

THE STATE OF ERITREA

Ministry of Health



NATIONAL MULTI-SECTORAL STRATEGIC PLAN FOR NON-COMMUNICABLE DISEASES (NCDs)

2019-2023

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FOREWORD

The large burden encountered on the population`s economies, health systems and societies of countries is by non-communicable diseases (NCD) such as Cardiovascular Disease (CVD), Cancer, Chronic Respiratory Disease (CRD), Diabetes and Mental ill-health. These diseases and their related complications generate a real and significant threat globally and to Eritrea.

In the health sector, Eritrea has made remarkable and exemplary progress regarding the Millennium Development Goals (MDGs) and targets. Eritrea is one of the three Sub Saharan African countries which achieved MDG 4. The infant mortality rate (IMR) dropped from 72/1000 live births in 1995 to 42 and under-five mortality (U5MR) is 65 deaths per 1,000 live births in 2010 from a level of 136/1000 in 1995. The successes are mainly attributed to efforts of Ministry of Health (MOH) and its partners in the areas of malaria control, control of vaccine preventable diseases and improvement in prevention and case management of the main childhood killer diseases.

In the area of non-communicable diseases, although lots remain to be done, the Ministry of Health is exerting its efforts in the provision of care to patients, with the establishment of dedicated NCD services including NCD corners in all health facilities & NCD clinics in health centers and above levels in all Zones.

This strategic plan has considered the successes already achieved in the health sector, the global focus on non-communicable diseases, the Brazzaville declaration on prevention and control of Noncommunicable diseases in the WHO African region, the political declaration on NCDs, World Health Assembly resolutions on NCDs, the WHO Global NCD Action Plan 2013-2020 and the global NCD monitor. In addition, it has given attention to the NCD goals and targets set in the sustainable development goals (SDGs) as well as the global strategy of the universal health coverage.

This developed strategic plan of action will be integrated with the already tested, accepted & introduced WHO-PEN strategic intervention guidelines and protocols at all health service levels for early detection of Major NCDs, their risk factors and managing them. I feel confident that this strategic plan will serve as a guidance & path for prevention & control of the NCDs and their risk factors for the coming five years.

Amina Nurhussien
Minister of Health

List of Acronyms

BCC	Behavioral Change Communication
CHW	Community Health Worker
CT Scan	Computerized Tomographic Scan
CVDs	Cardio Vascular Diseases
CRD	Chronic Respiratory Disease
COPD	Chronic Obstructive Pulmonary Disease
DPH	Department of Public Health
DM	Diabetes Mellitus
ECG	Electro Cardio-Gram
FCTC	Framework Convention on Tobacco Control
HF	Health Facility
HIV/AIDS	Human Immuno Deficiency Virus/Acquired Immuno Deficiency Syndrome
HMIS	Health Management Information System
HQs	Head Quarters
HRB	Health Risk Behaviors
HSSDP II	Health Sector Strategic Development Plan II
IDSR	Integrated Disease Surveillance and Response
KAP	Knowledge, Attitude and Practice
MoE	Ministry of Education
MoH	Ministry of Health
MRI	Magnetic Resonance Imaging
NCDs	Non-Communicable Diseases
NGOs	Non-Governmental Organizations
PFDJ	People`s Front for Democracy and Justice
RHD	Rheumatic Heart Disease
SWOT	Strength, Weakness, Opportunity and Threats
ToT	Training of Trainers
WHO-PEN	World Health Organization Package of Essential Non Communicable Disease
WHO	World Health Organization

Executive Summary

The large burden imposed on the population`s economies, health systems and societies of countries by non communicable diseases (NCD) such as Cardiovascular Disease (CVD), Cancer, Chronic Respiratory Disease (CRD), Diabetes and Mental ill-health requires an investigation for more effective strategies to compact with problems at international, national and local levels.

Many health systems are fragmented, dealing with specific disease entities or with individual determinants or modifiable risk factors such as tobacco use, alcohol abuse, unhealthy nutrition and reduced physical activity. Similarly, despite the need for integrated action to be undertaken against Major Chronic Diseases throughout a person`s full life span, there is a lack of coordination between technical programmes at international level.

Sound advice on how to address a major health problem is extremely important in view of the limited resources in the nation. This advice should be evidence-based, i.e. based on sound theory and good practice, with a realistic possibility of adapting existing scientific knowledge and experiences to the local needs and capacities of such health systems.

This strategic plan will serve as a guidance & path for prevention & control of the devastating behavioral health risk & the diseases caused as a result for the coming five years of Major Non-Communicable Diseases (MNCD) interventions. This developed strategic plan of action will be integrated with the already tested, accepted &introduced WHO-PEN strategic intervention guidelines and protocols at all health service levels, especially for low level settings, for early detection of MNCDs, their risk factors and managing them.

1. Background Information

Eritrea is situated in the Horn of Africa and lies North of the equator between latitudes 12°22' N and 18°02' N, and longitudes 36°26' 21" E and 43°13' E. It has an area of 124,000 square kilometers and is bordered by the Red Sea to the east, Djibouti to the southeast, Ethiopia to the south, and the Sudan to the north and west. Administratively, Eritrea is divided into six zobas (regions): Anseba, Debub, Debubawi Keih Bahri, Gash-Barka, Maekel, and Semenawi Keih Bahri, and 58 sub-zobas (sub-regions) (NSEO 2013; MOH, 2012).

A complete population census is pending. However, based on the Eritrean Population and Health Survey (EPHS) conducted in 2010, the National Statistics Office (NSO) estimates Eritrea's resident population in 2016 as 3.75 million. It is estimated that the population under 15 years constitutes 47% percent while the population 65 years and above accounts only 7% percent of the total population. The population is essentially rural with about 65% percent living in the countryside.

Over the past few years, Eritrea has witnessed significant improvements in life expectancy and in some of the key health impact targets, in particular adult mortality, Infant mortality and Child mortality, and maternal mortality. Life expectancy at birth has significantly improved from 49 years in 1995 to 64.7 years in 2015, a rate higher than the African region average. (Source: HSSDP II)

Maternal mortality has significantly reduced, from 1,590 per 100,000 live births in 1990 to 501 in 2015, which is projected to 485 deaths per 100,000 live births in 2016, with an estimated annual rate of reduction of 4.6%. Commendable progress has also been attained with child survival, with an annual rate of reduction of under 5 mortality from 1990 – 2016 at 4.8%. Looking at specific contributors to disease burden, there have been improvements in the incidence, prevalence and mortality due to HIV TB and Malaria. There are also successes in other areas of service provision, like reduction of Female Genital Mutilation and increased EPI coverage for Penta and Measles, consistently more than 90%. Also in the area of hygiene and sanitation successes are reported with already 695 (26.1%) of the 2,666 rural villages in the country having been declared "Open Defecation Free". There are however emerging issues related to communicable and non-communicable conditions like diabetes, hypertension, cancers '(According ICD 10 code). One of the key cross cutting intervention that should be focused by the health sector is the high rates of malnutrition. According to series of EPHS surveys; it is found to be consistently on the increase.

The Major Chronic Diseases including Cardio-vascular diseases, Cancer, Chronic Respiratory Diseases & Diabetes and their related complications generate a real and significant threat to Eritrea responsible for 51.7% of all deaths. In this area, the Ministry of Health is exerting its efforts in the provision of care to patients, with the establishment of dedicated NCD service including NCD corners in all health facilities & NCD clinics in health centers and above levels in all Zones. However, the gaps are still very wide that need further interventions.

Eritrea recognizes that the persistent communicable diseases and the growing burden of NCDs will need to be addressed comprehensively. Thus, Eritrea has identified the following principles and values:

- Strengthen community based health services;
- Bring facility-based services closer to the people;
- Create ownership and participation;
- Strengthen decentralized governance structures;
- Improve efficiency, equity and quality of care of health services
- Strengthen health sector coordination to enable better participation of all actors whether public or private;
- Creating partnership and multi-sectorial approach

2. Over View of the Situation

NCDs, also known as chronic diseases, are of long duration and the result of a combination of genetic, physiological, environmental and behaviours factors. Chronic diseases (WHO, 2005a), are identified as “Group II Diseases” a category based on ICD-10 code.

