Federal Democratic Republic of Ethiopia
Ministry of Health

NATIONAL STRATEGIC ACTION PLAN FOR THE PREVENTION AND CONTROL OF MAJOR NON-COMMUNICABLE DISEASES 2011-2017 EFY (2018-2025)

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

April 2019
Addis Ababa, Ethiopia

Ethiopia is one of the fast growing economies in Africa with a vision to reach a middle-income status by 2035. Realization of this vision will require 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 increasing 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 and nutritional disorders.

Despite substantial strides made in improving population health status in Ethiopia, still a lot is required in creating a health system that can withstand all adversities. Ethiopia is still one of the countries with a very 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: Noncommunicable diseases, mental, neurological and substance use disorders; and Group III conditions: Injuries. According to 2016 estimates, noncommunicable 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 noncommunicable 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.

This national strategic action plan outlines the major NCDs and their 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 preventive and curative health services integrated within the three-tiered healthcare system of

separately in the National Cancer Control Plan and National Mental Health Strategy.

This 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 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 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, 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. It is my hope that with implementation of this strategy major NCDs and their risk factors will get due attention by all concerned and the unnecessary suffering of the population will start to be addressed.

Dr Lia Tadesse (MD, MHA)
State Minister of Health

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1. Dr Mussie Gebremichael
2. Dr Asmamaw Bezabeh
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It is hoped that this implementation plan will be adopted by RHBs to develop their own strategic and annual plans on prevention and control of Major NCDs and their risk factors.

Hiwot Solomon (MPH)

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
FMoH	Federal Ministry of Health
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

diseases and diabetes, are the leading causes of morbidity and mortality globally. NCDs and their risk factors have a complex interaction with each other, with infectious diseases, nutritional deficiencies and other communicable conditions.

NCDs are by far the leading cause of death worldwide. In 2016, they were responsible for 71% (41 million) of the 57 million deaths occurred globally. The major NCDs responsible for these deaths included cardiovascular diseases (44% of all NCD deaths and 31% of all global deaths); cancers (9% of all NCD deaths and 16% of all global deaths); chronic respiratory diseases (9% of all NCD deaths and 7% of all global deaths); and diabetes (4% of all NCD deaths and 3% of all global deaths). 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%).

Evidences are emerging in Ethiopia that shows the country in a state of epidemiologic transition. Consequently, Ethiopia is facing a triple burden of disease with the mix of persistent infectious diseases, increasing noncommunicable diseases and injuries. The WHO 2018 NCDs report indicated a total of 700,000 deaths in Ethiopia in 2016 in which NCDs and injuries constitute 51% of the deaths (39 % attributed to NCDs and 12% to injuries). In detail, cardiovascular diseases accounted for 16%, cancers for 7% and respiratory disease for 2%, diabetes for 2%, injuries for 12% and other NCDs for 12% of all causes of death in 2016. Similarly, the Ethiopia NCDI Commission report showed comparable results with that of the WHO report. The Commission's report indicated 52% of deaths in Ethiopia were due to NCDs and injuries combined in 2016 (NCDs 43.5% and 8.5% being injuries).

Poverty is closely linked with NCDs. NCDs and poverty creates 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 Ethiopia 6th report, 68% of NCDI services in Ethiopia were financed by Out of Pocket (OOP) expenditures from households. Overall, 23% of total OOP

development in the twenty-first century. Thus, the UN general assembly passed a Political Declaration for the Prevention and Control of NCDs that calls for a comprehensive and multisectoral response by the member States. Likewise, the SDGs have 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. In response, NCDs first appeared in the Health Sector Development Program (HSDP) III which spanned from 2005 – 2010, though there was no meaningful implementation of the NCD Programs. But, the NCD Program evolved in the subsequent HSDP IV which was from 2010-2015 whereas, the FMOH established an independent NCD Unit in 2013. The country has developed its first strategic action plan for the prevention and control of NCDs for 2014 – 2016. NCDs were considered as one of the major disease control priorities in the Health Sector Transformation Plan 2015 – 2020 with elaborative strategies and costed interventions. Likewise, Ethiopia is developing a vital registration system that would assist in measuring disease burden and risk factors but is not yet comprehensive or ready.

Currently, Ethiopia is revising the national strategic plan for the prevention and control of NCDs with the overall goal envisioned to reduce the burden of Major 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 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 is designed to curb the challenges posed by NCDs and their 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, strategic policy changes, resource mobilization and collaboration among all

sectors

2. Formulate and strengthen legislations, policies and plans for the prevention and control of non-communicable diseases at both county and regional government levels.
3. Promote and strengthen advocacy, communication and social mobilization for NCD prevention and control
4. Strengthen health systems for NCD prevention and control across all levels of the health sector
5. Promote healthy lifestyles and implement interventions to reduce the modifiable risk factors for NCDs: unhealthy diets, physical inactivity, harmful use of alcohol, khat use, tobacco use and exposure to tobacco smoke.
6. Promote and conduct research and surveillance for the prevention and control of non-communicable diseases
7. Put in place interventions to reduce exposure to environmental, occupational and biological risk factors
8. Establish and strengthen effective Monitoring & Evaluation (M&E) systems for NCDs and their determinants.

federation of 9 Regional States and 2 City Administrations with a bicameral parliament. It has an estimated population of about 105 million in 2017. 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.

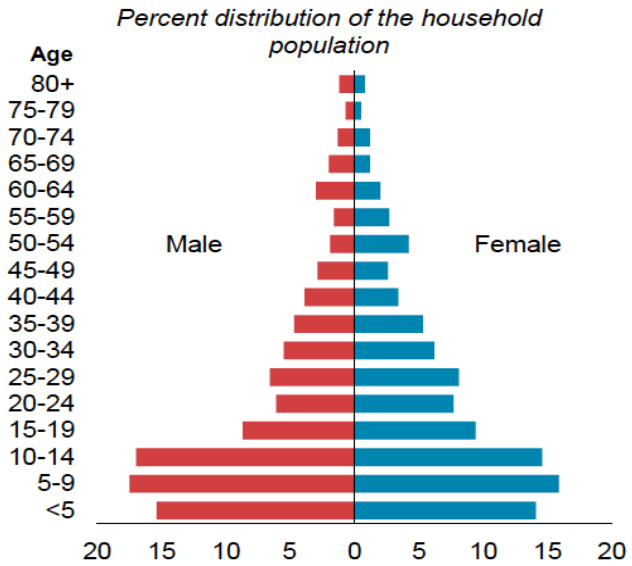


Figure 1: The Population Pyramid of Ethiopia, 2016 *(EDHS 2016)*

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. However, it 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.

The literacy rate stands at a national average of 50%.

prevention of chronic conditions were mentioned in the policy as secondary priorities to communicable, maternal, neonatal, and nutritional (CMNN) disorders.

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 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

DISEASES

2.1 INRODUCTION ON 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 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 Africa include haemoglobinopathies, mental disorders, violence and injuries, oral-dental diseases, eye diseases, thyroid disorders, chronic kidney disease, 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

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%).

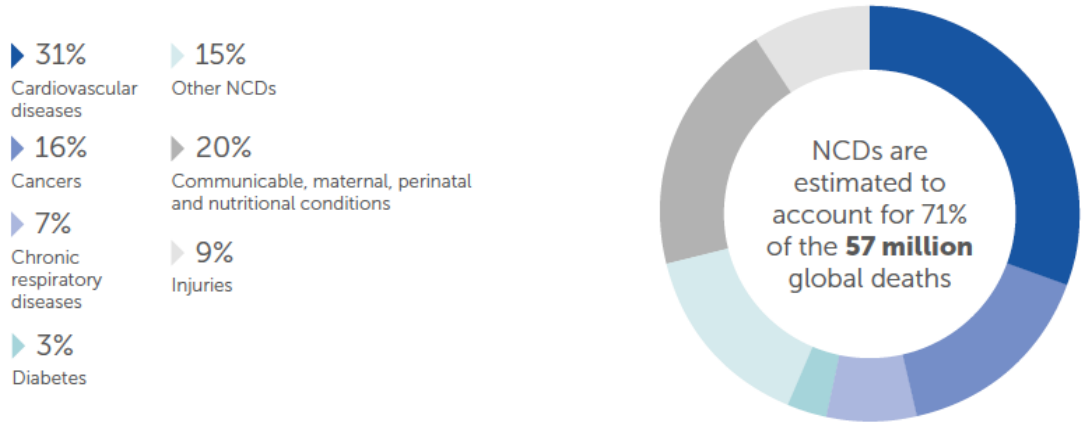


Figure 2: GLOBAL MORTALITY (% OF TOTAL DEATHS), ALL AGES, BOTH SEXES, 2016 *(Global NCD Report 2018)*

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

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 Noncommunicable Diseases

Noncommunicable diseases have been neglected for too long.

