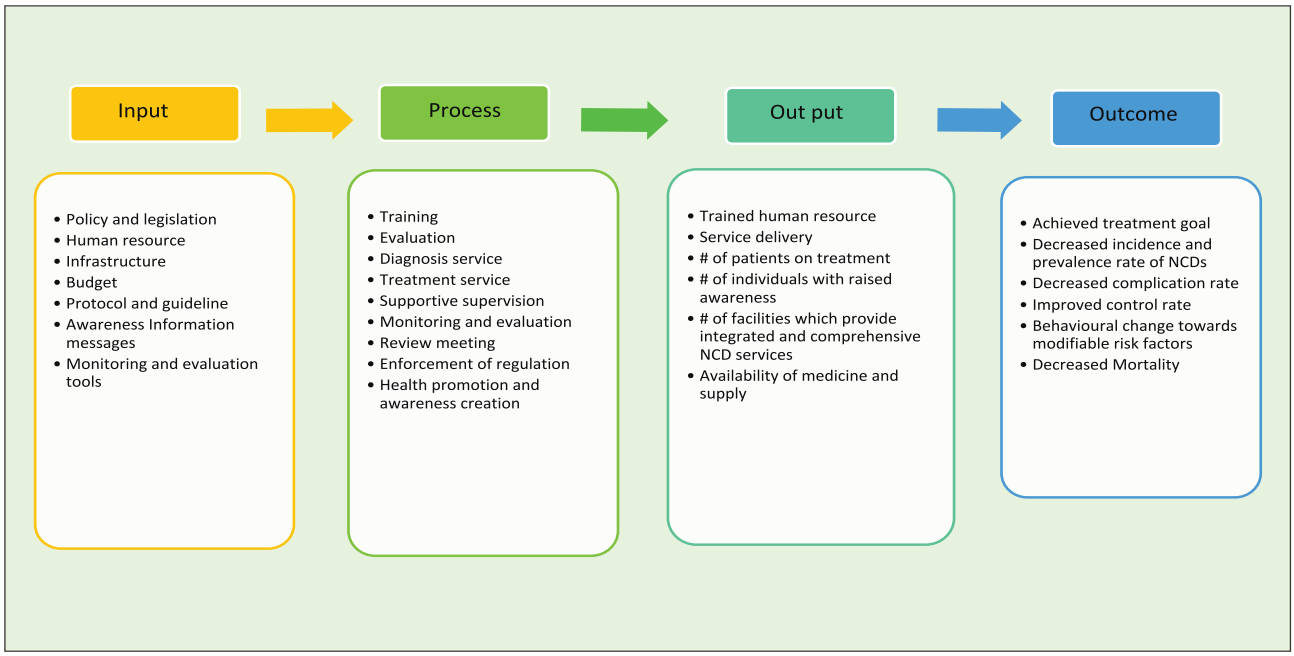

FIGURE 7: M&E FRAMEWORK FOR PREVENTION AND CONTROL NCDS AND RISK FACTORS

Strategic Initiative 1: Incorporate key indicators of NCDs into the national health information Management System (HMIS)

The objective of this strategic intervention is to strengthen the national health information Management System (HMIS) to capture NCD indicator

Strategic Interventions

- Develop and Integrate Relevant NCD indicators in the National HMIS including DHIS2 and Other electronic platforms
- Develop monitoring and evaluation tools for NCD services
- Integrate NCDs service indicators in the National Joint Supportive Supervision program
- Capacity building on NCD services M&E for program mangers health care workers and Health information technicians on data capturing, analysis and use
- Include NCD Indicators in the Health Center and Hospital KPI

Strategic Initiative 2: Establish/Strengthen Disease Registries, Research and Surveillance

The objective of this strategic intervention is to improve the availability and quality of information/ data on NCDs and risk factors.

Strategic Interventions:

- Assess the level of adult mortality through the national vital registration system
- Establish Disease specific registries for understanding of national and regional burden and trends.
- Support verbal autopsy activities in sentinel sites
- Conduct WHO Stepwise Survey on NCD risk factors (2020 and 2025)
- Strengthen SARA survey to incorporate adequate NCDs and risk factors health facility service and readiness indicators.
- Set research agendas on NCDs, risk factors and interventions and support researches conducted

CHAPTER FIVE:
IMPLEMENTATION OF THE NATIONAL STRATEGIC PLAN FOR NCDS AND RISK FACTORS

Factors controlling NCDs and determinants of NCDs are very diverse and multifactorial and at large beyond the reach of the health sector alone. Besides, NCDs evolve throughout the life cycle, as such; interventions shall encompass all stages of life. Cognizant of this; the response requires involvement of both governmental and nongovernmental stakeholders. Thus, the prevention and control of NCDs requires a multi-sectoral response and collaborations. Besides, the response requires prompt and isolated actions of the health sector too, where the health sector is primarily responsible to ensure availability and delivery of quality health services through the primary health care to ensure universal health coverage. Therefore, the implementation of the NCD NSP will be two pronged.

5.1 PRONG ONE: THE MULTISECTORAL RESPONSE FOR NCDS

As has been mentioned elsewhere in this document, the prevention and control of NCDs requires a multi-sectoral response and collaborations. As such an appropriate organizational structure to support coordination and implementation will ensure the delivery of efficient NCDs prevention and control programs in the country. Primarily the multisectoral response focuses on interventions that require policy level actions. Actors include both governmental and nongovernmental agencies.

Governmental actors included but are not limited to the Ministry of Health (MOH), Ministry of Trade and Industry, Ministry of Education (MOE), Ministry of Agriculture (MOA), Ministry of Finance, the Federal Attorney General's Office (FAGO), Ministry of Women, Children and Youth Affairs (MWCYA), Ministry of Culture and Tourism, Ministry of Housing and Urban Development (MHUD), Ministry of Transport, Ministry of Labor and Social Affairs (MOLSA), Sport's Commission, Ministry of Mines and Energy, Environmental Protection Agency, Ethiopian Broadcasting Authority(EBA), and Federal and Regional Government Medias.
Nongovernmental actors include International and Local NGOs, UN Agencies, Faith Based Organizations, Civic Society Organizations (CSOs), Professional Associations, Patients' Associations, Community Based Organizations and the Private Media.