Throughout the world, human health is being shaped by the same powerful forces: rapid urbanization, demographic situations/ageing, and the globalization of unhealthy lifestyles. It is also strongly influenced by social determinants of health, such as income, education, employment and working conditions, ethnicity, and gender. Thus, NCDs are both a complex public health matter and a challenge to economic development. They call for intervention on the part of the health sector as well as other government & Non-governmental sectors, civil society and the private sector.

(Reform this sentence) One of the most striking examples of this shift is the fact that Major Non-communicable Diseases such as cardiovascular disease, cancer, diabetes and chronic lung diseases have

overtaken infectious diseases as the world's leading cause of mortality. They are predominantly caused by a set of common risk factors; these include tobacco use and exposure to second hand smoke, unhealthy diet, physical inactivity, obesity, and harmful use of alcohol, among others.

The global burden and threat of non-communicable diseases constitutes a major public health challenge that undermines social and economic development throughout the world, and inter alia has the effect of increasing inequalities between countries and within populations. According to the WHO 2018, Non communicable diseases or NCDs are by far the leading cause of death in the world, representing near 71% of all annual deaths. These diseases (NCDs) kill about 41million people each year. Some 85% of all NCD deaths occur in low- and middle-income countries¹

- In 2015, an estimated 40 million deaths occurred due to NCDs, accounting for 70% of the overall total of 56 million deaths. The majority of such deaths were caused by the four main NCDs, namely: cardiovascular disease, 17.7 million deaths (accounting for 45% of all NCD deaths); cancer, 8.8 million deaths (22%); chronic respiratory disease, 3.9 million deaths (10%); and diabetes, 1.6 million deaths (4%). The risk of dying from any one of the four main NCDs between ages 30 and 70 decreased from 23% in 2000 to 19% in 2015.
- They affect people in low- and middle-income countries where more than three quarters of global NCD deaths – 32million – occur.
- These four groups of diseases account for around 82% of all NCD deaths.
- 4 out of 5 of NCD deaths occur in developing countries.
- They share four risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets.

In terms of attributable deaths, the leading NCD risk factor globally is raised blood pressure (13%), followed by tobacco use (9%), raised blood glucose (6%), physical inactivity (6%), and overweight and obesity (5%). Diabetes accounted for 0.4% of morbidity and 3.1% of total reported deaths in 2014.

If present growth trends are maintained, by 2020, NCDs will attribute to 7 out of every 10 deaths in developing countries.

¹WHO.Global status report on non-communicable diseases 2014. World Health Organization 2014

The world's poorest countries can gain US\$350 billion by 2030 by scaling up investments in preventing and treating NCDs, like heart disease and cancer that cost an additional US\$1.27 per person annually. Such actions would save more than 8 million lives over the same period.

As is the case with the rest of the world, according to World Health Organization – Noncommunicable Diseases Progress Monitor 2017, in Eritrea Non-communicable Diseases are continuously coming to the picture of the leading causes of morbidity and mortality although the major burden is still infectious diseases and nutrition problems. The NCDs are estimated to account for 42% of total deaths in Eritrea and the probability of dying between ages 30 and 70 years from the 4 main NCDs is 25%.

Proportional NCDs mortality in percentage of total deaths, all ages and both sexes in Eritrea is mainly due to cardiovascular diseases (14%), cancer (6%), chronic respiratory diseases (2%) and diabetes (2%). (According ICD 10 code).

According to HSSDP II, the percentage of total deaths, under 70 years, in both sexes in Eritrea is mainly due to cardiovascular diseases (37%), cancer (27%), chronic respiratory diseases (8%) and diabetes (4%). As it is stated in the table below, Heart diseases (11.2%) is the first cause of death, stroke (5.7%) seventh cause of death & Diabetes Mellitus (5%) ninth cause of death. They are among the ten leading causes of mortality in Eritrea.

Table1. Ten Leading Causes of Mortality of all ages in health facilities. Source: MOH HMIS report, 2017

S.N	Disease type	No. deaths
1	Heart diseases	207
2	Pneumonia, all types	206
3	Other causes	119
4	Injury all types	118
5	Septicemia	117
6	Malnutrition all, types	101

7	Stroke, not spec.Ashaemmorhage/ infarction	78
8	Diabetes mellitus	70
9	Diarrhoea all forms	68
10	Other liver disease	67
	Total	1151

A study on Knowledge, Attitudes and Practices (KAP) done on diabetes and CVDs and their risk factors in 2010 in Eritrea showed that more than two thirds of the smokers were persuaded into smoking and alcohol drinking by friends. About one quarter of diabetics and hypertensive's regularly took high amounts of alcohol. Knowledge about hypertension and diabetes was poor with less than 10% of the population recognizing common (not applied for hypertension) of these two diseases, their risk factors and their usual complications.

The magnitude of the CVDs and diabetes burden and their risk factors in Eritrea has largely been quantified in the 2010 NCD survey which documented a prevalence rate of 15.2 % for hypertension, 5.2 % with raised fasting blood glucose and 36.9 % with raised total cholesterol and 2.2 % for tobacco use.

As indicated in figure 1, according to the NHMIS data documented from 1998-2016, all major non-communicable diseases had an increment pattern starting from 1998 even though heart diseases & hypertension showed a reciprocal trend on the past ten years.

Fig. 1 National morbidity data for Major Non-communicable Diseases 1998-2016. Source: NHMIS 2016.