The UN High level meeting in 2011 acknowledged that the global burden and threat of noncommunicable 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. WHO developed NCD Global Action plan 2013-2020 and the comprehensive global monitoring framework for the prevention and control of noncommunicable diseases. The Global NCD Monitoring framework has 9 targets and 25 indicators.

The Sustainable Development Goals (SDGs) have increased global attention on the neglected noncommunicable 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.

2.3 BURDEN OF NONCOMMUNICABLE DISEASES IN ETHIOPIA

Ethiopia is developing a vital registration system that would assist in measuring disease burden and risk factors but is not yet comprehensive or ready.

injuries. Noncommunicable 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 noncommunicable 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.

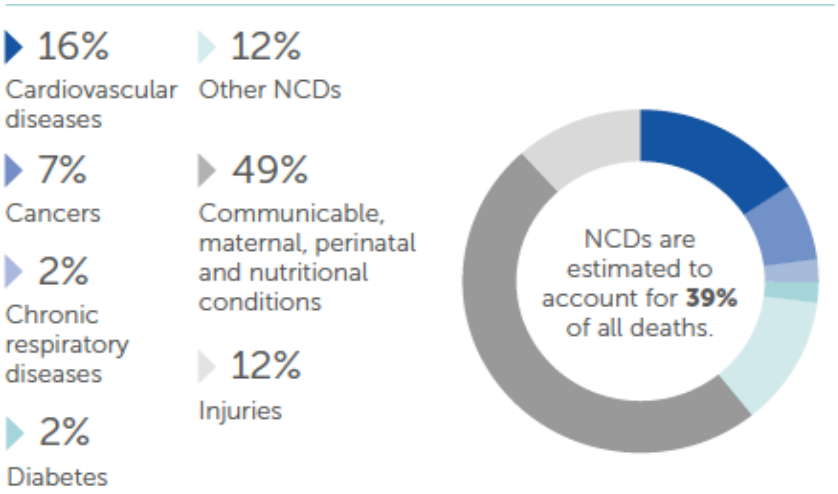


Figure 3: Proportional Mortality in Ethiopia, 2016 (n=700,000) *(Source: WHO 2018 Report)*

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

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 noncommunicable 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

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

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

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

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 ILLNESS

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

tertiary hospitals. 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. 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, or a hereditary characteristic that is associated with an increase in the occurrence of a particular disease, injury, or other health condition.

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; for example:

- Age,
- Gender,
- Race, and
- Family history (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,
- Alcohol use, and
- Unhealthy diets (increased fat and sodium, with low fruit and vegetable intake).
- Indoor air pollution

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

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	Musculoskeletal 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	

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.

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+ (%)	7.3	0.4	4.2	2015
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+ (%)			3.3	2015

Based on the National NCD STEPS Survey ~ 98% of adults have at least one major NCD

impact of NCDs goes beyond increasing the cost of health services. Significant costs to individuals, families, businesses, governments and health systems add 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.

2.7 THE NATIONAL RESPONSE TO THE NCDI 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

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.
- 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 major NCDs (Major 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.
- 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.

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 NCD Unit, • Evolving interest and commitment of the FMOH and RHBs on prevention and control of NCDs • NCD agenda incorporated within HSTP • 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 • NCD issues integrated into the Health Extension program • NCD program integrated into the Ethiopian Primary Health care guideline • National NCD STEPS Survey Conducted na result launched • National NCDI Commission established and assessed NCDI Situation and developed recommendations and cost-effective interventions	• Strong primary healthcare structure especially designed for disease prevention and health promotion through the HEP • The four major 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 • 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 • UN organizations' 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 • Lack of financial and technical resources for program implementation	• Poor awareness and misconceptions about the burden and consequences of NCDs, among the policy makers, health professionals and the general public • Non-existent multi-sectoral coordination

• Poor availability and affordability of quality, safe and efficacious basic technologies and medicines for screening, diagnosis, treatment and monitoring of NCDs • Inadequate capacity of the health workforce • Poorly staffed RHBs • Limited number of HFs providing integrated management of NCDs at primary health care level • Poor partnership between the public and private health systems,	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) • Lower value for health in the general population • Poor health seeking behavior among the public • Economic gain by the government from NCD risk factors (alcohol, Khat, soft drinks)

3.1 SCOPE, VISION AND MISSION OF THE NATIONAL STRATEGIC ACTION PLAN

SCOPE

Cardiovascular diseases (CVD), chronic respiratory diseases (CRD), CKDs and diabetes (DM) are included in this National Strategic Action Plan. These three 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 NCD morbidity and mortality it is not included in this strategy as it has been addressed separately in the National Cancer Control Plan 2015-2020. The other major contributors to NCD 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 NSAP will focus on the aforementioned three major NCDs and their shared risk factors. As per the national health policy and health sector transformation plan of Ethiopia, this NSAP for the prevention and control of Major NCDs will focus on promotive and preventive activities for the population at large as well as provision of quality NCD services in an equitable manner for individuals with NCDs or at high risk of developing NCDs.

VISION

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

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.”

GOAL

To reduce the burden of Major 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.

OBJECTIVES:

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 care with financial risk protection 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 OF THE NATIONAL STRATEGIC ACTION PLAN

The WHO global action plan on NCDs 2013 - 2020, outlines nine voluntary targets for the prevention and control of non-communicable diseases by the year 2025.The current national strategic action plan clearly defines targets for prevention and control of NCDs and their risk factors in Ethiopian context. The 2015 STEPS NCD risk factors survey has been used as a baseline data for the target setting.

Table 4: Major NCDs Targets for 2025

Ser.	Indicators	Baseline	Target by 2025

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	30% 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	5.2% 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)	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 FMOH 2016	60 %
14	Halt raise in prevalence of raised blood sugar in persons aged 15+ years	3.3% 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 FMOH 2016	60%

	required to treat major NCDs in both public and private facilities;		
18	All health centers and hospitals provide routine and emergency asthma care	Baseline readiness 27% readiness for asthma care	100%
19	Decrease household air pollution from biomass fuel use	Baseline > 90% households use biomass fuel	< 50%

3.2 GUIDING PRINCIPLES FOR THE NSAP ON MAJOR NCDS AND RISK FACTORS

The strategic plan relies 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)

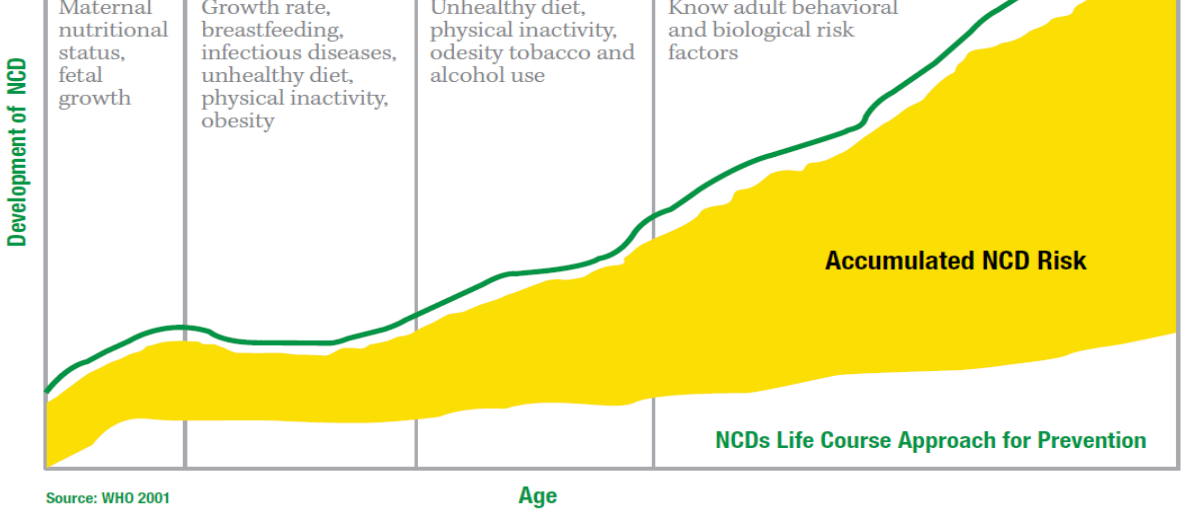


Figure 4: A life course approach for NCD prevention

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 noncommunicable 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 NCD prevention and control is impossible, hence NCD have to be prioritized in UHC design and implementation. When achieved, UHC can provide a powerful vehicle to accelerate progress in NCD 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. Especially integrated people centered primary health care and social protection mechanisms should be ensured, to provide access to health services for all and in particular for the poorest segments of the population.
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. NCD prevention and curative services will be delivered integrated within the three-tiered health care system of the country (primary,

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.