Table 8: Multi-sectoral and policy interventions for the prevention and control of Non-communicable Diseases

Risk factors/ disease	Interventions	Policy category	Responsible sectors in Ethiopia
Tobacco use	Raise taxes on tobacco	Tax and subsidies	Finance
	Enforce Bans on tobacco advertisement, promotion and sponsorship	Regulation and enforcement	EFDA, EBA
	Smoke free indoor work places and public spaces	Regulation and enforcement	EFDA, Law enforcement
	Implement plain packaging and large graphic health warnings on all tobacco packages	Health education and information (HEI)	MoH, Media, Education, EFDA
	Restrict sell of single stick Cigarette.	Regulation and enforcement	Legislators, Federal Attorney General, EFDA, Law Enforcement
	Ban sell of Cigarette for minors and also ban sale by minors	Regulation and enforcement	Legislators, Federal Attorney General, EFDA, Law Enforcement
Alcohol use	Raise taxes on alcoholic beverages	Tax and subsidies	Finance, Revenue and Custom Authority
	Enforce restrictions on availability and sell of retailed alcohol	Regulation and enforcement	Law Enforcement Entities
	Bans on alcohol advertising	Regulation and enforcement	EFDA, EBA
	Ban on sell of alcohols to minors and by minors (<21 Years Old)	Regulation and enforcement	Legislators and Law enforcement
Physical inactivity	Implement a population-based public health program to increase physical activity	Health Education and Information and built environment	Culture and Tourism, MoH, Education, Media, Sport Commission, Ministry of Housing and Urban Development
	Create supportive environments (build environment) for behavioral change of physical activity levels	Regulation and enforcement	Ministry of Housing and Urban Development

Unhealthy diet	Replace trans-fat and saturated fats with mono and polyunsaturated fats	Regulation and enforcement	Trade and Industry, EFDA
	Impose regulations to reduce salt in manufactured food products	Regulation and enforcement	Trade, Industry, EFDA
	Increase taxation of sugar sweetened beverage	Tax and subsidies	Finance, EFDA
	Front of pack labeling of salt and sugar content of packed and processed foods and drinks.	Regulation and enforcement	EFDA, EPHI, Ethiopian Standardization Agency (ESA)
	Reduce salt and sugar intake through behavior change communication and mass media campaign	Health education and information (HEI)	MoH, Education, Media
	Increase consumption of fruits and Vegetables	Increase production, distribution and use	Ministry of agriculture, Ministry of Revenues, Ministry of transport
Khat Use	Raise taxes on Khat	Tax and subsidies	Finance
	Bans on commercial Khat chewing places	Regulation and enforcement	EFDA, EBA
	Crop Substitution	Incentivize	Agriculture
Air pollution	Indoor air pollution: expand access to electricity	Built environment	Mines and energy
	Indoor air pollution: Reduce the use of biomass fuels and kerosene for cooking and heating in households.	Regulation and enforcement	Education, Media, MoH, Mines and Energy
	Indoor air pollution: promote the use of low-emission household devices	Health education and information (HEI)	Mines and energy
	Emission: regulate transport, industrial and power generation emission and take action on pollutant entities	Regulation and enforcement	Transport, Environmental Protection Agency
	Indoor air pollution: promote the construction of well-ventilated households with separated kitchen.	Regulation and enforcement,	EPA, MOH-E, Mines and Energy
	Public transportation: build and strengthen affordable public transportation system in urban areas	Built environment	Transport

EFDA *(Ethiopian Food, and Drugs Control Authority)*, **EBA** *(Ethiopia Broadcast Authority)*, **MoLSA** *(Ministry of Labor and Social Affairs)*, **EPA** *(Ethiopian Environmental Protection Authority)*, **MoH** *(Ministry of Health)*, **MoCT** *(Ministry of Culture and Tourism)*.

Source: Table adapted from The Ethiopia NCDI Commission report 2018

The key steps to mitigate the impacts of NCDs is to have a proper policy framework, strategy, develop capacity and committed leadership at all levels.

The following key priority interventions are recommended:

1. Raise the priority status of NCD within the Health Sector and non-health Sector
2. To ensure enforcement of the EFDA Proclamation on Tobacco and alcohol.
3. Develop and enforce other regulations and directives on NCD risk factors like khat, Trans-fat, Saturated fats, Sugar, Salt.
4. To review all relevant government policies to ensure consistency with NCD prevention and control measures in keeping with the concept of 'Health in All Policies'
5. Develop and lead a multi-sectoral national strategy to guide the multi-faced national responses to NCDs burden

The UN political declaration on NCDs underscores a national multisectoral response lead by the Head of State/Head of Government. In Ethiopia, multisectoral responses led by National Steering Committee (NSC). The NSC will have a chairperson and secretary elected from the NSC member ministries where mainly they will be in charge of leading and oversee the general functions of the NCDs prevention and control response in the country. To facilitate its work the NSC can organize technical team comprised of technical expertise from each member sector. The NSC will be in charge of coordination, monitoring and evaluation of the different agreed upon action points of the multi-sectoral response.

Structure and objective of the national multisectoral response are proposed below, while ultimately will be decided in a consensus by the NSC.

The national steering committee for NCDs:

a. shall comprise of all relevant sectoral ministries, the private sector and development partners, preferably led by the office of the prime minister or an elected chair
b. will be responsible in developing one national multisectoral NCD prevention and control strategy, with clearly stated objectives, goals, targets and monitoring framework.
c. will monitor and evaluate the implementation of the agreed upon interventions and deliverables
d. All members of the committee shall sign a memorandum of understanding which binds all to the stated actions and obligations
e. As per the guidance of the committee the following duties will be discharged to subcommittees shall be established with specific duties and responsibilities. The following four subcommittees will be stablished:

1. Promotive/Incentivize subcommittee:

i. This subcommittee will work on NCD risk factors that have promotive health behaviors, such as promoting physical activity and consumption of healthy food. The subcommittee shall comprise appropriate sectoral ministries, agencies, private sector and development partners.
ii. As per the guidance of national strategic plan the subcommittee will develop detail action plans, implementation strategies, and monitoring framework such that contributes and delivers to the overall goals and targets set above.