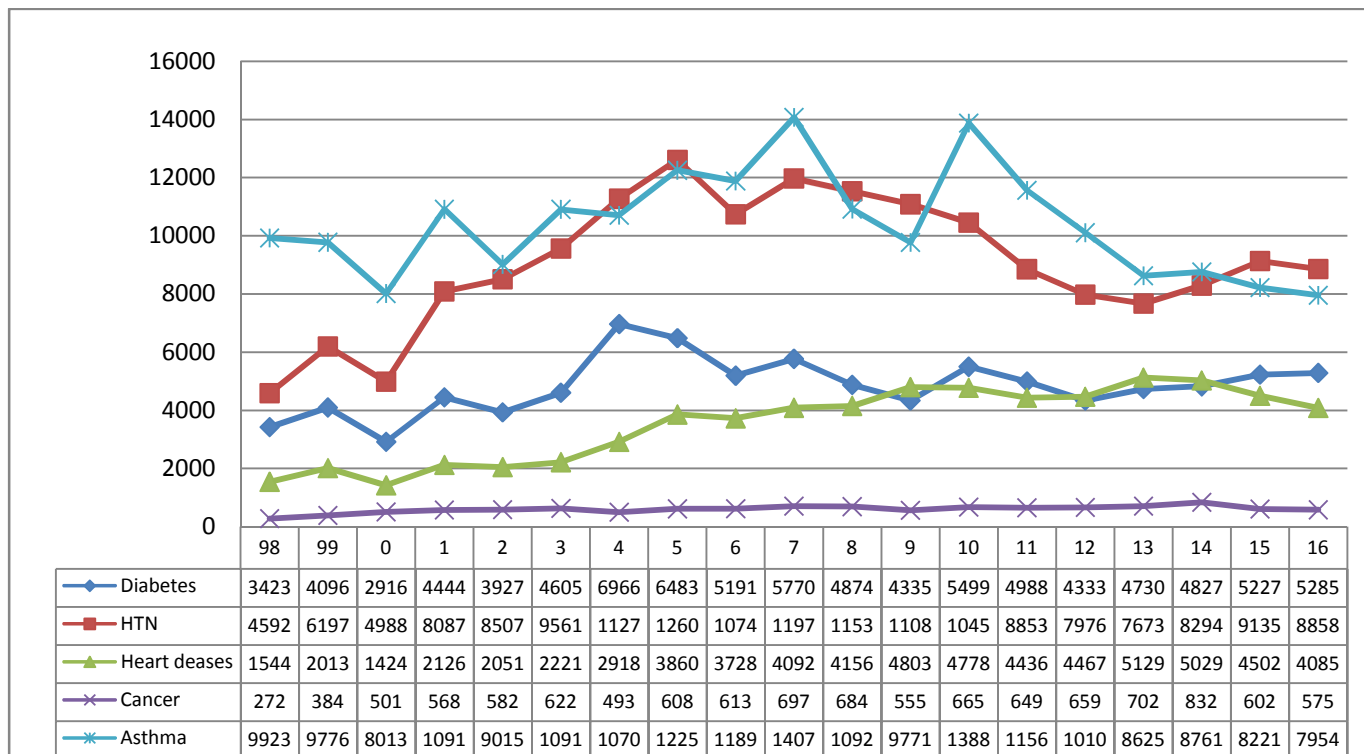
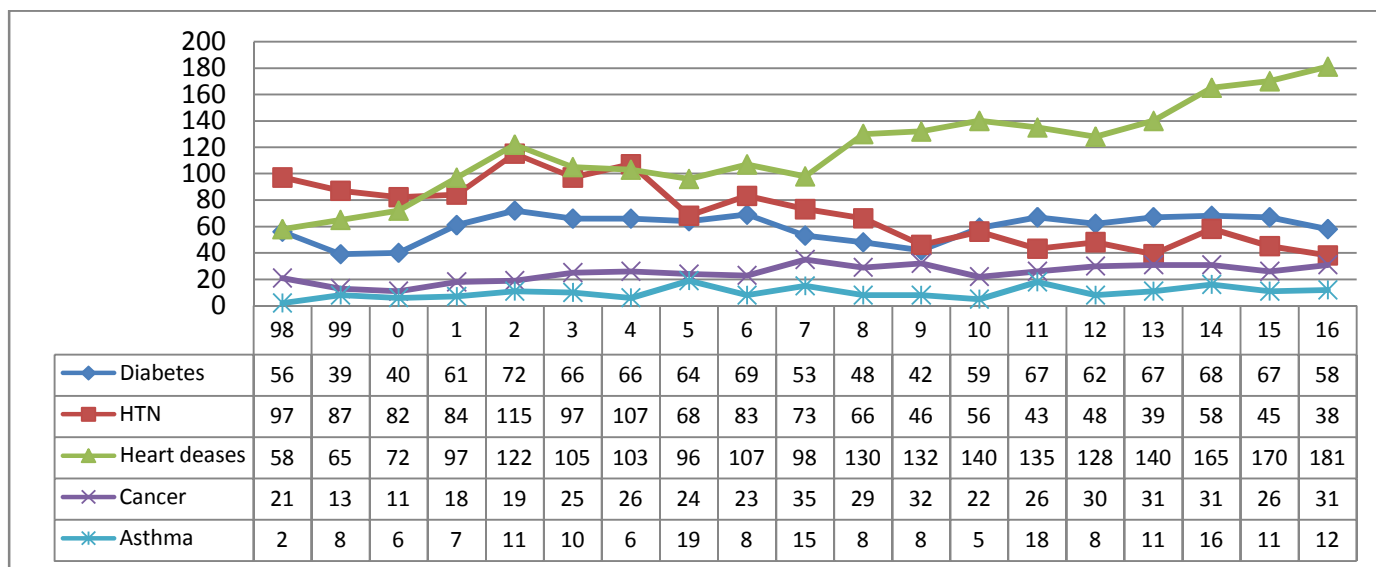


Fig. 2. Represents the overall mortality trend of the past eighteen years health facility records. It can be observed that death due to heart related problems is increasing in a fast & dramatic way yearly.

Fig. 2 National mortality data of Major Non-communicable disease, 1998-2016. Source: NHMIS 2016.



The HSSDP 2 has defined as its goal, the provision of essential quality health and related services efficiently and equitably available to all Eritreans, in line with their specific individual and communal health needs.

The health sector in Eritrea at the end of 2016 functions with a network of 28 hospitals (27 public and 1 private), 56 health centers and 256 health stations (including clinics and MCH facilities).

During the last years, many activities have been done to prevent, control, cure and also on the challenges of behavioural risk factors. The Ministry of Health in collaboration with the World Health Organization in Eritrea has introduced, adopted and tested the WHO PACKAGE FOR ESSENTIAL NCD (WHO-PEN) intervention in 2012. The tool was recognized as a working package to integrate NCDs in the Primary Health Care especially in the lower setting health care facilities. According to the activity reports from all the Zones in 2017, there are 139 NCD corners established in public and private of the lower health care facilities & working with the minimum resource to the communities in their catchment areas.

The global health agenda has continued to evolve, in line with key changes in the way people live, work and interact, leading to changes in the understanding and management of health. There is currently an unprecedented level of interaction amongst different people, with both benefits and risks associated with their health. This interaction has allowed the definition of 17 Sustainable Development Goals (SDGs) with 169 targets that countries will aspire to attain and address issues to do with them by 2030. The SDG 3 is a Health goal, which states “Ensure healthy lives and promote well-being for all at all ages”, in addition to addressing the unfinished MDG and expanded agenda as well as their means of implementation. It gives more emphases on NCDs namely: to reduce mortality from NCDs, strengthen prevention and treatment of substance abuse, reduce deaths and injuries from road traffic accidents, strengthen the implementation framework convention on tobacco control etc.

On the other hand, the Universal Health Coverage (UHC) focus aims to ensure countries are able to:-

- (i) Identify and plan to make available the full range of essential health and related services that their populations require,
- (ii) Progressively increase coverage with these essential health and related services by addressing access and quality of care barriers, and
- (iii) Progressively reduce the financial barriers that populations are facing when accessing these

essential health and related services till there is equity and financial risk protection in financing of services.

Eritrea has formally assented to these goals in its health sector development plan 2018-2022. Attainment of good health is goal 3 in the SDGs, with required health actions reflected across all the other SDGs.

SWOT Analysis

Strengths

- Governmental commitment to prevent & control the Major Non Communicable Diseases within the general health system.
- MNCD unit formed under the NCD division in the MOH
- Existence of some service delivery infrastructures for Diabetic patients and hypertension
- Availability of Policy, strategic plan, Protocol, guidelines etc for MNCD Prevention & Control;
- New strategic WHO-PEN protocol approach have WHO minimum standards for MNCD prevention & control
- NCD corner opening coverage is in progress in all HF of all Zones
- Functional NCD units with program managers were established in all Zonal branch of MOH.
- Revised organo-gram of the Ministry of Health which separate the MNCD Unit from other NCDs in the division with a specified human resource & at presence of Zonal NCD coordinators
-

Weakness

- Lack of adequate budget for the prevention & control of MNCDs
- Weak programme administration and management occasioned by HR shortage, and staff turnover at all levels of health system;
- Inadequate training program for staff capacity development including international courses;
- Low level of supervision & monitoring to the already established NCD corners
- Inadequate medical equipment & medical supplies for NCD corners & clinics
- Uncertainties of the NCD statistics data collected & reported from the Zones;
- Lack of reliable national census data
- Lack of skilled & WHO-PEN trained health workers and equipment for NCD diagnosis
- Inability to reach all population of Eritrea
- Low awareness of the general population about the concept of MNCDs
- Inadequate Coordination between the related programs, development partners and Governmental sectors.
- Lack of infrastructure to support physical activity, sports and proper nutrition development
- Relatively slow implementation of the proclamation of tobacco control

Opportunities

- Availability of technical support and to a lesser extent financial support for planning, implementation, monitoring & evaluation of MNCD programme mainly from the WHO
- Even though there is no much contacts established, Existence of civil society organizations (e.g. National Union of Eritrean Woman, National Union of Eritrean youth and students, People living with HIV associations, faith based organizations etc.)
- Ministry of information is collaborating on broadcasting the diseases & the NCDs risk factors through Doctors in studio & other ways.

Threats

- Inadequate partners that have interest on NCDs
- Increasing the availability of cigarettes & alcohol in quality & quantity in market

3. National multi-sectoral NCD Strategic plan

3.1 Introduction

The Health Sector Strategic Development Plan (HSSDP II) 2017-2021 is comprehensive and outlines Eritrea's strategies to improve the health of its people.