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, affordable, feasible and scalable in all settings

From a financing perspective, these interventions are a practical and achievable starting point for incorporating NCD interventions into health benefit packages for universal health coverage, costing as little as $1 per person, per year, in lower-income settings between 2018 and 2025, and in the case of taxation not only delivering health benefits but also generating additional government revenues.

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 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 NSAP is organized by priority area, consisting of four targeted areas of intervention that will guide the implementation of NCD activities.

These priority areas include:

1. **Priority Area One: Strengthen the national response through policy, governance, leadership and coordination.** Strengthen country-wide ownership of NCD interventions by influencing health-related policies and fostering the development of multi-sectoral leadership in NCD related interventions.
2. **Priority Area Two: Health promotion and disease prevention targeting behavioral risk factors.** Reduce population’s exposure to, and participation in,

diseases through people centered primary care and universal health coverage.

4. **Priority Area Four: Monitoring, evaluation and research.**

Evaluate and monitor landscape of disease prevalence, medical capacity for care and national behavioral trends to determine progress in the prevention and control of NCDs.

The Descriptions of the NSAP main priority areas and their strategies follows below.

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

OBJECTIVE: Strengthen national capacity and country-wide ownership of NCD interventions by leadership, governance, multi-sectoral action and partnerships in order to accelerate the national response for prevention and control of non-communicable diseases. Strengthen country-wide ownership of NCD interventions by influencing health related policies and fostering the development of multi-sectoral leadership in NCD related interventions.

Effective implementation of this priority action area will result in increased political commitment, availability of sustainable resources, and multi-sectoral activities. During the UN Political Declaration on NCDs, countries committed themselves to strengthen and integrate non-communicable disease prevention and control into their health-planning processes and national development agenda. Ethiopia was among the countries who committed to this goal. As we uphold this pledge, we recognize that this far-reaching program will be best implemented when backed by policy both within and beyond the health sector. This priority area outlines strategies to foster multi-sectoral cooperation, develop healthy-living preventative policies and encourage nation-wide leadership and governance in the fight against NCDs.

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

The objective of this strategy is to address the challenges posed by NCD risk factors and the

and control. Specific policies and legislation are required to address the rising burden of NCD risk factors. In Ethiopia, risk factors that will be given most attention include: tobacco, unhealthy diet, physical inactivity, and alcohol abuse and khat consumption. Future policies and legislation will be designed to prioritize medical intervention for people affected by NCDs resulting from these high-risk activities, and will also prioritize strategies that decrease public participation in these activities.

Priority Initiative 2: Establish/Strengthen national and sub-national non-communicable diseases unit.

The FMOH has established an NCD Case team within the Disease Prevention and Control Directorate. This may evolve into a Directorate at Federal and RHB levels.
NCD governance needs to be strengthened as follows:

- Strengthening and/or establishing NCD coordinating structures at all levels: federal, regional, zonal, woreda levels and health facilities.
- Staff NCD offices with employees that demonstrate expertise for the position.
- Ensure NCD offices are allocated a working budget to perform responsibilities.
- Build capacity for NCD case team members among all levels of program management.

Priority Initiative 3: Develop and revise the national strategic action plan for the prevention and control of non-communicable diseases.

The Strategic Framework for the Prevention and Control NCDs has been finalized, and the two documents can be used together. As a three-year plan, the NSAP will be revised and updated periodically in accordance with the changing priorities of the country and its capacity to respond.

Priority Initiative 4: Establish Multisectoral Coordination Mechanism for prevention and control of NCDs and Risk factors at National and Regional levels.

It is impossible to curb all the problems posed by NCDs and their risk factors through the

agriculture, communication, education, energy, environment, sport, housing, justice and security, legislature, finance, sports, tax and revenue, trade and industry, transport, urban planning and youth affairs and partnership with relevant civil society and private sector entities will be established. This will be integrated into the Multisectoral Woreda Transformation (MWT) platform (with the Steering Committee and the Technical Committee leading the policy and technical matters respectively).

The MWT will be in charge of coordination, monitoring and evaluation of the different agreed upon action points of the multi-sectoral response. The MWT will have a chairperson and secretary elected from the WMT member ministries where mainly they will be in charge of leading and overseeing the general functions of the NCDs prevention and control response in the country. To this end the Ministry of Health provides technical expertise and play central role in the overall national effort to halt the growing burden of NCDs and their risk factors.

Strategic Interventions:

- Establish multisectoral steering committee for prevention and control of NCDs and risk factors as part of the Woreda Transformation Platform
- Coordinate development of Multisectoral Action Plan (MSAP) Implementation of MSAP on NCDs and risk factors
- Mobilize financial and technical resources for prevention and control of NCDs

Priority Initiative 5: Set up a national and sub national NCDs Advisory group and technical taskforce.

The advisory group will be responsible for joint planning, policy and guideline formulation, resource mobilization and monitoring and evaluation of the NCD program and monitoring and evaluation of the implementation of the multisectoral action plan.

The Advisory committee will be established at Federal, Regional, Zonal and Woreda Levels.

Objective: Reduce exposure of individuals, families and communities to modifiable risk factors for non-communicable diseases through increased awareness and the creation of environments that promote healthy living. Cardiovascular diseases, cancer, chronic respiratory diseases and diabetes are the four non-communicable diseases are the major group of NCDs sharing common risk factors. Over 80% of CVDs and diabetes and nearly 40% of cancers are preventable through addressing their shared behavioral risk factors.

Priority Initiative 1: Health promotion and disease prevention by increasing public awareness and education.

Promotive activities focus on behavior change so as to avoid the social, economic, and cultural patterns of living known as contributing factor to an increased risk of disease. Whereas, preventive health services are aimed at limiting the incidence of NCDs by controlling immediate causes and risk factors.

NCDs are not merely a health problem. They impact all sectors of the government, thus requiring a collaborative response. To this end it is mandatory to create awareness among policy makers, senior managers and health professionals primarily accountable to lead the prevention and control of NCDs and their risk factors.
Community-wide education aiming to promote healthy living and reduce the prevalence of NCDs will be provided at all levels of the health service delivery hierarchy. Through training, health care professionals will be better equipped to educate patients of NCD risk factors and capable of identifying symptoms of NCD related illnesses. Health extension workers and members of the health development Army (HDA) are valuable assets that can provide health promotion and disease prevention messages to the population at a community-level.

Strategic Interventions

- Develop NCD communication strategy and health education modules on NCDs, and risk factors

household and community level

- Awareness raising and education on NCDs and NCD risk factors in school and among targeted out of school children, adolescents and young adults.
- Awareness raising on NCDs and risk factors in work places.

Priority Initiative 2 : Promoting Healthy Diet

Nutrition; both under and over nutrition plays important roles in the causation of NCDs. For this purpose, a ***healthy diet*** is defined as one which includes adequate intake of vegetables, fruits, and whole grains; consumption of low-fat dairy products, poultry, fish, legumes, vegetable oils and nuts; and limited intake of sweets, sugar-sweetened beverages, salt and animal fats. Besides, the effects of nutrition on NCDs occur throughout the life cycle for that, healthy diet promotive services shall encompass all stages of life. As such, none other than promoting healthy diet shall adopt the principle of intervention across the life course, where to start with the FMOH Nutrition case team under the Maternal Child Health Directorate and the NCD case team under the Diseases Prevention and Control Directorate must act together, while engaging the non- health actors that can contribute.

Strategic Interventions

- ✓ Liaise for the establishment of an intra-ministerial cooperative taskforce among NCD team, Nutrition team and Maternal and Child health teams. Use this platform for the establishment of inter-ministerial taskforce
- ✓ Revise/update the national nutrition guideline to encompass the context of NCDs and life course perspective
- ✓ Liaise with the Ministry of Education to introduce healthy diet promotion in school curriculums and awareness creation activities
- ✓ Develop national dietary guidelines to promote healthy dietary lifestyles
- ✓ Liaise with national Multisectoral Committee for adoption of policies and legislations to promote healthy diet
- ✓ Implementing public awareness activities on healthy diets during the life course

Sports Policy underlines the importance of physical activity by stating the importance of creation of sporting facilities in and around residential areas, workplace; promotion of mass sport and sporting activities favoring women and disabled people. That means sport and physical activity to all Ethiopians.