2. Inhibitive/Restrictive subcommittee:

i. This subcommittee will work on NCD risk factors such as tobacco, alcohol and khat use.
ii. The subcommittee shall comprise appropriate sectoral ministries, agencies, private sector and development partners.
iii. As per the guidance of national strategic plan the subcommittee will develop detail action plans, implementation strategies, and monitoring framework such that it contributes and delivers to the overall goals and targets set above.

3. Resource Mobilization Subcommittee

This subcommittee will help mobilize resources for the implementation of the multisectoral action plan.

4. Monitoring and Evaluation Subcommittee

This subcommittee with the other subcommittees will develop an M&E framework, targets and indicators for monitoring the progress of the Multisectoral strategic plan.

5.2 PRONG TWO: THE HEALTH SECTOR RESPONSE FOR NCDS

The prevention and control of NCDs demands a pragmatic and aggressive response from the health sector. The health sector responses for NCDs are diverse whereas, services are supposed to be integrated for all major NCDs and risk factors.

Required Actions for Health Systems Strengthening as the key to the NCDs Response

1. Improve governance and structure of health administration for NCDs at all levels
2. Reorient the health system in keeping with the burden of NCDs and risk factors.
3. Deploy adequate staff at the ministry of health, regional health authorities and public health facilities to support the NCD program
4. Secure adequate funding to support the NCD programme through the regular government budget and development partners
5. Strengthen the capacity of health work force to manage and deliver high quality care for NCDs in both public and private sectors
6. Improve laboratory and diagnostic services at national, regional and institutional level in order to provide adequate capacity for diagnosis and management of NCDs
7. Improve pharmacy services and ensure the provision of essential medicines and technologies for the diagnosis, treatment and prevention of NCDs at the primary, secondary and tertiary care levels.

Whereas, the health sector response for NCDs and risk factors shall be managed and coordinated at different levels of the health system: The Federal Ministry of Health (MOH-E), regional health bureaus, zonal health offices/departments and district health offices will play various roles and responsibilities in the prevention and control of NCDs and their risk factors. All of them have the responsibility to ensure integration of services for NCDs and risk factors into the existing health programs and services.

5.3 ROLES AND RESPONSIBILITIES AND COORDINATION

NATIONAL LEVEL

The MOH-Ethiopia is responsible for setting standards, developing and revising national guidelines, preparing national action plans including target setting, mobilizing resources necessary for capacity-building, monitoring and evaluation, advocacy and operational research, and for overseeing overall national coordination of health services and programs for NCDs and risk factors.

Within the MOH-Ethiopia, different specialized agencies and directorates play key roles in ensuring implementation of the health services for NCDs and risk factors. Coordination of these bodies is crucial for effective and efficient program implementation and improvement of quality of services. Mainstreaming NCD agenda in all health and health related strategies and documents is critical.

At the federal level team of experts and key implementers on NCDs and risk factors will be organized into various technical working groups (TWGs) so as to advise the ministry on key policy formulations, provide technical guidance on evidence-based recommendations, and propose possible solutions for implementation challenges.

REGIONAL LEVEL

RHBs take the technical guidance from the MOH and adopt it per their regional context to implement interventions on the prevention and control NCDs and risk factors. The RHBs therefore, are in charge of planning, coordinating, implementing, monitoring and evaluation of the health sector response for NCDs and risk factors in the respective regions.

At the regional level team of experts and key implementers on NCDs and risk factors will be organized into various technical working groups (TWGs) so as to advise the regional health bureau on key evidence-based recommendations and propose solution for implementation challenges.

ETHIOPIAN PHARMACEUTICALS SUPPLY AGENCY (EPSA)

For a responsive health services to NCDs and risk factor pragmatic supply chain procurement and delivery system is of paramount importance. The MOH-Ethiopia in close collaboration with EPSA will do regular quantifications of necessary commodities for NCDs Program service delivery. EPSA will also coordinate the quantification, procurement and distribution of the necessary commodities by integrating into existing supply chain management system. Reporting and requisition formats will be updated to incorporate commodities needed for NCDs and risk factors.

ETHIOPIAN PUBLIC HEALTH INSTITUTE (EPHI)

Ensuring, quality laboratory and diagnostic services will play a significant role in the provision of health services for NCDs and risk factors. EPHI in collaboration with the MOH-Ethiopia will be in charge of laboratory services, moreover, EPHI will lead the development and revision of training manual as well as provision of training for laboratory professionals. EPHI with its regional reference laboratories will work to build the diagnostic capacities at facility level. In addition, EPHI will put a mechanism for EQA by integrating into existing quality assurance mechanisms. EPHI in collaboration with MOH-Ethiopia will conduct operational research as needed.

ETHIOPIAN FOOD AND DRUG CONTROL AUTHORITY (EFDA)

Essential medicines, medical technologies and supplies for NCDs and risk factors are too broad, and are evolving global phenomenon. Accordingly, most drugs, technologies and supplies are new or are not contextualized to Ethiopia. The MOH-Ethiopia in collaboration with EFDA will take the necessary steps so as to enlist and make available these essential drugs, technologies and supplies as per the recommendation of the national guideline and will regulate the safe importation, production, use and disposal of these products in Ethiopia.

HEALTH FACILITIES

All health facilities will be in charge of delivering screening, diagnostic, treatment and care services for NCDs and risk factors based on the national Essential Health Services Package. In collaboration with Woreda, Zone and Regional health managers the health facilities will determine the type and depth of health services for their catchment populations.

HEALTH POSTS/COMMUNITY

- Health Extension Workers in collaboration with the Health Development Army will help create an awareness in the community on prevention and control NCDs and risk factors
- Strengthen screening services for NCDs and their risk factors
- Help strengthen adherence to care and treatment for NCDs and their risk factors

DEVELOPMENT PARTNERS

- Provide the necessary technical and financial assistance to MOH-Ethiopia and the RHBs in the national response to NCDs. And participate in strengthening the capacity of government at all level of the health system to effectively implement programs on NCDs and risk factors.
- Enhance local and international resource mobilization and build technical and institutional capacities to sustain effective and efficient national response.
- Ensure their contributions are aligned with the national and regional responses.