The sector vision and mission statements are as follows:-

Vision - *Improved health status, wellbeing, productivity and quality of life of the Eritrean people with an enabling and empowering environment for the provision of sustainable quality health care that is effective, efficient, acceptable, affordable and accessible to all citizens.*

Mission: *To promote and provide high quality promotive, preventive, curative and rehabilitative health care services to the Eritrean people.*

More countries are witnessing an increase in the burden of non-communicable conditions and their risk factors due to improving health and living conditions. Reductions in mortalities associated with many high priority diseases like HIV and Malaria is improving overall survival rates. Globalization and changing lifestyles are leading to more risky health behaviours that are fuelling a rise in non-communicable conditions. This burden is particularly related to four major non-communicable conditions and risk factors for which targeted policy actions are required (Table 2).

Table 2: Four main non communicable diseases share four common risk factors

		Major causative risk factors			
		Tobacco use	Unhealthy diets	Physical inactivity	Harmful use of alcohol
Major diseases	Heart disease and stroke	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Diabetes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Cancer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Chronic lung disease	<input checked="" type="checkbox"/>			

Source: World Health Organization NCD program

3.2 Scope of the National NCD multi-sectoral Strategic Plan

This National Strategic Plan for NCD is aligned with the Eritrean National Health Sector Development Plan II and the resolutions and mandates (especially targets & indicators) made by the World Health Organization.

Table 3. The nine (9) voluntary global targets of the Global NCD action plan 2013-2020.

Target NO	Tools by Targets	Percentage
Target 1	Reduce mortality from NCDs	25% relative reduction
Target 2	Reduce harmful use of alcohol	At least 10% relative reduction
Target 3	Reduce prevalence of physical inactivity	A 10% relative reduction
Target 4	Reduce salt intake	A 30% relative reduction
Target 5	Reduce tobacco use	A 30% relative reduction
Target 6	Reduce prevalence of raised blood pressure	A 25% relative reduction
Target 7	Halt the rise in diabetes and obesity	Halt the rise
Target 8	Provide drug therapy to prevent heart diseases	At least 50% of eligible people receive drug
Target 9	Provide essential medicines	An 80% availability

This strategic plan calls for concerted efforts in the prevention and control of NCD in Eritrea, with specific focus on Major NCD and their risk factors. It highlights the importance of creating a living environment that promotes and facilitates healthy choices for all Eritreans through Multi-sectoral collaboration and cooperation. Increasing health promotion and health education programme activities with changes in our environment can help the population to stand with the positive life style behaviors.

3.3 Definition of the main components of the NCD

3.3.1 Cardiovascular diseases (CVDs)

Cardiovascular diseases (CVDs) are the leading causes of mortality worldwide which comprises 17.7 million deaths, 45% of all NCD deaths in 2015.

In Eritrea the age standard death rate per 100,000 due to Cardio vascular diseases by sex was estimated 388 for men and 280 for women in 2012. These are a group of disorders of the heart and blood vessels and include:

- a. **Ischemic heart disease**– disease of the blood vessels supplying the heart muscle;
- b. **Cerebro-vascular Disease (Stroke and Transient ischemic attack)** – disease of the blood vessels supplying the brain;
- c. **Peripheral arterial disease** – disease of blood vessels supplying the arms and legs;
- d. **Rheumatic Heart Disease (RHD)**– damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria;
- e. **Congenital heart disease** – malformations of heart structure existing at birth;
- f. **Deep Vein Thrombosis (DVT) and pulmonary embolism** – blood clots in the leg veins, which can dislodge and move to the heart and lungs.

3.3.2 Hypertension

Hypertension or High Blood Pressure is medical condition in which there is a sustained elevation of blood pressure. This mainly occurs when there is a narrowed arterial blood vessel or increase of blood volume against vessel walls. The normal level for blood pressure is below 120/80. The increase of blood pressure as defined by WHO/ISH is shown in Table 4.

Table 4. WHO/ ISH Definition & Classification of Arterial Hypertension BP levels.

Category	Systolic BP (mmHg)	Diastolic BP (mmHg)	Treatment
Optimal BP	< 110	< 80	Life style promotion (LSM)
Normal BP	< 120	< 80	Life style modification
Pre-Hypertension	120-139	85 – 89	Life Style modification
Mild Hypertension	140-159	90 – 99	1 drug & (LSM)
Moderate >>	160-179	100 – 109	2 drugs & (LSM)
Sever >>	≥180	≥110	2 drugs & (LSM) & increase dose & change type
Malignant >>	> 180	> 130, and exudates, haemorrhage	Referral
Isolated Systolic Hypertension	≥140	< 90	2 drugs & (LSM)

Blood pressure between 120/85 and 139/89 is called pre-hypertension (to denote increased risk of hypertension) and a blood pressure of 140/90 or above is considered hypertension. The complications of hypertension include; heart attack, stroke, renal failure and blindness.

According to STEPs Wise survey conducted in 2010, the percentage of people with raised BP was 14.1% in 2010 (21.1% for men and 12.5% for women) and the percentage with raised BP on medication was 5.2%.

3.3.3 Cancer

Cancer is the uncontrolled growth and spread of cells. It can affect almost any part of the body. Many cancers can be prevented by:-

- Avoiding exposure to common risk factors, such as tobacco smoke,
- Consuming healthy diet,
- Avoiding excessive alcohol drinking &
- Practicing physical activities.

In addition, a significant proportion of cancers can be cured, by surgery, radiotherapy or chemotherapy, especially if they are detected early. The types of malignancies which have the premier value in the community are malignant neoplasms of Breast, Cervical, Lung, Liver, Esophagus, Prostate, Brain & Colon. There are also significant numbers of childhood malignancies such as leukaemia, brain tumour etc.

3.3.4 Chronic Respiratory Diseases

Chronic Respiratory Diseases are diseases of the airways and other structures of the lung. Some of the most common are Chronic Obstructive Pulmonary Disease (COPD), asthma, occupational lung diseases and pulmonary hypertension. In addition to tobacco smoke, other risk factors include air pollution, occupational chemicals and dusts and frequent lower respiratory infections during childhood. CRDs are not curable, however, various forms of treatment that help dilate major air passages and improve shortness of breath can help control symptoms and increase the quality of life for people with the disease.

3.3.5 Diabetes

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys, and nerves. Type 2 diabetes is the most common (90%) type of diabetes usually in adults, which occur when the body becomes resistant to insulin or doesn't make enough insulin. Diabetes (Type 1) is a chronic condition in which the pancreas produces little or no insulin by itself. For people living with diabetes, access to affordable treatment, including insulin, is critical to their survival.

There is an emerging global epidemic of diabetes that can be traced back to rapid increases in overweight, including obesity and physical inactivity. It is related to modifiable risk factors such as obesity or overweight, physical inactivity, and high-calorie diets of low nutritional value. Metabolic syndrome is characterized by the presence of pre-diabetes in conjunction with one other cardiovascular disease (CVD) risk factor (hypertension, upper body obesity or dyslipidemia).

4. Guiding Principles and Values

The provisions of the NCD multi-sectoral strategic plan shall be based on the following guiding principles and values:

- Commitment to the promotion of primary health care concept;

- Ensure affordability, accessibility and sustainability of effective services;
- Promotion of the involvement of the private sector and local NGOs in the prevention and control of NCDs;
- Promotion of inter-country, regional and global partnerships on NCD interventions to share responsibilities and resources for maximum impact;
- Empowerment of individuals and their communities through a participatory approach in the development and implementation of culturally sensitive behavioral change and disease management strategies
- Recognizing that policies in various sectors outside of the health sector have large impacts on healthy lifestyle, control of NCDs and coordination of national promotion activities.
- Promoting multidisciplinary and multi-sectoral policies and interventions aimed at promoting healthy lifestyle in the entire population
- Promoting equity by ensuring the provision of a minimum package of interventions that target the poor and hard to reach population groups as well as covering the special needs of all groups.
- Developing advocacy programs and tools using appropriately trained staff that is familiar with the culture and local conditions of the community
- Guiding and adjusting policy and program activities based on evidence based interventions.
- Integrating NCD preventive and control program within the existing public health system.

The National NCD strategic plan presents a way to increase the awareness of our population on improving risk behaviours and their medical interventions with the existing knowledge and current scientific evidence in reducing the burden of CVD, cancer, CRD and diabetes in Eritrea, while taking into account the national, social, cultural and economic context of Eritreans. It integrates the various frameworks, strategies and action plans addressing specific risk factors and particular diseases into a holistic and definitive approach to NCD prevention and control.