Strategic Interventions

- ✓ 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.
- ✓ Promote mass sport including competitive sport events in collaboration with stakeholders.
- ✓ Engage the Ministry of Housing and Urban Planning and the Ministry of Transport in the creation of enabling environment for physical activity including playgrounds, walkways, and cycling lanes.
- ✓ Creating public awareness on the health benefits of physical activity in prevention and control of NCDs
- ✓ Promoting physical activity in the community, private and public institutions, workplaces, health facilities. The Car free road days initiative will be implemented in all urban centers

Priority Initiative 4: Reduce Harmful Use of Alcohol

On top of the fatal consequence of alcohol intoxication evidences are clear established on the role of long-term harmful use of alcohol in the development of NCDs.

Strategic Interventions

- ✓ Implementing the legislation on prohibition of advertising, promotion and sponsorship of alcoholic beverages at the National and Regional levels
- ✓ Liaise with national Multisectoral Committee for access restrictive measures aimed at children and young people including in schools

integrating alcohol abuse management and rehabilitation services at all levels including community, health care system, and workplace

Priority Initiative 5: Tobacco Use Reduction

Ethiopia is progressing well in its implementation of the WHO Framework Convention for the Control of Tobacco (FCTC). Thus, the action required is to ensure the implementation of FCTC and the national tobacco control directive at its most.

Strategic Interventions

- ✓ Enforce the tobacco control related articles in the establishing proclamation of the Ethiopian Food and Drug Control Authority and collaborate with other relevant sectors to enforce the WHO FCTC and the national tobacco control directive at full capacity.
- ✓ Implement public awareness on the dangers of tobacco use and its related risks.
- ✓ Tobacco free work and public places

Priority Initiative 6: Reduce Local Production, Distribution and Use of Khat

Evidences show Khat is one of the shared risk factors for NCDs. Moreover, khat chewing is often accompanied by cigarette smoking and consumption of sugary drinks. Often those who consume khat sit for a long time. In most cases khat users end up using alcohol to avoid the after effects of the psychoactive content. The above facts illustrate the vicious cycle between khat chewing and other major NCD risk factors. In this account Ethiopia considers the following strategic interventions

Strategic Interventions

- ✓ Liaise with national Multisectoral Committee for legislative regulation in domestic production, distribution, sale and use of khat.
- ✓ Liaise with the Ministry of Education for access restrictive measures aimed at children and young people including in schools and universities.
- ✓ Implement public awareness on the dangers of khat consumption and its related risks.

This strategic objective aims to promote interventions to reduce exposure to environmental and occupational 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

- ✓ Strengthening the implementation of the legal frameworks, policies, standards and guidelines to reduce exposure to environmental and occupational risk factors to protect populations from environmental contaminants and occupational hazards that predisposes to NCDs.
- ✓ Initiate and promote programs aimed at protecting and reducing exposure to risk factors for NCDs at the workplace, public and home environment.
- ✓ Create public awareness on prevention and control of exposure to environmental, biological and occupational risk factors on NCDs

Priority Initiative 8: Prevention of Rheumatic Heart Disease

Acute Rheumatic Fever (ARF) is an inflammatory disorder of the connective tissue of the body, 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

- ✓ 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).

DIAGNOSIS, TREATMENT, CARE AND SUPPORT FOR MAJOR NCDS AND THEIR RISK FACTORS

Objective: Strengthen and reorient health systems to provide early detection, diagnosis, treatment and palliative care for patients affected by non-communicable diseases.

The main goal of this priority area is to detect diseases at an early stage in order to be able to initiate prompt treatment. Thus, provision of quality screening, diagnostic and treatment services ensured service utilization and confidence of the public on the health system.

Under this priority area focus is given to:

- Screening, diagnosis and treatment of diseases such as Hypertension, Rheumatic Heart disease, stroke, heart failure, Coronary heart disease, diabetes, asthma, COPD and chronic kidney diseases
- Screening and brief management of risk factors such as alcohol abuse, tobacco addiction, khat abuse and other substances of abuse
- Screening, counseling and management of biochemical risk factors especially overweight/obesity, hyperlipidemia and raised blood sugar.
- Preventive therapies for stroke and heart attack.
- Palliative and rehabilitative care for patients with CVD, DM, CRD and CKD

Health for all based on the principle of universal health coverage through the primary health care that delivers quality services based on principles of equity which assures the utilization of services are the bases of this priority area. By doing so the overall objective is to break barriers to the NCDs care and treatment services to the public.

To this end the following priority initiatives will be implemented:

Priority Initiative 1: Strengthening Health Service Delivery

Ethiopia follows a three tiered health service delivery system (primary, secondary and tertiary), and not forgetting the community. For that, the NCDs care and treatment services will be delivered integrated within the three tiered health care system of the country. Services will be given at all levels starting at the community upwards to health posts, health centers, general hospitals and tertiary referral hospitals. Type of specialized screening, diagnostic and

Accordingly the following strategic directions will be adopted by the FMOH to achieve this strategic direction.

Strategic Interventions:

- ✓ Identify an appropriate disease specific health services for each level of the health tier
- ✓ Develop care and treatment protocols for each level of the health tier
- ✓ Establish well-functioning referral system
- ✓ Ensure the reorganization of health services at each level in accordance with the need of NCDs
- ✓ Decentralization and Integration of NCD services into the primary health care level through task shifting, task sharing and improved referral mechanisms.
- ✓ Include NCD Indicators in the Health Center and Hospital KPIs

The following table shows recommended disease specific interventions at different levels of the health care system.

Table 5: Prioritized service activities at different levels of the health system

Main NCDs	Core Services			
	Communities and HEP	**Health Centers/Primary Hospitals**	**General Hospitals**	**Tertiary Hospitals**
Rheumatic heart disease	- Awareness about streptococcal infection - Promotion of personal and environmental hygiene - 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

	detection - Population screening for raised blood pressure - Non-medical interventions-lifestyle (tobacco cessation, physical activity, healthy diet, alcohol, khat)	- Patient assessment and management - Personal plan targets for BP, weight, exercise, smoking cessation - Screening for complications - Referral of complex cases	- Personal plan targets for BP, weight, exercise, smoking cessation - Specialist referral of complex cases - Pediatric services - Pregnancy services	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,	- 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	- Clinical review - Assessment for complications - Intensified treatment - Complication screening, treatment and monitoring - Dialysis, Renal transplantation referral

	- 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	- 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	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	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

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

Provision of quality care and treatment services for NCDs demanded a good mix of health workers at each level of the service delivery system. The community based decentralized health delivery system in Ethiopia puts health posts and the Health Extension Program (HEP) the pillar of services. The HEP and the Health Extension Workers (HEW) played an

reorientation to deliver minimum standard NCD care and treatment services.

In doing so the ministry required to adopt the following strategic directions

Strategic Interventions:

- Ensure mix and staffing of healthcare workers as per the minimum required level
- Develop screening, diagnosis and treatment guideline as per the classification of health cadres (Specialists, Doctors, nurses, HEWs)
- Develop training materials for each category of the health cadres
- Training of health workers TOT and cascade
- Mentoring and supportive supervision to ensure quality
- Develop and provide job aids, patient education materials

Priority Initiative 3: Infrastructure, Diagnostics, Medical Supplies and technologies

Provision of quality care and treatment services depends on the availability of basic infrastructure, diagnostics and medical supplies.

The number of health facilities is expanding in Ethiopia and it is expected to increase in the coming 7 years especially with the number of hospitals to increase dramatically.

Currently the number of facilities is as shown in table below.

Table 6: Number, types and functional status of health facilities and health posts in Ethiopia, Health and Health Related Indicators 2017/18

Health facility type	*Fully Functional*	*Under Construction*	*Total based on HHRI 17/2018*
Health Post	16660	551	17,211
Health Center	3982	68	4040
Hospital	266	96	352

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

The Situation is even worse for NCDs service delivery. Even though 49%, 48%, 33% 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.

Hence the ministry of health and the health system at all levels will strive to improve the readiness of health facilities to deliver NCD services by working to improve the whole of the health system than on expanding uncoordinated vertical programming of NCD services.

The WHO health systems strengthening framework will be used to improve the NCDs service delivery.