PRIVATE HEALTH SECTOR

The role of private sector in the prevention and treatment of NCDs and risk factors will be of paramount importance. Private sectors should be proactively involved in the development and implementation of national NCDs and risk factors guidelines and strategic documents. Private health institutions should adhere to the diagnostic and treatment standard as mentioned in the national guidelines while providing their services. In addition, the sector will also play key role in the production, procurement and distribution of essential medicine and technologies for diagnosis and management of NCDs.

CHAPTER SIX:
COSTING AND FINANCING OF THE NSAP

The Ethiopia NCDI Commission in 2018 identified an initial list of highest priority interventions that have been listed in the following table. Treatment of pharyngitis in children to prevent rheumatic heart disease is an example of very cost-effective intervention with cost effectiveness ratios below $100 USD (2012) per DALY averted.

Targets were set to 30% effective coverage over the first 2-year period (2020/21-2021/22), with further scale up to 50 % by 2025.

Cost by intervention was estimated using One Health Tool Version 4.5 using the software's default data on cost of drugs and supplies and the default population model for Ethiopia. The One Health Tool also provides default assumptions on the number of interventions needed, personnel time needed, number of drugs needed, etc. Program costs (such as training, supervision, and construction of new facilities) were not included in the first cost estimates. Therefore, the Commission added 10% to the total cost estimated to account for programme costs, mostly for training and supervision.

Multi-sectoral interventions that are designed to reduce population level behavioral and environmental risk factors (e.g. tobacco and alcohol use, air pollution, excessive sugar consumption, and others) are presented in Table 5. Many of these were policy interventions, which fall into four broad categories: taxes and subsidies; regulations and related enforcement mechanisms; built environment and informational. Some of these inter-sectoral interventions could be cost saving, and others could potentially generate more resources for health. These interventions will be costed during the development of Multi-sectoral plan.

Table 9: Costing of High Priority interventions for diabetes, cardiovascular and chronic respiratory diseases and their cost effectiveness listed by delivery platform, EFY 2013-2017.

Interventions	Investment across implementation years (in $1,000 USD)					CEA (USD per DALY)	Delivery platform
	2013EFY (2020-21)	2014EFY (2021-22)	2015EFY (2022-23)	2016EFY (2023-24)	2017EFY (2024-2025)		
Encourage adherence to medications	15	17	20	22	25	$152	Community
Community based opportunistic screening for CVD	644	690	738	788	842		Community
Primary prevention for those with absolute risk of CVD >10%	4591	4849	5115	5423	5741	$67-177	Health center
Treatment of cases with established ischemic heart disease (secondary prevention)	320	342	365	389	415		Health center

Treatment of cases with established CVD (secondary prevention)	194	208	222	240	254		Health center
Treatment of cases with acute pharyngitis to prevent rheumatic fever	35	39	41	45	47	$12	Health center
Treatment of cases with rheumatic heart disease (with benzathine penicillin)	18	19	22	26	29		Health center
Management of Type 2 DM	21,137	22666	24226	25823	27436		Health center
Insulin management of diabetes mellitus type 1	2,301	2362	2434	2513	2603		District hospital
Asthma: Low-dose inhaled beclomethasone + SABA	16,104	16664	17214	17756	18304		District hospital
COPD: Exacerbation treatment with antibiotics	104	116	127	139	153		District hospital
Cardiac surgery for rheumatic heart disease	1,008	1058	1111	1166	1224		Referral Hospital
Total cost of all interventions for CVD, CRD and diabetes	46,471	49,030	51,635	54,330	57,073		258,539 USD (Grand Total)
USD per capita	$0.44	$0.87	$1.31	$1.75	$2.19		

CEA: *Cost Effectiveness Analysis*

A total of USD 258,539,000 will be required for the coming 5 years to implement these highest priority interventions (see table 10).

Table 10. Summary of Costing by Priority Areas (USD in thousands)

Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Total Amount in USD
National Systems Response	3,020.620004	3,186.955279	3,356.28056	3,531.45585	3,709.751145	16,805.06
Health Promotion	7,481.834002	7,893.833168	8,313.238336	8,747.13351	9,188.756687	41,624.80

Medical Treatment	24,257.86	25,593.66	26,953.47	28,360.26	29,792.10	134,957.34
M&E	11,710.688	12,355.55578	13,012.02	13,691.15532	14,382.39108	65,151.81
Total Cost in USD	46,471	49,030	51,635	54,330	57,073	258,539

NB: *medical treatment includes capital expenditures for technologies and equipment, running costs of laboratory diagnostics, clinician salary and medicines and treatment enablers.*

Following the cost of medical treatment (52.3%), the largest priority area is the cost of monitoring and evaluation. This priority area is estimated to be 25.2% of the total program cost. This area is followed by the estimated cost of health promotion, at 16.1% of the total program cost. National level NCD response is estimated to consume 6.1% of the estimated budget.

Funding for the NSAP will be mobilized from national and international sources. Ethiopia is implementing a community-based health insurance (CBHI) system for the informal sector that covers the health expenditures required for diagnosis and treatment of major NCDs. Social Health Insurance is expected to implemented soon for the formal sector. The MOH-Ethiopia and RHBs will adopt innovative funding and resource mobilization mechanisms in order to ensure adequate availability of the required finance.

ANNEXES

ANNEX 1: IMPLEMENTATION LOG FRAME OF THE NSAP FOR NCDS PRIORITY AREA 1: STRENGTHEN THE NATIONAL RESPONSE THROUGH POLICY, GOVERNANCE, LEADERSHIP AND COORDINATION.