The modifiable behavioural & metabolic risk factors that shall be given more emphasis are:

- Tobacco
- Physical inactivity
- Unhealthy diet
- Alcohol
- Raised blood glucose
- Raised Blood pressure

- Overweight
- High Cholesterol level (hyper lipidemia)
- Stressors
- Other factors which influence the Non infectious diseases of major public health concern.

In achieving the Vision for Health and the Mission of the Ministry of Health, the activities carried out by the health sector shall be in line with the goals of the national health sector development plan & the Global NCD action plan 2013-2020. The Vision for Health empowers individuals, families and communities, emphasizes wellness and care as well as achieving an enhanced quality of life.

Table 5: Priority interventions for prevention & control of Non communicable diseases

Service Area	Priority Interventions	Indicator (Output)	2017	2019	2022	2023
Major chronic diseases	Capacity building for Health workers at health centre level.	% of Health workers Trained on WHO-PEN Protocol	30% (360)	60% (1080)	100% (2000)	-
	Develop & produce Health promotional materials	# of health facilities provided with IEC materials	200	250	350	-
	Establishment of NCD corners equipped with basic medical necessities	# of established well equipped NCD corners	90	130	190	210
	Promote healthy life style through school health program intervention.	# of schools with Trained students on tobacco reduction & promotion of physical activity.	0	75	125	150

Table 6: National NCD targets for 2023

SNO	Target for intervention	2010	2023
1.	Reduction of premature mortality from NCDs:	25%	23%
2.	Reduction in prevalence of current tobacco use(smoking & smokeless)	4.4%	4%
3.	Reduction in overall alcohol consumption (including hazardous and harmful drinking).	38.2%	33%
4.	Increase the feeding habit of fruits& vegetables at least once daily	0.2%	10 %
5.	Relative reduction in prevalence of insufficient physical activity.	17.7%	15%
6.	Reduce the number of Never measured their BP	42.2%	35 %
7.	Reduce the number of Never measured their blood sugar in adults	88.5%	80%
8.	Reduction of prevalence of Hypertension in adults	14.1%	13%
9.	Reduction of prevalence of diabetes in adults	4.7%	4 %
10.	Reduction of prevalence of RHD among children	5%	4.7 %
11.	Reduction of prevalence of Raised triglyceride >150mg/dl in adult	37.3 %	35%
12.	Prevalence of Raised cholesterol >190mg/dl in adult	36.9%	35%
13.	Overweight and obesity in adolescents (BMI 25, 30)	12.3%	11.7%

The overall Eritrea NCD current estimate mortality rate per 100,000 is 671 and the target for 2021 is 600. (Source: HSSDP II 2016)

5. Vision, Mission, General Objectives& Strategic Objectives

5.1 Vision:

A healthy and productive Eritreans free from preventable NCDs and their associated risk factors and disabling complications.

5.2 Mission

To promote healthy lifestyles and improve the physical and social wellbeing of individuals and communities by creating suitable environments which will prevent diseases and alleviate the burden from NCDs through multi-sectoral approach.

5.3 General Objective

The general objective of the NCD is to prevent or delay the onset of CVD, Cancer, CRDs and DM and their related complications and also to improve access to and quality of services on the management of NCDs, thus enhancing quality of life of the population, leading to longer and more productive life.

5.4 Strategic objectives

The main strategic objectives identified in the plan include:

- 1) To strengthen leadership and governance to accelerate country response for prevention and control of NCDs and their risk factors;
- 2) To promote the prevention & control of NCDs, their risk factors and underlying social determinants through people-centered primary health care interventions;
- 3) To strengthen the human and institutional capacities of health service for early detection, prevention, treatment, rehabilitation and palliative care for NCDs (man power& logistics);
- 4) To promote multi-sectoral action and partnerships for the prevention and control of NCDs;
- 5) Increase Patient Compliance;
- 6) To encourage research, monitoring and evaluation of implementation at the National & Zonal levels.

Strategic objective one: To strengthen leadership and governance to accelerate country response for prevention and control of NCDs

There is a need to strengthen leadership and governance for prevention and control of NCDs. The MOH has formed MNCD as a unit at national & zonal levels to combat the over growing morbidity & mortality trends in the country. Furthermore, this third strategic plan has been developed to strengthen & introduce new innovations: -

Key activities

- a. Establish NCD committees at national and zoba levels;
- b. Strengthen capacity of MOH to provide leadership and coordination for NCDs;

- c. Maintain main streaming of the prevention and control of non-communicable diseases into health programme;
- d. Develop and implement plans, standards, manuals and guidelines that promote physical activity, the production and consumption of healthy diets and restriction of harmful use of alcohol and tobacco.

Strategic objective two: To promote the prevention & control of NCDs, their risk factors and underlying social determinants through people-centered primary health care interventions.

Health promotion continues to play a pivotal role as an intervention in the prevention & control of the double burden of NCDs in Eritrea. It can be applied through community sensitization, Media and social marketing campaigns, distribution of promotional materials to promote healthy lifestyles and to increase knowledge and awareness of NCD risk factors. Workplace and community-based awareness raising campaigns programmes will be further expanded to empower individuals at high risk or with chronic diseases to develop health literacy, take on self-care responsibilities and become resources for themselves and others in disease prevention and management.

Key activities

- a. Implement public awareness programmes to promote healthy lifestyles;
- b. Comprehensively implement the WHO FCTC and its protocols and guidelines;
- c. Strengthen programmes to address NCD risk factors such as physical inactivity, unhealthy diet, tobacco use and harmful use of alcohol;
- d. Production and distribution of health promotional materials of different types for the diseases & their risk factors;
- e. Strengthening existing & train new CHW for NCDs on health promotion addressing the main NCD risk factors; Smoking, excessive alcohol intake, unhealthy eating and physical inactivity (other NCD modifiable risk factors will also be included);
- f. Intensifying media campaigns using television, radio and printed media of new approaches with all Eritrean ethnic languages,
- g. Strengthening of the School Health Programmes involving the teachers, families and communities education on promoting healthy life styles) for NCDs & their modifiable risk factors.

Strategic objective three: To strengthen the human and institutional capacities of health services for early prevention, detection, treatment, rehabilitation and palliative care for NCDs.

There is a need to continually improve the skills, knowledge and attitude of all health care personnel at all levels to deal with the challenge of chronic disease management. This can be done through continuous professional development training courses, conducted especially at the local level. Strengthen health

service institutions at all levels through providing basic equipment and materials, clinical practice guidelines and evidence-based decision support tools. This helps to ensure the appropriate and timely screening, diagnosis and treatment of chronic diseases.

Key activities

- a. Regular review and advocate for a wider spectrum of NCD drugs to the essential drug list;
- b. Strengthen health services and develop capacity of primary health care workers to be able to implement screening, prevention, control, treatment and rehabilitation of NCDs in an integrated manner according to National Guideline and scaling up of WHO-PEN including NCD corners in all health facilities & NCD clinics in health centers & above;
- c. Advocate for integration of NCDs into communicable disease control programs, family and community health programs;
- d. Ensure that all health facilities are equipped with the minimum clinical equipment and tools for assessment and management of NCDs & their risk factors;
- e. Establish specialized NCD centres such as Cardiac center, cancer center at National and Zonal levels;
- f. Develop standard operating procedures & treatment guideline for appropriate and quality clinical management of NCDs at different levels health facilities;
- g. Ensure effective screening and early detection to reduce cancer incidence and mortality especially cancer of the reproductive organs, Rheumatic Heart Diseases, gestational diabetes, Type one diabetes & others.
- h. Generate National NCD awareness week conducting through different activities.

Strategic objective four: To promote multi-sectoral action and partnerships for the prevention and control of NCDs;

Population-based lifestyle interventions require a ‘whole-of-society’ response. Political and community leadership, partnerships and community mobilization are essential to ensuring acceptance and popular support for NCD prevention and control. The people centered health care frame work promotes empowering communities and individuals to fully participate in health decision-making. This principle is particularly relevant in the control and prevention of chronic diseases especially for communities who are prone to the condition at all setting.