Strategic Interventions:

- Define the components of the service standards (Infrastructure, screening tools, diagnostics, essential medicines, medical instruments, drugs, laboratory supplies and reagents, equipment) for delivery of NCDs services in the Ethiopian setup.
- Ensure health facilities fulfill minimum standards to deliver NCD screening, diagnosis, prevention and care services.
- Ensure continuous and sustainable availability of essential medicines for NCDS and risk factors
- Ensure continuous and sustainable availability of essential medical instruments for NCDS and risk factors
- Ensure continuous and sustainable availability of essential laboratory machines for NCDS and risk factors
- Ensure continuous and sustainable availability of essential laboratory supply and regents for NCDS and risk factors
- Strengthen Lab Quality assurance system and laboratory networks
- Work with Ethiopian Pharmaceutical Supply Agency, RHBs and WoHOs to avail medicines, and technologies in timely and uninterrupted fashion.
- Strengthen the health insurance system to increase population coverage and service coverage

One of the key components in the prevention and control of NCDs is surveillance of the national NCD response using progress monitoring indicators. Monitoring major NCDs helps to analyze the socio economic and environmental determinants of health in order to provide guidance for policy, legislative and financial measures.

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. Indicators can be added or modified according to local context, while the internationally agreed proposed set of indicators will provide internationally comparable assessments of the status of NCD trends over time, and help to benchmark the situation of the country against others in the same region, or in the same development category.

Monitoring framework for Non-Communicable Disease

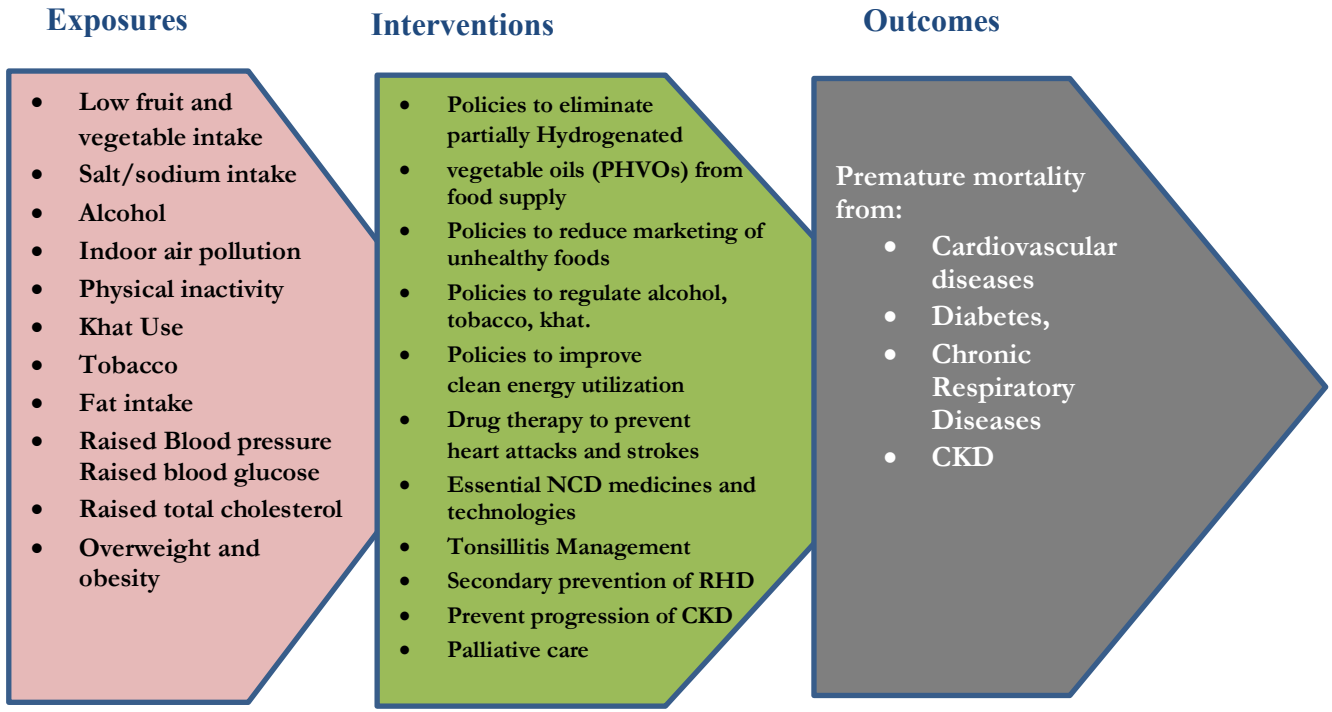


Figure 5: M&E Framework for NCDs

data have to be collected for effective NCD response.

Implementation of the action plan will be tracked through nationally agreed upon indicators and targets. The national indicators and targets will be in line with the global monitoring framework that comprises 25 indicators and nine voluntary targets (see Annex 3) for countries to adopt based on local evidence and capacity. The indicators and the national targets provide overall direction and the action plan provides a road map for reaching the targets.

Priority Initiative 1: Strengthening the national health information Management System (HMIS) to incorporate NCDs and risk factors

Selected NCD indicators will be incorporated in the HMIS. Health facilities will be required to collect, compile and supply these NCD HMIS indicators through the relevant administrative level as per the reporting period. Subsequently, Woreda, zonal and regional office will compile, analyze and use the information for local decision and further report to the FMOH. Appropriate NCD HMIS registers, for example, tally sheets and reporting templates, will be developed and distributed to all levels of the health system. As studies shows private sectors handle a significant amount of NCD cases, therefore capacity building, and regulation of the private sector and its integration in regular surveillance is an important challenge of most LMICs, and have to be given due emphasis.

Periodical supportive supervision activities are part and parcel of the monitoring system will be carried to lower administrative levels in all sectors that are involved in the prevention and control of NCDs. The national steering committee and its NMTAG will be in charge of guiding and coordinating the implementation of supportive supervision in all sectors. In the health sector supportive supervision activities will be carried to health facilities and lower administrative levels periodically to guide, train and encourage staff to improve their performance in the provision of high-quality health services and program management.

Strategic Interventions

- Integrate NCD indicators in the National HMIS including DHIS2 and Other electronic platforms

age, sex and type, for understanding of national and regional trends.

Registries will be of two types:

- **Hospital based registries:** for instance, recording of information on the cancer patients seen in a particular hospital helps for patient care and to certain extent for epidemiological purposes. However, these registries cannot provide measures of the occurrence of cancer in a defined population because it is not possible to define their catchment populations that are the populations from which all the cases arise.
- **Population-based registries:** registries monitor the frequency of new cases (so-called incident cases) every year in well-defined populations and over time by collecting case reports from different sources (treatment facilities, clinicians and pathologists, and death certificates). The frequency of these incident cases is then estimated per 100,000 population.

Surveillance of NCDs and their risk factors: Periodic data collection on behavioral and metabolic risk factors is important to follow progress of national NCD response. This survey has to be conducted using a well-defined data sets, data source and undertake every 3-5 years. National Multiple Indicator Cluster Survey (MICS), BSS and WHO NCD Stepwise survey are some of the surveys

Strategic Interventions:

- Assess the level of adult mortality through sampled vital registration system
- Conduct verbal autopsy in sentinel sites
- Establish health facility-based CVD, DM, RHD, CRD registries.
- Conduct WHO Stepwise survey on major NCDs
- Set research agendas on NCDs, risk factors and interventions and support researches conducted

Factors controlling NCDs and determinants of NCDs are very divers and multifactorial and at large beyond the reach of the health sector alone. Besides, NCDs evolves throughout the life cycle, as such; interventions shall encompass all stages of life. In cognizant; the response requires involvement of all stakeholders both government and none government. 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 and by the principle of the universal health coverage. Therefore, the implementation of the NSP will be two pronged.

5.1 PRONG ONE: THE MULTISECTORAL RESPONSE FOR NCDS

Aforementioned elsewhere, 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 NCD/NCD risk factors prevention and control programs in the country. Primarily the multisectoral response focuses in interventions that require policy level actions. Actors included government and nongovernment agencies alike. As such, government 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 General Attorney's Office (GAO), Ministry of Women, Children and Youth Affairs (MWCYA), Ministry of Culture and Tourism, Ministry of Urban Planning and Housing (MUPH), Ministry of Transport, Ministry of Labor and Social Affairs (MOLSA), the media are few to start with. Nongovernment actors to mention some includes religious institutions, Civic Societies, Faith Based Organizations (FBO), CBOs, Non-governmental organizations (NGO) and UN agencies will be the major ones.