Activities	(Indicator)	Time frame	Responsible body	Means of Verification (Data Source)
Objective: To strengthen the national capacity and country-wide ownership of NCD interventions through influencing policy formulation, leadership, governance, multi-sectoral action and partnerships.				
Strategic Initiative 1: Strengthen National health policy on NCDs and their risk factors.				
Ensure Specific policies and legislations are developed to address the rising burden of NCDs and risk factors.	NCD and Risk factors are included in the Health Policy	2019-2020	MOH-E, PM Office	Revised Policy
Design policies and legislations to prioritize medical intervention for people affected by NCDs	Policies on NCDs	2019-2020	MOH-E, PM Office, HOPR	Policies, directives, proclamations
Foster public participation in designing and implementation of NCD prevention and care policies.	Number of individuals engaged in policy, strategy and guideline development	2020-2025	MOH-E, RHBs	Policies, directives, proclamations
Strategic Initiative 2: Establish/Strengthen NCD governance at all levels				
Strengthen NCD Coordination and Governance at Federal and RHB levels by expanding structures and budgets	NCD Case team promoted to NCD Directorate in MOH-Ethiopia and RHBs	2022	MOH-E and RHBs	Establishing document
Mainstreaming of Non-communicable diseases prevention and control in all health sector strategies and activities, and enhanced coordination of services	All Health sector strategies and documents and services give due attention to NCDs and their risk factors	2020-2025	MOH-E and its agencies (DPCD, MCH, PH and HEP Directorate, Medical Services General Directorate, PR and Communication etc)	Strategic Documents and activities review

Strengthening and/or establishing NCD co-ordinating structures at zonal, woreda and health facilities levels.	Number of Staff at all levels working on NCDs	2020-2025	MOH-E, RHB, ZHDS, WoHO	Activity report
Set up national, Regional and Zonal/Woreda NCDs Technical Working Groups and Task forces	Federal, Regional, Zonal and Woreda Level TWGs established and functional.	2020-2025	MOH-E, RHBs, ZHDs and WoHO	Activity reports
Mobilize adequate resources for NCD programs at all levels.	Adequate Budget allocated on NCDs and Risk factors	2020-2025	MOH-E, RHB, ZHDs, WoHO	Activity report
Strategic Initiative 3: Establish Multisectoral Coordination Mechanism for prevention and control of NCDs and Risk factors at all levels of the government.				
Ensure Integration of prevention and control of NCDs and their risk factors in the multisectoral Woreda Transformation Platform.	Steering committee established	2019-2020	PM Office, MOH-E, Sectoral Ministries	Steering committee minutes
Coordinate development of the NCD Multisectoral Strategic Action Plan (MSAP)	Multisectoral Action plan developed	2020/21	MOH-E, Sectors	Multisectoral response action plan
Monitor implementation of the Joint Multisectoral Strategic Action Plan (MSAP)	Policies and regulations enforced	2020-2025	MOH-Ethiopia and Other sectoral Ministries	Reports of actions
Mobilize financial and technical resources for prevention and control of NCDs	Resource mobilized	2020-2025	MOH-E, NCD case team, NTWG, development partners	Activity reports

PRIORITY AREA 2: INTENSIFY HEALTH PROMOTION AND DISEASE PREVENTION TARGETING BEHAVIORAL, INFECTIOUS AND ENVIRONMENTAL NCD RISK FACTORS.

Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
Objective: Promote healthy lifestyles and reduce exposure to modifiable risk factors for non-communicable diseases.				
Strategic Initiative 1: Increase public awareness on NCDs and their risk factors				
Develop NCD communication strategy and health education modules on NCDs and their risk factors	Communication strategy developed; health education module developed	2020	MOH-E, intersectoral task force	Activity reports, developed strategic document/s
Conduct Advocacy on NCDs and their risk factors to increase the awareness and commitment of policy makers, health managers and health care workers.	Number of health education, awareness raising and advocacy campaigns for policy makers and donors	2020-2025	MOH-E, RHBs, ZHDs, WoHO	Activity report
Integrate NCD and risk factors messages into the routine health education program of health facilities	Number of health education at HFs	2020 - 2025	MOH-E, RHB,ZHD, WoHO, HFs	Activity reports, number and type of health education sessions
Conduct Awareness raising programs on NCDs and risk factors in work places.	Number of health education, awareness raising campaigns in Work places	2020 - 2025	MOH-E, RHB, ZHDs, WoHO	Activity reports, number and type of health education sessions
Integrate Communication Packages on NCDs and their risk factors in School Health and Nutrition Program and the Health extension programs.	Type and number of health promotion activities	2020 - 2025	MOH-E, intersectoral task force	Activity reports, number and type of health education sessions
Strategic Initiative 2: Promoting Healthy Diet				
Develop national dietary guidelines to promote healthy dietary habits.	National dietary guideline developed	2020	MOH-E	Guideline, Activity report
Implementing public awareness activities on healthy diets during the life course	Number of public awareness campaigns conducted on healthy diet	2020-2025	MOH-E, RHB,ZHD, WoHO	Number of people reached through the campaigns

Collaborate with the national/regional nutrition council and task forces to address the dietary risk factors for NCDs.	Number of TWG meetings attended	2020-2025	M O H - E , R H - B,ZHD, WOHO	Activity Report
Liaise with the Ministry of Education to introduce healthy diet promotion in school curriculums and awareness creation activities.	Implementation of promotion of Healthy diet in school health and nutrition program	2020-2025	MOH-E, MOE	Activity Reports
Develop and implement policies and legislations to promote healthy diet (Reduction of Salt, Sugar, Trans-fat; encourage Fruit and Vegetable consumption)	Directives, proclamations on saturated fat, trans fat, salt and sugar	2020-2025	MOH-E, EFDA PMO, HOPR,	Directives and proclamations
Strategic Initiative 3: Promoting Physical Activity				
Promote mass sport including competitive sport events in collaboration with stakeholders.	Sporting events per annum	2020 - 2025	MOH-E, Inter-ministerial taskforce	Activity reports
Creating public awareness on the health benefits of physical activity in prevention and control of NCDs	Number of public awareness campaigns on physical activity	2020-2025	MOH-E, MOCT, M O W C Y A , Sports Commission	Activity reports
Liaise with the Ministry of Youth and Sports to develop/adopt a strategic implementation plan to enforce the national sport policy.	Sports policy endorsed by HOPR	2022	MOH-E, MOWCYA, Sports Commission	Sports policy
Liaise with the Ministry of Education for the promotion of all-inclusive physical activity in schools.	School Health and Nutrition Program	2020-2025	MOH-E,MOE	Activity Report
Engage the Ministry of Housing and Urban Development and the Ministry of Transport to create an enabling environment for physical activity including playgrounds, walkways, and cycling lanes.	Physical activity friendly environment created	2020-2025	MOH-E,MOHUD,MOT	Activity report