Key activities

- a. Multi-sectoral coordination as in strategic objective 1;
- b. Conduct joint stakeholders planning and implementation on thematic areas of NCDs;
- c. Hold periodic joint reviews, monitoring and evaluation;
- d. Conduct courses for media workers, particularly for TV/radio hosts & newspaper editors to promote health and counter misinformation;
- e. Promote multi-sectoral partnerships, international cooperation and encourage stakeholder participation in developing, implementing and evaluating NCD prevention and control interventions as well as resource mobilization;
- f. Conduct advocacy campaign for national and zonal partners, local community leaders and relevant others;
- g. Collaborate with the food producing, processing & distribution premises (including food factories and retailers) to increase the production and promotion of low fat, salt & sugar foods.

Strategic objective five: Increase Patient Compliance

Patients with chronic diseases play a major role in managing their diseases and influencing the level of control and outcome. It is important to establish partnership between patients and their families together with the health care teams. Self-management programmes reduces the severity of symptoms, improve confidence, resourcefulness and self-efficacy of patients with chronic diseases. The traditional role of patients as passive recipients of health no longer holds true.

Key activities

- a. Development & introduction of inter-personal health education (group therapy) programmes at all MOH & other private health care facilities;
- b. Development of self-guided intervention packages to help patients with NCD, risk factors and their families to monitor and manage their disease or condition;
- c. Ensure that all health facilities have an NCD Resource Centre (NCD clinics) staffed with appropriately trained NCD educators or suitably trained health care personnel and furnished with equipment, tools and HP/IEC materials;
- d. Make available glucose strips for self –monitoring of Blood Glucose Specifically for diabetes;
- e. Help patients to understand on health seeking behavior, general medical check- up, completing the full dose of prescribed medications & make recheck etc. Encourage patients for follow ups.

Strategic objective six: To encourage research, monitoring and evaluation at the National & Zonal levels.

In the course of implementing this strategic plan of action, the MOH will conduct regular supportive supervision, annual reviews and monitoring and evaluation. There will also be prevalence studies for both risk factors and chronic diseases (e.g. WHO STEP Survey) which provide critical information for priority setting and selection of specific population and clinical interventions.

Key activities

- a. Advocate for wider coverage of NCDs in NHIS (DHIS 2);
- b. Maintain & update NCD registries& reporting forms at all health facilities;
- c. Incorporate priority NCD researches in the national health research agenda;
- d. Strengthen human and institutional capacity for research on NCDs;
- e. Integrate NCD indicators into National Population Surveys;
- f. Dissemination and implementation of NCD research results;
- g. Conduct regular supportive supervision at all levels of HF in all Zones;
- h. Strengthen NCD surveillance system e.g. WHO-STEP survey & others.

6. Roles for key Governmental, Non-Governmental organization & private sectors.

The roles of other key Ministries& organization are outlined in the table below. They all have to be actively involved, both in creating policies and legislations to create a health promoting built environment and also in implementing the programmes to prevent and control NCD in Eritrea.

SNO	Ministry/Organization	Possible role in NCD prevention and control
1.	Ministry of Health	As key Ministry works for coordinating, organizing, planning, advocating, facilitating, monitoring the other Ministries, organization, stakeholders, NGOs etc.
2.	Ministry of Education/Commission for high Education	School-based NCD risk factor intervention programmes, enforcement of health-promoting environments, health education and promotion on NCD and NCD risk factors in schools, (teaching about Breast Self-Examination, smoking cession, harmful habit of alcohol use, RHD screening etc) include in its curriculum etc. Conduct research on the NCDs & their risk factors.
3.	Ministry of Information	Ensure the dissemination of relevant public health information to all stakeholders through appropriate means, Media campaigns on NCD

		prevention & control, regulation of advertisements on unhealthy food/drinks, in particular targeting children, smoking, alcohol etc. Advocate health messages timely.
4.	Ministry of Finance/Ministry of National Development	Allocate enough amount of fund for the prevention & control of Non Communicable Diseases & encourage NGOs to grant /fund;
5.	Ministry of Agriculture	Increase the availability of fresh vegetables and fruits at affordable prices to increase consumption habit of plant products.
6.	Ministry of Transport& Communication	Increase the access of Internet & other communication media to have a role to explore the new insight & scientific findings of health issues.
7.	Ministry of Trade & Industry	Develop guidelines, standards, issue & enforce the illegal importation of food, drinks, cigarette products & other health risk products entering through land, Sea & air ports to the State. Increase tax for the imported & control the edible, drinkable, product of the local industries; Decrease tax for the importation of bicycles, gym equipment, spare-parts etc. that promote physical activities,
8.	Commission of Sport & Culture	Encourage people to have the habit of exercise, provide a conducive environment, persuade people to use the cultural foods & drinks
9.	MOJ	Promote people on behavioral communication changes for health wise issue through Laws & legislation proclamation. Safeguard health of the population.
10.	NUEYS	Promote youth & students at their young age to have positive health attitude & abstain the negative health habits & encourage them to do early screening for all NCDs.
11.	MO Public Works	Develop guidelines that enforce the inclusion of space for physical activity as part of the criteria for permitting a construction of an infrastructure (schools, hotels, companies, etc.),
12.	NUEW	Promote females to know the early sign & symptoms of NCDs & specially breast, cervical, uterine cancers& encourage them to do early screening.

7. Summary Budget Breakdown - NCD strategic POA (USD)

SNO	Strategic objective	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Leadership & governance	0	825.81	825.81	825.81	825.81	3,303.23
2	Prevention & control	5,645.16	47,067.10	28,809.03	21,583.23	66,744.52	169,849.03
3	Institutional capacity strengthening	102,683.87	483,556.45	151,703.87	49,7931.29	151,703.87	1,387,579.35
4	Multi-sectoral action	1,855.48	3,094.19	3,094.19	3,094.19	3,094.19	14,232.24
5	Patient Compliance	0	3,870.97	6,451.61	3,870.97	6,451.61	20,645.16
6	Research, monitoring and evaluation	6,025.81	67,866.45	6,025.81	6,025.81	6,025.81	91,969.69
	Total	116,210.32	606,280.97	196,910.32	533,331.30	234,845.81	1,687,578.72 USD

8. Implementation frame work and budget for NCDs, in ERN.

Key Activity	Sub –Activities	Description of Cost Assumptions	2019 FY	2020 FY	2021 FY	2022 FY	2023 FY	Five Years Total cost in ERN
Strategic objective one: To strengthen leadership and governance								
a. Establish NCD committees at national and zoba levels,	Conduct orientation workshop for National & zonal committee for 15 participants for 2 days per year at national & all Zones	<ul style="list-style-type: none"> refreshments for 105 = 15X7 (1 national + 6 zones) participants at @ERN 60 for 2 days 	12,600.00	12,600.00	12,600.00	12,600.00	12,600.00	63,000.00
	Develop & distribute working guideline for committees to be used for the expansion of the activity	<ul style="list-style-type: none"> Copy 2 pages @ERN 2 X 100 copies 	400.00	400.00	400.00	400.00	400.00	2,000.00
b. Strengthen capacity of MOH to provide leadership and coordination for NCDs	Ensure continuous participation of NCD staff in capacity building trainings/workshops	-	0	0	0	0	0	0
c. Mainstreaming NCDs into health programmes	Ensure the integration of NCD programs into other health programs	-	0	0	0	0	0	0
Sub total			13,000.00	13,000.00	13,000.00	13,000.00	13,000.00	65,000.00
Strategic objective two: To promote the prevention & control of NCDs, their risk factors								
a. Develop and implement standards, manuals and guidelines that promote physical activity, the production and consumption of healthy diets and restriction of harmful use of alcohol	Develop, produce& distribute comprehensive MNCD Health worker training manual	<ul style="list-style-type: none"> Printing & coping of HW manuals 30 pages100 copies each @ERN2 refreshments for 200 participants @ERN60 for 1 day 	0	18,000.00	0	0	0	18,000.00
	Develop, produce& distribute comprehensive MNCD community health worker training manual (discussion guide)	<ul style="list-style-type: none"> Printing & coping of CHW manuals of 30 pages100 copies each @ERN2 refreshments for 200 participants @ERN60 for 1 day 	0	18,000.00	0	0	0	18,000.00
	Develop, produce& distribute training manual for MNCD educators	<ul style="list-style-type: none"> printing 200 manual of 20 pages each@ERN2 per page 	0	8,000.00	0	0	0	8,000.00
	Develop, produce& distribute comprehensive risk factor - alcohol guidelines	<ul style="list-style-type: none"> Printing & coping of the guidelines 5 pages100 copies each @ERN2 	0	0	13,000.00	0	0	13,000.00