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

Risk factors/ disease	Interventions	Policy category	Responsible sectors in Ethiopia
	Raise taxes on tobacco	Tax and subsidies	Finance

	public health program to increase physical activity	Information and built environment	Media
Unhealthy diet and physical inactivity	Replace trans-fat and saturated fats with polyunsaturated fats	Regulation and enforcement	Trade, 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
	Provide consumer education against excess use of salt and sugar, including product labelling	Health education and information (HEI)	MoH, Education, Media
Air pollution	Indoor air pollution: expand access to electricity	Built environment	Mines and energy
	Indoor air pollution: halt the use of unprocessed coal and kerosene as a household fuel	Regulation and enforcement	Education, Media, MoH
	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	Regulation and enforcement	Transport, EPA
	Public transportation: build and strengthen affordable public transportation system in urban areas	Built environment	Transport
Alcohol use	Raise taxes on alcoholic beverages and enforce restrictions on availability of retailed alcohol	Tax and subsidies	Finance
	Bans on alcohol advertising	Regulation and enforcement	EFDA, EBA
Khat	Raise taxes on Khat	Tax and subsidies	Finance
	Bans on khat use in public places	Regulation and enforcement	EFDA, EBA
	Crop Substitution	Incentivize	Agriculture

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).*

key priority interventions are recommended:

1. Raise the priority status of NCD within the Health Sector and non-health Sector
2. To ensure the passing and implementation of legislation banning smoking in public places and other provisions of the WHO FCTC.
3. 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'
4. 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 lead by National Steering Committee (NSC) will be in charge of the Multisectoral response. 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.

1. **A national steering committee or commission for NCDs:**
   a. The national commission for NCDs shall comprise of all sectoral ministries, the private sector and development partners, preferably led by the office of the prime minister or an elected chair
   b. The national NCD commission will be responsible in developing one national NCD prevention and control strategy, with clearly stated objectives, goals, targets and monitoring framework
   c. The commission will monitor and evaluate the implementation of the agreed upon

c. As per the guidance of the commission the following duties will be discharged to subcommittees or sub commission members.

2. **Promotive/Incentivize subcommittee:**
   a. This subcommittee will work on NCD risk factors that have promotive health behaviors, which specifically are physical activity, fruit and vegetable consumption etc.
   b. The subcommittee shall comprise appropriate sectoral ministries, agencies, private sector and development partners.
   c. As per the guidance of national strategic action plan the subcommittee will develop detail action plans, implementation strategies, and monitoring framework in such it contributes and delivers to the overall goals and targets set above
3. **Inhibitive/Restrictive subcommittee:**
   a. This subcommittee will work on NCD risk factors that have a negative health impact that includes risk factors such as tobacco, alcohol and khat use.
   b. The subcommittee shall comprise appropriate sectoral ministries, agencies, private sector and development partners.
   c. As per the guidance of national strategic action plan the subcommittee will develop detail action plans, implementation strategies, and monitoring framework in such it contributes and delivers to the overall goals and targets set above
4. **Advertisement and Product promotive subcommittee:**
   a. This meant to promote healthy lifestyle and protect health and life of individuals and population from negative advertisement.
   b. The subcommittee shall comprise appropriate sectoral ministries, agencies, private sector and development partners.
   c. As per the guidance of national strategic action plan the subcommittee will develop detail action plans, implementation strategies, and monitoring framework in such it contributes and delivers to the overall goals and targets set above

from the health sector. The health sector responses for NCDs are diverse whereas, services are supposed to be unique at the same time for the specific NCDs and risk factors.

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

1. Improve governance for NCDs
2. Restructure health systems and human resource development in keeping with the burden of NCDs
3. Secure 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 government regular budget and development partners
5. Strengthen the capacity of health care workers and non-health care workers to manage and deliver chronic care for NCDs in both the 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 for the 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 (FMOH), regional health bureaus, zonal health offices and district health offices will have different areas of work 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

factors.

Within the FMOH, different specialized agencies and directorates play key roles in implementation of the health services for NCDs and risk factors. Coordination of these bodies is crucial for effective and efficient program implementation and improves quality of services.

At the federal level team of experts and key implementers on NCDs and risk factors will be/are 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 to implement interventions on the prevention and control NCDs and risk factors adopting per their regional context. The RHBs therefore, are in charge of planning, implementing, coordinating monitoring and evaluation of the health services for NCDs and risk factors in the respective regions.

ETHIOPIAN PHARMACEUTICALS SUPPLY AGENCY (EPSA)

For a responsive health services to NCDs and risk factor pragmatic supply chain procurement and delivery system is in a paramount importance. The FMOH in close collaboration with EPSA will do regular quantifications of necessary commodities for prevention and control 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.

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 FMOH will be in charge of laboratory services, whereas, 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

ETHIOPIAN FOOD AND DRUG CONTROL AUTHORITY (EFDA)

Essential medicines, medical technologies and supplies for NCDs and risk factors are too broad, as well as widely old and/or newly evolving global phenomenon. Accordingly, most drugs, technologies and supplies are new or are not standardized to Ethiopia. The FMOH in collaboration to EFDA will take the necessary steps so as to enlist and avail these drugs, technologies and supplies as per the recommendation of the national guideline.

HEALTH FACILITIES

Primarily health facilities will be in charge of delivering screening, diagnostic, treatment and care services for NCDs and risk factors. In collaboration with Woreda, Zone and Regional health off9cials health facilities will determine the type and depth of health services within their facilities.

HEALTH POSTS/COMMUNITY

- HEW in collaboration with HDA create an awareness in the community on key preventive and curative interventions for NCDs and risk factors
- Implement BCC/IEC part of the national response to NCDs and risk factors

DEVELOPMENT PARTNERS

- Provide the necessary technical and financial assistance to FMOH in the national response. And participate in strengthen capacity of governments at all level 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.

The Ethiopia NCDI Commission in 2018 identified an initial list of highest priority interventions that have been listed in the following table. Screening for cervical cancer and treatment of pharyngitis in children to prevent rheumatic heart disease are examples of very cost-effective interventions with cost effectiveness ratios below $100 USD (2012) per DALY averted.

Targets were set to 30% effective coverage over the first five-year period (2019-2023), with further scale up to 50 % by 2025.

Cost by intervention was estimated using OneHealth Tool Version 4.5 using the software's default data on cost of drugs and supplies and the default population model for Ethiopia. The OneHealth 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 2011-2017.

Interventions	***Investment across implementation years (in $1,000 USD)***							**CEA (USD per DALY)**	**Delivery platform**
	2011 EFY (2018-19)	**2012 EFY (2019-20)**	**2013 EFY (2020-21)**	**2014 EFY (2021-22)**	**2015 EFY (2022-23)**	**2016 EFY (2023-24)**	**2017 EFY (2024-25)**		
Encourage adherence to medications	**13**	**14**	**14**	**17**	**19**	**21**	**22**	$152	Community

prevention for those with absolute risk of CVD >10%	**4591**	**4849**	**5115**	**5423**	**5741**	**6081**	**6091**	177	center
Treatment of cases with established ischemic heart disease (secondary prevention)	**320**	**342**	**365**	**389**	**415**	**465**	**470**		Health center
Treatment of cases with established CVD (secondary prevention)	**194**	**208**	**222**	**240**	**254**	**273**	**275**		Health center
Treatment of cases with acute pharyngitis to prevent rheumatic fever	**35**	**36**	**38**	**39**	**41**	**43**	**45**	$12	Health center
Treatment of cases with rheumatic heart disease (with benzathine penicillin)	**13**	**13**	**15**	**15**	**16**	**17**	**18**		Health center
Management of Type 2 DM	**21,137**	**22666**	**24226**	**25823**	**27436**	**29063**	**30690**		Health center
Insulin management of diabetes mellitus type 1	**2,301**	**2362**	**2434**	**2513**	**2603**	**2697**	**2818**		District hospital
Asthma: Low-dose inhaled beclomethasone + SABA	**16,104**	**16664**	**17214**	**17756**	**18304**	**18851**	**19546**		District hospital
COPD: Exacerbation treatment with antibiotics	**77**	**87**	**97**	**107**	**118**	**130**	**142**		District hospital
Cardiac surgery for rheumatic heart disease	**1,008**	**1058**	**1111**	**1166**	**1224**	**1286**	**1350**		Referral Hospital
Total cost of all interventions for CVD, CRD and diabetes	**46,437**	**48,989**	**51,589**	**54,276**	**57,013**	**59,827**	**62,429**		380,560 USD (Grand Total)
USD per capita	$0.44	$0.87	$1.31	$1.75	$2.19	$2.63	$3.07		