Promoting physical activity in the community, private and public institutions, workplaces and health facilities.	People engaged in physical activity, work place physical activity facilities	2020 - 2025	MOH-E, Inter-ministerial taskforce	Activity report
Strengthen the Car free roads days initiative implementation in all urban areas.	number of monthly car free roads days events conducted in all cities and towns	2020-2025	MOH-E, Sports Commission, MOT, Police	Activity report
Strategic Initiative 4: Reduce Harmful Use of Alcohol				
Implement and enforce EFDA Proclamation 1112/2019 on prohibition of advertising, promotion and sponsorship of alcoholic beverages, and mandatory labelling of alcoholic beverages at the National and Regional levels.	Policy/directive developed, implemented	2020-2025	MOH-E, Inter-ministerial taskforce	Activity report
Creating public awareness on the health, security and economic harms of alcohol use.	Type and number of awareness sessions	2020 - 2025	MOH-E, intersectoral task force	Activity reports
Liaise with Ministry of Finance, Ministry of trade and industry and other relevant sectors to regulate alcohol production, sale, use and taxation.	Alcohol regulation activities conducted.	2020-2025	MOFEC, MOTI, MOH-E	Activity report
Strategic Initiative 5: Tobacco Use Reduction				
Enforce the implementation of articles on tobacco control in the EFDA proclamation 1112/2019 in accordance with the WHO framework convention for the control of tobacco (FCTC).	FCTC implemented, Tobacco proclamation endorsed	2020-2025	MOH-E, EFDA	Activity reports
Promote gradual substitution of tobacco farms with other income generating agricultural products.	Number of tobacco farms replaced with alternative crops	2020-2025	Ministry of Agriculture, Ministry of Trade and Industry	Activity report
Raising public awareness on the health, societal and economic harms related to tobacco use.	Type and number of awareness sessions	2020-2025	MOH-E, intersectoral task force	Activity reports, number and type of health education sessions
Strategic Initiative 6: Reduction of Khat Use				

Liaise with national Multisectoral Committee to develop legislations and regulation on domestic production, sale and use of khat.	Legislation/directive developed and implemented	2020	Intersectoral taskforce/EFDA	Activity reports
Promote gradual substitution of khat farms with other income generating agricultural products.	Legislation/directive developed and implemented	2020-2025	Intersectoral taskforce/EFDA	Intersectoral NCD Risks Assessment Survey report
Raise public awareness on the dangers of khat consumption and its related risks.	Type and number of awareness sessions	2020 - 2025	NCD case team, intersectoral task force	Activity reports, number and type of health education sessions
Liaise with the Ministry of Education and other sectors for developing access restrictive measures aimed at children and young people including in schools and higher education institutions.	Legislation/directive developed and implemented	2020-25	Intersectoral taskforce/EFDA	School Assessment Survey reports
Strategic Initiative 7: Promote interventions on the reduction of exposure to environmental and occupational risk factors.				
Strengthening the implementation of the legal frameworks, policies, standards and guidelines to reduce exposure to environmental and occupational risk factors in collaboration with relevant sectors	✓ Number of legislations and policy areas developed ✓ Number of guidelines documents developed	2020-2025	MOH-E, MoLSA, Ministry of Trade and Industry, Ministry of Transport, Ministry of Mines and Energy, Environmental Protection Agency	Activity Report
Initiate and promote programs aimed at protecting and reducing exposure to environmental and occupational risk factors for NCDs at the workplace, public and home environment.	• Number of work place programs • Number of Public programs • Number of home programs	2020-2025	MOH-E, MOLSA, EPA, Intersectoral task force	Activity Reports

Create public awareness on prevention of exposure to environmental and occupational risk factors on NCDs	• Number of awareness campaigns carried out • Number of IEC materials developed and disseminated • Number of sensitization meetings held	2020-2025	MOH-E, Intersectoral task force	Activity reports
Strategic Initiative 8: Prevention of Rheumatic Heart Disease				
Primordial Prevention activities: Reduce overcrowding in congregated settings, in schools and at homes and improve personal hygiene.	Advocacy sessions conducted on overcrowding reduction and personal hygiene	2020-2025	MOH-E, RHB, MOE, EPHI	School health survey report
Primary prevention of RHD: is treatment of bacterial pharyngitis for prevention of acute sequalae of group A streptococcal throat infections	Number of children and young adults treated for bacterial tonsillopharyngitis with appropriate antibiotics for the right duration	2020-2025	MOH-E, RHB, ZHDs, WoHO, HFs, Ministry of education	Activity report
Secondary prevention of RHD: the continuous administration of specific antibiotics to patients with a previous attack of rheumatic fever, or well-documented rheumatic heart disease (RHD registry based).	Number and type of guidelines/protocols and training/ teaching materials developed, number of facilities providing services	2020 - 2025	M O H - E , R H - B,ZHDS, WOHO	Activity report

PRIORITY AREAS 3: COMPREHENSIVE AND INTEGRATED CLINICAL INTERVENTIONS FOR NCDs AND THEIR RISK FACTORS

Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
Objective: To expand access to comprehensive, high quality and integrated services for the community on NCDs and their risk factors.				
Strategic Initiative 1: Strengthening Health Service Delivery				
Define essential package of care on NCDs and risk factors for each level of the health care system.	Essential NCD Services packages developed	2020-2020	MOH-E, EFDA	Essential package document
Reorient and reorganize the health services in accordance with the NCDs and risk factors care package.	Number and proportion of health facilities ready to deliver minimum package of NCD services	2020-2025	MOH-E, RHB, ZHDs, WoHO	SARA Survey
Decentralize and Integrate NCDs and risk factors services into the primary health care through task shifting, task sharing and improved referral networks.	Number and proportion of primary health facilities	2020-2025	MOH-E, RHB, ZHDs, WoHO	SARA Survey
Empower patients and families in the care of patients with NCDs.	Number of patients and families trained to deliver home and self-care for NCDs	2020-2025	MOH-E, RHB, ZHDs, WoHO	Activity Report
Strategic Initiative 2: Develop the Human Resource for NCDs Service Delivery				
Ensure the assignment of appropriate mix of healthcare workers as per the minimum standard.	Multidisciplinary NCD Care teams established	2020 – 2025	MOH-E, RHBs, ZHDs, Woredas	Activity report
Ensure NCDs and their risk factors are given due attention in all health-related preservice training curricula.	Curricula on NCDs incorporated	2020-2025	MOH-E, MOSHE	Curricula document
Develop NCDs and risk factor guidelines, training materials, care and treatment protocols for health care providers and train health care workers.	Number and type of guidelines training materials and protocols developed Number of HCWs trained	2020 – 2025	MOH-E, RHBs, development partners, NTWG	Activity report