		<ul style="list-style-type: none"> • refreshments for 200 participants @ERN60 for 1 day 						
b. Conduct community sensitization at all levels in all zones	Conduct community sensitization workshops for at least 200 community members for a day on quarterly bases at sub zonal level, and twice a year at zonal level and at national once a year	<ul style="list-style-type: none"> • Perdiem for 2 facilitators, 5 times per year@ERN120 X 7 (1 national + 6 Zones), 	8,400.00	8,400.00	8,400.00	8,400.00	8,400.00	42,000.00
c. Comprehensively implement the WHO FCTC and its protocols and guidelines	Continuous discussion & communication with higher officials to ratify the already proclaimed tobacco law & implement WHO FCTC at all levels	-	0	0	0	0	0	0
d. Strengthen programmes to address NCD risk factors such as physical inactivity, unhealthy diet, tobacco use and harmful use of alcohol	Equip the national NCD office with the necessary working logistics	<ul style="list-style-type: none"> • Laptop 1 @ERN 15,000 • LCD 1 @ERN 20,000 • A4 white paper 10 reams @ERN 1000 • Camera 1 @ERN5000 	0	36,500.00	0	0	0	36,500.00
e. Production and distribution of HP materials	Develop, produce and distribute HP brochures of different types for all Health facilities	<ul style="list-style-type: none"> • 5 different types of brochures each 50000 @ERN 1.50, 	375,000.00	0	0	0	375,000.00	750,000.00
	Develop, produce and distribute stickers & leaflets of different types for the diseases & their risk factors	<ul style="list-style-type: none"> • 50000 stickers @ERN 1, • 1000 posters @ERN 75, 	0	125,000.00	0	0	125,000.00	250,000.00
	Develop, produce and distribute posters & billboards of different types for the diseases & their risk factors	<ul style="list-style-type: none"> • 100 posters @ERN 500, • 10 Bill boards @ERN 5000, 	0	0	100,000.00	0	0	100,000.00
f. Strengthening existing & train new CHW for NCDs & their risk factors	Training of members of the community as community health workers (CHW), 20 participants for 5 days in all Zones per year	<ul style="list-style-type: none"> • Perdiem for 120 CHW for 7 days@ERN120, • hall rent for 5 days @ERN2000, • 120 note book & pen @ERN101 • refreshments for 120 CHW at @ERN60 for 5 days 	0	158,920.00	158,920.00	158,920.00	158,920.00	635,680.00

g. Intensifying media campaigns using television, radio and printed media	Develop media HP materials in video, audio & news paper, on MNCDs & their risk factors	Cost assumption for actors & art work	0	200,000.00	0	0	200,000.00	400,000.00
	Broadcast MNCD & their risk factors using television, radio and printed media and use of new approaches using all Eritrean ethnic languages, for 10 days once a year	<ul style="list-style-type: none"> • Broadcast cost TV spot @ERN2000 per minute for 2 minutes for 5days • Broadcast cost radio spot @ERN1800 per minute for 2 minutes for 5days 	38,000.00	38,000.00	38,000.00	38,000.00	38,000.00	190,000.00
h. Strengthening of the School Health Programmes	Sensitize 5000 students of secondary schools & college level on quarterly bases and at national level to promote healthy life styles as a major public health threat	<ul style="list-style-type: none"> • Perdiem for 2 HW @ERN120 for 1 day in 6 zones & national level 4 times a year, 	0	6,720.00	6,720.00	6,720.00	6,720.00	26,880.00
	Train 20 teachers twice a year in every zone & national level to raise awareness of the MNCD modifiable risk factors at schools	<ul style="list-style-type: none"> • Perdiem for 20 teachers for 2 days@ERN120, • hall rent for 2 days @ERN2000, • refreshments for 20 teachers at @ERN60 for 2 days in all zones & national level 	0	118,400.00	118,400.00	118,400.00	118,400.00	473,600.00
	Conduct screening of 400 students & orientation on RHD for selected Junior & secondary schools students on yearly bases	<ul style="list-style-type: none"> • Perdiem for 3 HW @ERN120 for 5 days per year 	3,600.00	3,600.00	3,600.00	3,600.00	3,600.00	18,000.00
I. Generate National NCD awareness week.	<ul style="list-style-type: none"> • Mass media advocacy campaign (Drs. at studio, specialists program, sharing experience, TV & radio spot, News paper etc.) • Use banners for diseases & risk factors awareness • Opportunistic screening for common NCDs (HPT & DM) at HF for free • Health education concerning NCDs & their risk factors for a week at HF • HP materials eg. Brochures distribution at HF, schools, factories, NGOs, etc. • Focused NCD screening eg. For HW 	<ul style="list-style-type: none"> • Communicate with higher officials to facilitate the national campaign • Extensive communication with MoI, • Produce banners, write News letter articles, • Inform HF to do the screening & Health education etc. 	0	0	0	0	0	0
Sub total			450,000.00	729,540.00	446,540.00	334,040.00	1,034,040.00	2,969,160.00
Strategic objective three: Institutional capacity strengthening through man power & equipment								
a. Regular	Conduct review meeting with the		0	0	960.00	960.00	960.00	2,880.00

review and advocate for a wider spectrum of NCD drugs to the essential drug list	national specialists (medical doctors) for 2 days per year	<ul style="list-style-type: none"> • refreshments for 8 participants for 2 days @ERN60 							
b. Human capacity building	Provide training of trainers for selected nationwide health workers on WHO-PEN & its protocol, for 20 H.W for 5 days	<ul style="list-style-type: none"> • Perdiem for 20 HW for 5 days @ERN530, • hall rent for 3 days @ERN2000, • refreshments for 30 HW at @ERN60 for 3 days 	62,600.00	62,600.00	0	0	62,600.00	125,200.00	
	Training of health workers at different levels for early detection, prevention, control & management (WHO-PEN), 490 participants for 7 days in all Zones per year	<ul style="list-style-type: none"> • Perdiem for 490 HW for 7 days @ERN400, • hall rent for 5 days @ERN2000, • refreshments for 490 HW at @ERN60 for 5 days 	1,529,000.00	1,529,000.00	1,529,000.00	1,529,000.00	1,529,000.00	7,645,000.00	
	Training of health workers as MNCD educators at health centre level on diabetes management for 60 participants for 7 days per year at national level	<ul style="list-style-type: none"> • Perdiem for 60 HW for 7 days @ERN530, • hall rent for 5 days @ERN2000, • refreshments for 60 HW at @ERN60 for 5 days 	0	250,600.00	250,600.00	250,600.00	250,600.00	1,002,400.00	
c. Advocate for integration of NCDs into other MOH programs	Continuous discussion & communication with heads of divisions/programs to have collaboration on primary & secondary prevention (co morbidity) training aspects		0	0	0	0	0	0	
d. Equipped Health facilities with the minimum clinical equipment	Strengthen health facilities with NCD corner with the minimum clinical equipment, & tools for screening and management of MNCDs & their risk factors.	<ul style="list-style-type: none"> • 1 Digital Aneroid sphygmomanometer @ERN 89.7 • 1 Blood glucose meter One touch select @ERN 151.35 • 1 Measuring tape @ERN13.20 • 1 Pocket peak flow meter@ERN130.35 • 1 Spacer A2A@ERN95.85 • 1 Stethoscope @ERN28.8 • 1 Digital clinical thermometer @ERN19.35 • 1 Bathroom scale 	0	6,001,425.00	0	6,001,425.00	0	12,002,850.00	