CEA: Cost Effectiveness

Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total Amount in USD
National Systems Response	3018.41	3184.29	3353.29	3527.94	3705.85	3888.76	4057.89	24,736.40
Health Promotion	7476.36	7887.23	8305.83	8738.44	9179.09	9632.15	10051.07	61,270.16
Treatment Enablers	1671.73	1763.60	1857.20	1953.94	2052.47	2153.77	2247.44	13,700.16
Medical Treatment	22568.38	23808.65	25072.25	26378.14	27708.32	29075.92	30340.49	184,952.16
M&E	11702.12	12345.23	13000.43	13677.55	14367.28	15076.40	15732.11	95,901.12
Total Cost in USD	**46,437**	**48,989**	**51,589**	**54,276**	**57,013**	**59,827**	**62,429**	**380,560**

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

ANNEXES

ANNEX 1: IMPLEMENTATION LOG FRAME OF THE NSAP FOR MAJOR NCDS

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

Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
Strategic Objective: Strengthen national capacity and country-wide ownership of NCD interventions by leadership, governance, multi-sectoral action and partnerships in order to accelerate the national response for prevention and control of non-communicable diseases.				
Priority Initiative 1: Strengthen National health policy on NCDs and their risk factors				
Ensure Noncommunicable Diseases Prevention and control and risk factors reduction initiatives are included in the health policy of Ethiopia	NCD and Risk factors are included in the Health Policy	2019	Minister's Office and State Minister's Office	Revised Policy
Priority Initiative 2: Establish/Strengthen national and sub-national non-communicable diseases unit.				
Strengthening and/or establishing NCD case teams at all levels including: federal, regional, zonal and Woreda	Focal persons on NCDs at all levels	2020	FMOH, RHB, WoHO	Activity report
Staff NCD offices with employees that demonstrate expertise for the position,	Number of Staff at all levels working on NCDs	2019-2025	FMOH, RHB, WoHO	Activity report
Ensure NCD offices are allocated a working budget to perform responsibilities	Adequate Budget allocated on NCDs and Risk factors	2019-2025	FMOH, RHB, WoHO	Activity report
Build capacity for NCD case team members among all levels of program management	Trained staff at all levels	2019-2025	FMOH, RHB, WoHO	Activity report
Priority Initiative 3: Develop and revise the national strategic action plan for the prevention and control of non-communicable diseases.				
Finalize the NCD	NCDs and Risk			Strategy

strategic Plan and ensure its endorsement into the next HSTP.	factors include in HSTP2	2019/2020	FMOH, RHB, WoHO	document
Support the RHBs, Zones and WoHO to develop their own strategic action plan on NCDs and Risk factors	NCD strategic plans available at Regional, Zonal and Woreda level	2019/2020	FMOH, RHB, WoHO	Strategy document
Priority Initiative 4: Establish Multisectoral Coordination Mechanism for prevention and control of NCDs and Risk factors at National and Regional levels.				
Establish multisectoral steering committee for prevention and control of NCDs and risk factors	Steering committee established	2019-2020	PM Office, FMOH, Sectoral Ministries	Steering committee minutes
Coordinate development of Multisectoral Action Plan (MSAP)	Multisectoral Action plan developed	2020	FMOH, Sectors	Multisectoral response action plan
Implementation of MSAP on NCDs and risk factors	Policies and regulations enforced	2020-2025	FMOH and sectoral Ministries	Reports of actions
Mobilize financial and technical resources for prevention and control of NCDs	Resource mobilized	2019-2025	FMOH, NCD case team, NTWG, development partners	Activity reports
Priority Initiative 5: Set up a national and sub national NCDs Advisory group and technical taskforce.				
Establish NCD TWGs at all levels to facilitate implementation of NCD Program	Federal, Regional, Zonal and Woreda Level TWGs established and functional.	2019-2025	FMOH, RHBs, ZHDs and WoHO	Activity reports

PRIORITY AREA 2: HEALTH PROMOTION, PREVENTION AND RISK FACTOR REDUCTION

Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
Strategic Objective: To empower individuals, families and population at large to help protect themselves from risk factors and promote for enabling conditions (legislative, regulatory, policy and taxation) that would facilitate target audiences adopt healthy lifestyle behaviors				
Priority initiative 1: Health promotion and disease prevention by increasing public awareness and education.				
Develop communication strategy and health education modules on NCDs, and risk factors	Communication strategy developed, health education module developed	2019	NCD case team, intersectoral task force	Activity reports, developed strategic document/s
Conduct Social and Behavioral Change Communication (SBCC) through print and electronic media	Number and type of SBCC materials and activities	2019 - 2025	NCD case team, intersectoral task force	Activity reports
Raise awareness among policy makers, senior managers and health workers, on the burden of NCDs and their risk factors.	Number of health education, awareness raising and advocacy campaigns for policy makers and donors	2019-2025	FMOH, RHBs, WoHO	Activity report
Health education by health workers in all health facilities including at the primary health care setting on NCDs and their risk factors	Number of health education at HFs	2019 - 2025	NCD case team	Activity reports, number and type of health education sessions
Health education using HEWs and HDAs at the household and community level	Number of health education by HEWs and HDAs	2019 - 2025	NCD case team	Activity reports, number and type of health education sessions
Awareness raising on NCDs and risk	Number of health education, awareness raising	2019 - 2025	FMOH, RHB, WoHO	Activity reports, number and type of health

factors in work places.	campaigns in Work places			education sessions
Awareness raising and education on NCDs and NCD risk factors in school and among targeted out of school children	Type and number of health promotion activities	2019 - 2025	NCD case team, intersectoral task force	Activity reports, number and type of health education sessions
Priority Initiative 2: Promoting Healthy Diet				
Develop and disseminate national dietary guideline	National dietary guideline developed	2020	NCD case team	Guideline, Activity report
Incorporate nutrition program within the school health initiative	NCDs nutrition integrated	2019	NCD case team	Activity report
Raise public awareness regarding benefits of physical activity, vegetable and fruit consumption and healthier lifestyle using all available communication tools	Type and number of awareness sessions	2019 - 2025	NCD case team, intersectoral task force	Activity reports, number and type of health education sessions
Priority Initiative 3: Promoting Physical Activity				
Promote mass sport including competitive sporting	Sporting events per annum	2019 - 2025	FMOH, Inter-ministerial taskforce	Activity reports
Promote walking and cycling in urban residential areas	Enabling walking and cycling environment created	2019 - 2025	FMOH, Inter-ministerial taskforce	Activity reports
Promote physical activity in the community, private and public institutions, workplaces, health facilities	People engaged in physical activity, work place physical activity facilities	2019 - 2025	FMOH, Inter-ministerial taskforce	Activity report
Priority Initiative 4: Reduce Harmful Use of Alcohol				
Update/develop and enforce policies regarding promotion	Policy/directive developed, implemented	2019-2025	FMOH, Inter-ministerial taskforce	Activity report

and sponsorship of alcoholic beverages				
Raise public awareness initiatives and legislations on alcohol production, distribution, taxation and health hazards using all available communication tools	Type and number of awareness sessions	2019 - 2025	NCD case team, intersectoral task force	Activity reports, number and type of health education sessions
Priority Initiative 5: Tobacco Use reduction				
Support EFDA in implementation of the WHO FCTC	FCTC implemented, Tobacco proclamation endorsed	2019-2025	EFDA	Activity reports
Raise public awareness regarding initiatives and legislations on tobacco production, distribution, taxation and health hazards using all available communication tools	Type and number of awareness sessions	2019 - 2025	NCD case team, intersectoral task force	Activity reports, number and type of health education sessions
Priority Initiative 6: Reduce Local Production, Distribution and Use of Khat				
Legislation/directive to regulate in domestic distribution, sale and use of khat	Legislation/directive developed and implemented	2020	Intersectoral taskforce/EFDA	Activity reports
Raise public awareness regarding initiatives and legislations on khat production, distribution, taxation and health hazards control using all available communication tools	Type and number of awareness sessions	2019 - 2025	NCD case team, intersectoral task force	Activity reports, number and type of health education sessions
Priority 7: To promote interventions to reduce exposure to environmental, occupational, genetic and biological risk factors				
Strengthening the implementation of	✓ legislations and policy areas	2019-2025	FMOH, Intersectoral	✓ Number of legislations

the legal frameworks, policies, standards and guidelines to reduce exposure to environmental, biological and occupational risk factors to protect populations from environmental contaminants and occupational hazards that predisposes to NCDs	developed ✓ guidelines documents developed		task force	and policy areas developed ✓ -Number of guidelines documents developed
Initiate and promote programs aimed at protecting and reducing exposure to risk factors for NCDs at the workplace, public and home environment	Programs aimed at protecting and reducing environmental exposure initiated	2019-2025	FMOH, Intersectoral task force	- Number of work place programs - Number of Public programs - Number of home programs
Create public awareness on prevention and control of exposure to environmental, biological and occupational risk factors on NCDs	✓ IEC materials developed ✓ Awareness campaigns on held	2019-2025	FMOH, Intersectoral task force	-Number of awareness campaigns carried out -Number of IEC materials developed -Number of IEC materials disseminated -Number of sensitization meetings held
Priority Initiative 8: Primary and Secondary Prevention of Rheumatic Heart Disease				
Support introduction and scale up registered based tonsillo- pharyngitis treatment and antibiotic prophylaxis for RHD	Number and type of guidelines/protocols and training/teaching materials developed, number of facilities providing services	2019 - 2025	NCD case team, clinical services directorate	Activity report