Strengthen health facility level Mentorship Programs on NCDs and risk factors.	Number of HCWs supported through mentoring	2020 – 2025	MOH-E, RHBs, ZHDs, Woredas	Activity report
Develop NCDs Program Management training materials and train NCD Program Managers at all levels.	Number of NCD Program managers trained on NCD Program management	2020-2025	MOH-E, RHBs, ZHDs, Woredas	Activity report
Ensure health facility level quality improvement system incorporates NCDs services.	Number of QI initiatives on NCD services	2020-2025	MOH-E, RHBs, ZHDs, Woredas	Activity report
Strategic Initiative 3: Improve Infrastructure, Diagnostics, Medical Supplies and Technologies.				
Define the components of the service standards for delivery of NCDs services in the Ethiopian setup.	Infrastructure, screening tools, diagnostics, essential medicines, medical equipment, essential medicines, laboratory supplies and reagents	2020-2020	MOH-E, RHBs, EFDA, EPSA, EPHI	Activity report
Ensure health facilities fulfill minimum standards to deliver NCDs and risk factors prevention, screening, diagnosis, treatment and care services.	Proportion of HFs fulfilling optimal standards for care	2020 – 2025	MOH-E, RHBs, ZHDs, Woredas	Activity report
Ensure uninterrupted supply of essential medicines and laboratory reagents for diagnosis and management of NCDs and risk factors	Number of HFs with essential medicines and laboratory reagents	2020 – 2025	MOH-E, RHBs, ZHDs, Woredas	Activity report, Surveys
Ensure continuous and sustainable availability of essential medical and lab equipment for diagnosis and management of NCDs and risk factors	Number of HFs with essential medical instruments and lab equipment	2020 – 2025	MOH-E, RHBs, ZHDs,Woredas	Activity report, Surveys
Strengthen laboratory networks and Lab Quality Assurance system.	Number and type of lab quality assurance reports	2020 – 2025	MOH-E, RHBs, ZHDs,Woredas	Activity report
Strengthen the health insurance system to increase population service utilization	Health insurance coverage	2020-2025	MOH-E, MOLSA	Activity Report,

PRIORITY AREA 4: RESEARCH, SURVEILLANCE, MONITORING AND EVALUATION

Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
OBJECTIVE: to improve the use data on NCDs and risk factors for evidence-based decision making.				
Strategic Initiative 1: Integration of NCDs surveillance and monitoring system into the National Health Management Information system				
Develop and Integrate Relevant NCD indicators in the National HMIS including DHIS2 and Other electronic platforms	Key Indicators included in HMIS	2020-2025	MOH-Ethiopia NCD Team, PPM&ED	NCD Indicators
Develop monitoring and evaluation tools for NCD services	Number of modified NCD registers	2020-2025	MOH-E/PPD	NCD registry
Integrate NCDs service indicators in the National Joint Supportive Supervision program	Integrated supportive supervision	2019-2025	MOH-E/PPD	Activities report
Capacity building on NCD services M&E for program mangers health care workers and Health information technicians in data capturing, analysis and use	Number trained on NCD M&E	2020-2025	MOH-E/PPD	Activities report
Include NCD Indicators in the Health Center and Hospital KPIs	Number Key performance Indicators on NCDs included	2020-2025	MOH-E/PPD	Activities report
Strategic Initiative 2: Establish/Strengthen Disease Registries, Research and Surveillance				
Assess the level of adult and child mortality through the national vital registration system	Vital registration in all Kebeles/Districts in Ethiopia	2020-2025	VERA/CSA	Annual Report
Support verbal autopsy activities in sentinel sites	verbal autopsy conducted	2020-2025	MOH-E/MOSHE/ Sentinel sites	Activities report
Establish Disease specific registries for understanding of national and regional burden and trends.	Developed register for CVD, DM, RHD, CRD, CKD.	2020-2025	MOH-E/RHB	HMIS
Conduct WHO Stepwise Survey on NCD risk factors (2020 and 2025)	NCD Risk factors STEPS survey	2020, 2025	MOH-E/EPHI/ WHO	Activities report

Set priority research agendas on NCDs, risk factors and interventions and support conduct of research	Priority research agendas identified; researches conducted	2020-2025	MOH-E, EPHI, AHRI	Number of research publications
Strengthen SARA survey to incorporate adequate NCDs and risk factors health facility service and readiness indicators.	SARA Adequately addresses major NCD indictors	2020,2024	MOH-E, EPHI, WHO	SARA Survey

ANNEX 2:
PRIORITIZED NCD SERVICE ACTIVITIES AT DIFFERENT LEVELS OF THE HEALTH SYSTEM

Main NCDs	Core Services			
	Communities and HEP	Health Centers/ Primary Hospitals	General Hospitals	Tertiary Hospitals/ Specialized Centers
Rheumatic heart disease	- Awareness about streptococcal infection - Promotion of personal and environmental hygiene and crowding - Information on the importance of antibiotic treatment and prophylaxis	- Health promotion and awareness - Diagnosis and Management of streptococcal sore throat - Secondary prophylaxis with BPG of RF and RHD - Screening for RHD and referral	- Diagnosis and Management of streptococcal sore throat - Second prophylaxis with BPG of RF and RHD - Patient assessment for RHD and management - ECG, ECHO	- Complications screening for RHD - Intensified RHD treatment - Clinical review
Hypertension	- Health promotion on salt reduction, exercise and fruit and vegetable consumption - Awareness on screening and early detection - Population screening for raised blood pressure - Non-medical interventions- lifestyle (tobacco cessation, physical activity, healthy diet, alcohol, khat)	- Health promotion on salt reduction, exercise and fruit and vegetable consumption - Screening and diagnosis - Patient assessment and management - Personal plan targets for BP, weight, exercise, smoking cessation - Screening for complications - Referral of complex cases	- Patient assessment and management including inpatient managements - Screening of complications and management - Personal plan targets for BP, weight, exercise, smoking cessation - Specialist referral of complex cases - Pediatric services - Pregnancy services	- Clinical review - Assessment of complex cases, intensified treatment - Complication screening, treatment and monitoring - Down referral of stabilized cases