PRIORITY AREAS 3: COMPREHENSIVE AND INTEGRATED SCREENING, DIAGNOSIS, TREATMENT, CARE AND SUPPORT FOR MAJOR NCDS AND THEIR RISK FACTORS

Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
Strategic Objective: The main goal of this priority area is to detect diseases at an early stage in order to be able to initiate prompt care and treatment				
Priority initiative 1: Ensure the availability of diagnostic, treatment and care services for major non-communicable diseases (CVD, CRD and Diabetes) and their risk factors				
Adapt or develop Guidelines, protocols, training materials, provider support tools, client education materials, recording and reporting tools	Number and type of guidelines training materials and protocols developed	2019 – 2025	FMOH, RHBs, development partners, NTWG	Activity report
Priority initiative 2: Develop and/or increase capacity of the Human Resource for NCDs Service delivery				
Ensure the availability of the required human resources at all level of the health care delivery system for NCDs and risk factors screening, diagnosis, treatment and care.	Multidisciplinary team established	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Training of the multidisciplinary team on the standards of NCD and risk factor prevention and care	Number of HCWs trained	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Strengthen referral linkages and mentoring networks	Number of HCWs supported through mentoring	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Priority initiative 3: Improve and expand the Infrastructure, Diagnostics, Medical Supplies and Technologies for NCD services				
Ensure health facilities fulfill minimum standards to deliver NCD and risk factors clinical and rehabilitative care	Proportion of HFs fulfilling optimal standards for care	2019 – 2025	FMOH, RHBs, Woredas	Activity report

Define the components of essential medicines, medical instruments, drugs, laboratory supplies and reagents for NCDs and risk factors in the Ethiopian setup	Essential medicines, instruments, laboratories identified and defined for NCDs and risk factors in Ethiopia	2019	FMOH, RHBs,	Activity report
Ensure continuous and sustainable availability of essential medicines for NCDS and risk factors	Number of HFs with essential medical instrument	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Ensure continuous and sustainable availability of essential medical instruments for NCDS and risk factors	Number of HFs with essential medical instrument	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Ensure continuous and sustainable availability of essential laboratory machines for NCDS and risk factors	Availability and accessibility of tests	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Ensure continuous and sustainable availability of essential laboratory supply and regents for NCDS and risk factors	Adequate and regular procurement and distribution	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Establish Lab Quality assurance system	Number and type of lab quality assurance reports	2019 – 2025	FMOH, RHBs, Woredas	Activity report
Work with EPSA, RHB and WoHO to avail essential medicines, and technologies in timely and uninterrupted fashion	Availability index for essential NCD medicines	2019 – 2025	NCD case team, EPSA	Activity reports
Strengthen the health insurance system to increase population coverage and service coverage	Health insurance coverage	2019-2025	FMOH, MOLSA	Activity Report, Surveys

PRIORITY AREA 4: RESEARCH, MONITORING AND EVALUATION

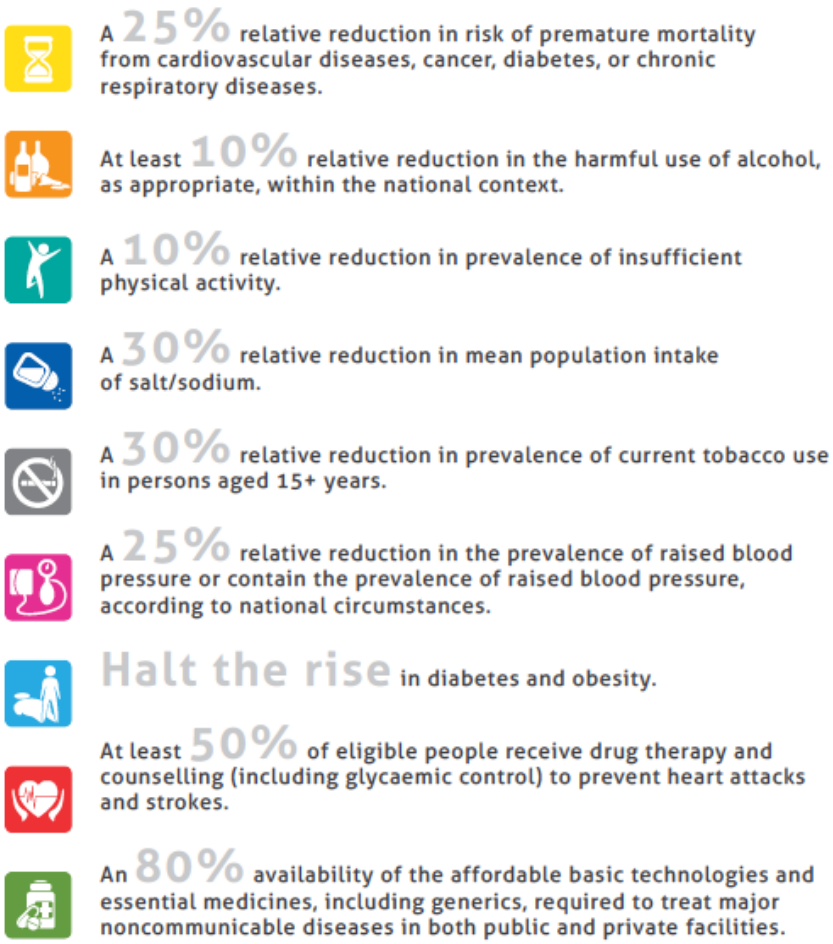
Activities	(Indicator)	Time frame	Responsible body	MOV (Data Source)
Strategic Objective: **To generate empirical evidence on the pattern, trends and determinants of non-communicable diseases and their risk factors and monitor progress towards attainment of the strategic objectives.**				
Priority Initiative 1: Integration of NCDs surveillance and monitoring system into the National Health Management Information system				
Incorporate key indicators on major NCDs into the revised HMIS	Key Indicators included in HMIS	2019	FMOH/PPD	NCD Indicators
Modify existing registers and develop follow up charts for NCDs	Number of modified NCD registers	2019	FMoH/PPD	NCD registry
Integrate NCD progress monitoring into the annual health sector review	Integrated monitoring of program	2019	FMoH/PPD	Activities report
Integrate supportive supervision of NCDs program into monitoring and evaluation of health programs	Integrated supportive supervision	2019-2025	FMoH/PPD	Activities report
Integrate assessment of the availability of generic NCD medicines into the national service provision assessment	the availability of generic NCD medicines in facility	2019-2025	FMoH/PMED	Activities report
Priority Initiative 2: Disease Registries, Surveillance and Research on NCDs and Risk factors				
Assess the level of adult mortality through sampled vital registration system	Vital registration in all Kebeles/Districts in Ethiopia	2019-2025	VERA/CSA	Annual Report
Conduct verbal autopsy in sentinel sites	verbal autopsy conducted	2019-2025	FMoH/RHB	Activities report
Establish health facility-based CVD, DM, RHD, CRD registries.	Developed register	2019-2025	FMoH/RHB	HMIS

Conduct WHO Stepwise survey on major NCDs	NCD Risk factors STEPS survey	2020, 2025	FMoH/EPHI	Activities report
Set research agendas on NCDs, risk factors and interventions and support researches conducted	Priority research agendas identified, researches conducted	2019-2025	FMOH, EPHI, AHRI	Number of research publications

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 3: Global Voluntary NCD Targets by 2025



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