Prevention of heart attack, and stroke	- Awareness raising on risk factors of Heart attack, CKD and stroke - Prevention measures-non-medical interventions - Treatment support	- Life style modification (tobacco cessation, physical activity, healthy diet, salt reduction, khat, alcohol) - Cardiovascular risk assessment & risk stratification - Support self-management, education - Drug therapy and follow up of – BP, glucose, lipids - Regular & periodic screening of complications, referral	- Patient information - Assessment of cases including those referred from health centers & risk stratification - Drug therapy, follow up, monitoring - ECG, ECHO - Specialist referral of complex, difficult cases	- Clinical review - Assessment of complex cases - Intensified treatment - Complication screening, treatment and monitoring
Prevention of chronic kidney disease (CKD)	- Awareness raising on risk factors of CKD - Prevention measures-non-medical interventions - Treatment support	- Life style modification (tobacco cessation, physical activity, healthy diet, salt reduction, khat, alcohol) - Support self-management, education - Drug therapy and follow up of – BP, glucose, lipids, urine protein - Regular & periodic screening of complications, referral	- Patient information - Assessment of cases including those referred from health centers & risk stratification - Drug therapy, follow up, monitoring of renal function and complications - ECG, ECHO - Dialysis and other supportive therapy	- Clinical review - Assessment for complications - Intensified treatment - Complication screening, treatment and monitoring - Dialysis, Renal transplantation referral

Diabetes	- Information on risk factors - Awareness on screening and early detection - Population screening for raised blood glucose - Non-medical interventions- lifestyle (tobacco cessation, physical activity, healthy diet, alcohol, khat) - Importance of weight management	- Health promotion as the preceding - Screening and diagnosis - Insulin or drug therapy & intensive glucose management - Personal plan targets for weight, BP, exercise, smoking cessation - Targeted complications (eye, foot, nerve etc) screening management and/or referral - Referral of complex, difficult cases	- Patient assessment and management including inpatient managements - Targeted complications screening & management - Personal plan targets for BP, weight, exercise, smoking cessation - Specialist referral of complex, difficult cases - Pediatric services - Pregnancy services	- Clinical review - Assessment of complex cases, intensified treatment - Insulin stabilization - Complication screening, treatment and monitoring - Down referral of stabilized cases
Asthma & COPD	- Information on risk factors (biofuels, smoking) - Life skill development to build and use smokeless household cooking facilities Awareness on screening and early detection - Non-medical interventions- lifestyle (tobacco cessation)	- Health promotion as the preceding - Screening and diagnosis of asthma and COPD - Use of Peak flow meter - Inhaler and drug therapy - Referral of complex, difficult cases	- Patient information, assessment - Patient management including inpatient managements - Specialist referral of complex, difficult cases - Pediatric services - Pregnancy services	- Clinical review - Spirometry - Assessment of complex cases, intensified treatment - Down referral of stabilized cases

ANNEX 3:
WHO NON-COMMUNICABLE DISEASE "BEST BUYS"

Risk factor/ disease to be addressed	Intervention	Detailed description
Reduce Tobacco use	Tax	Increase excise taxes and prices on tobacco products
	Packaging	Implement plain/standardized packaging and/or large graphic health warnings on all tobacco packages
	Advertising, promotion and sponsorship	Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship
	Smoke-free public places	Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places, and public transport
	Educate	Implement effective mass media campaigns that educate the public about the harms of smoking/tobacco use and second-hand smoke
Reduce harmful use of alcohol	Tax	Increase excise taxes on alcoholic beverages
	Advertising	Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)
	Availability	Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale)
Reduce unhealthy diet	Reformulate food	Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals
	Supportive environments	Reduce salt intake through the establishment of a supportive environment in public institutions such as hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided
	Educate	Reduce salt intake through a behaviour change communication and mass media campaign
	Packaging	Reduce salt intake through the implementation of front-of-pack labelling
Reduce physical inactivity	Educate	Implement community-wide public education and awareness campaigns for physical activity which includes a mass media campaign combined with other community-based education, motivational and environmental programmes aimed at supporting behavioural change of physical activity levels
Manage cardiovascular disease and diabetes	Drug therapy and counselling	Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk[2] approach) and counselling to individuals who have had a heart attack or stroke and to persons with high risk (≥ 30%) of a fatal and non-fatal cardiovascular event in the next 10 years
Manage cancer	Vaccinate	Vaccination against human papillomavirus (2 doses) of 9-13 year old girls
	Screening	Prevention of cervical cancer by screening women aged 30–49, either through: • Visual inspection with acetic acid, linked with timely treatment of precancerous lesions; • Pap smear (cervical cytology) every 3–5 years, linked with timely treatment of precancerous lesions; or • Human papillomavirus test every 5 years linked with timely treatment of precancerous lesions

[2] Total risk is defined as the probability of an individual experiencing a cardiovascular disease event (for example, myocardial infarction or stroke) over a given period of time, for example 10 years.

ANNEX 4:
GLOBAL VOLUNTARY NCD TARGETS BY 2025

A **25%** relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.

At least **10%** relative reduction in the harmful use of alcohol, as appropriate, within the national context.

A **10%** relative reduction in prevalence of insufficient physical activity.

A **30%** relative reduction in mean population intake of salt/sodium.

A **30%** relative reduction in prevalence of current tobacco use in persons aged 15+ years.

A **25%** relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances.

Halt the rise in diabetes and obesity.

At least **50%** of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.

An **80%** availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities.

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