		<ul style="list-style-type: none"> @ERN75.9 • 100 pocket Blood glucose test strip @ERN20805 • 100 packet Blood glucose test strip tin of 25 test strips @ERN9300 • 100 packet Urinary test strips for ketones tin of 25 test strips @ERN9300 						
	Develop & distribute uniform daily screening register form & monthly national MNCD case reporting form	<ul style="list-style-type: none"> • 100000 copy @ERN 1.50 	0	150,000.00	150,000.00	150,000.00	150,000.00	600,000.00
	Establish 36 new NCD corners every year at national level	<ul style="list-style-type: none"> • supervising health facilities, monitor & assist the progress of the zonal NCD programs on NCD corner establishment & others • vehicle used 1 @ ERN 2500 for 30 days, • 3 HW for 30 days, per diem at @ERN 400, 	0	111,000.00	111,000.00	111,000.00	111,000.00	444,000.00
e. Develop standard operating procedures & treatment guideline	- Strengthen the usage of treatment guidelines and Standard Operating Procedures through continuous developmental activities involving all health care personnel.- Develop & distribute the NCD corner & NCD clinic guideline	<ul style="list-style-type: none"> • 15 HW from Zonal Health care facilities, for 4 days, per diem at @ERN 400, • Hall rent at @ERN 2000 for 2 days • refreshment for 15 participants at @ERN60 for 2 days •copies of treatment guide lines of 5 pages at @ERN 1 • for 6 zones 	0	0	159,250.00	159,250.00	159,250.00	477,750.00
f. Ensure effective screening and early detection of NCD at facility level	Strengthen the existing & introduce new methods of screening for early detection. cancers (breast, cervical, prostate & childhood cancers), RHD, DM type 1,		0	0	0	0	0	0
	Train HW for Screening of cancer of the reproductive organs (breast through clinical examination & breast self examination),	<ul style="list-style-type: none"> • Perdiem for 60 HW for 7 days @ERN530, • hall rent for 5 days @ERN2000, • refreshments for 60 HW at 	0	250,600.00	0	250,600.00	0	501,200.00

		@ERN60 for 5 days						
	Train 3 local physicians for RHD case screening at school level for primary & secondary level of prevention	Funded by the Italian cardiology group (MASSA)						
	Purchase 3 portable cardiograph machines	• @ERN36,000 each	0	0	108,000.00	0	0	108,000.00
	Train HW for Screening of gestational diabetes, Type one diabetes & others.	• Perdiem for 60 HW for 7 days @ERN530, • hall rent for 5 days @ERN2000, • refreshments for 60 HW at @ERN60 for 5 days	0	0	250,600.00	0	0	250,600.00
Sub total			1,591,600.00	8,192,625.00		8,415,435.00		22,759,880.00
Strategic objective four: To promote multi-sectoral collaboration								
a. Create Multi-sectoral coordination with various stake holders (NGOs, youth, women's association etc)	Conduct workshop to foster multi-sectoral partnerships and encourage stakeholder participation	• refreshments for 20 participants at @ERN60 for 1 day • hall rent for 1 days @ERN2000,	3,200.00.00	3,200.00.00	3,200.00.00	3,200.00.00	3,200.00.00	16,000.00
b. Conduct joint planning and implementation on thematic areas of NCDs with stakeholders	• Conduct activities including seminars, workshops and other training programmes at national & zonal levels.		0	0	0	0	0	0
c. Hold periodic joint reviews, monitoring and evaluation	• Conduct review meeting with the zonal NCD coordinators 2 days per year	• 5 persons participated for 4 days @ 530 ERN, • refreshments for 8 participants at for 2 days @ERN60	11,560.00	11,560.00	11,560.00	11,560.00	11,560.00	57,800.00
d. Conduct courses for media workers,	• Training of media workers, particularly for TV/radio hosts to promote health and counter misinformation, for 30 participants for 2 days per year at national level	• Perdiem for 30 media workers for 2 days@ERN120, • refreshments for 30 media workers at @ERN60 for 2 days	10,800.00	10,800.00	10,800.00	10,800.00	10,800.00	54,000.00
e. Promote multi-sectoral	• Conduct workshop for stakeholders	• refreshments for 20	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	16,000.00

partnerships, international cooperation and encourage stakeholders participation	cooperation and participation	participants at @ERN60 for 1 day at national level • hall rent for 1 days @ERN2000						
f. Conduct advocacy campaign for national and zonal partners, local community leaders and relevant others	• Advocate NCD messages in other social & governmental occasions collaborating with local governors, community & religious leaders		0	0	0	0	0	0
g. Collaborate with the food producing, processing & distribution companies	• Conduct workshop to food processing premise on preparing foods& drinks safer for people with NCDs & others.	• refreshments for 20 participants at @ERN60 for 1 day in 6 zones • hall rent for 1 days @ERN2000 in 6 zones,	0	19,200.00	19,200.00	19,200.00	19,200.00	76,800.00
Sub total			28,760.00	47,960.00	47,960.00	47,960.00	47,960.00	220,600.00
Strategic objective five: Increase Patient Compliance								
a. Develop & introduce inter-personal health education	•Conduct daily MNCD screening at NCD corners by HWs	Use the guideline (components of NCD corner & NCD clinic)	0	0	0	0	0	0
	•Organize patients to conduct group therapy for sharing experiences among themselves guided by HWs	Guided by experienced HW	0	0	0	0	0	0
	• Conduct self monitoring & supervisory activities by the head of the HCF	The responsibility of the head & zonal MoH branch	0	0	0	0	0	0
b. Development of self-guided intervention packages to help patients with NCD,	Develop, produce & distribute Diabetes booklet for patients concerning medications &follow up etc.	• Development of the packages by head office • 2000 Color printed brochures @ERN15	0	30,000,00	0	30,000,00	0	60,000,00
	• Introduce patient identification card	• 10000 Color printed	0	30,000,00	0	30,000,00	0	60,000,00

risk factors and their families	for patients with Major NCDs. • Properly use patient registration form • Distribute checklists • Regular follow up by the Zonal NCD coordinators	@ERN 3 of DM ID card						
c. Ensure that all health facilities have an NCD Resource Centre staffed with appropriately trained NCD educators	• Conduct in service training at health facility level by the trained staffs • Ensure availability of material resources	The responsibility of the head & zonal MoH branch	0	0	0	0	0	0
d. Make available glucose strips for self –monitoring of Blood Glucose for diabetes.	• Strengthen the availability of gluco-meter & BP apparatus in all private pharmacies,	• Facilitated by locally staff at health facility level	0	0	0	0	0	0
e. Help patients to understand on health seeking behavior, general medical check- up,	• Produce posters for NCD clinic/NCD corner to help patients on disease control aspects & mount NCD control information at walls • Conduct co-morbidity bi-directional screening especially for DM &TB at WDD & World TB Day.	• Develop & distribute Colour printed posters of NCDs & risk factors 500 @ERN200 to all health facilities	0	0	100,000.00	0	100,000.00	200,000.00
Sub total			0	60,000.00	100,000.00	60,000.00	100,000.00	320,000.00
Strategic objective six: encourage research, monitoring and evaluation								
a. Advocate for wider coverage of NCDs in NHIS	• Coordinate with NHIS for inclusion & update of the relevant indicators of NCD in DHIS2.	Continuous discussion with the program	0	0	0	0	0	0
b. Maintain & update NCD registries at all health facilities	• Harmonize & update the reporting format of NCDs at national level	The responsibility of the program managers & the directors.	0	0	0	0	0	0
c. Incorporate priority NCD researches in the national health research agenda.	• Collaborate with research program of MOH to have recent data for continuous & practical intervention	The responsibility of the program managers & the directors.	0	0	0	0	0	0
d. Strengthen human and	• Encourage & participate private & governmental institutions to conduct		0	0	0	0	0	0

institutional capacity for research on NCDs	NCD & their risk factors researches								
e. Integrate NCD indicators into National Population Surveys	<ul style="list-style-type: none"> • Continuous discussion & collaborate with National Statistics Office for inclusion of NCDs & their risk factors 		0	0	0	0	0	0	0
f. Dissemination and implementation of NCD research results	<ul style="list-style-type: none"> • Disseminate result of surveys conducted to respective levels 	Soft copy dissemination to the eligible users.	0	0	0	0	0	0	0
g. Conduct regular supportive supervision at all levels	<ul style="list-style-type: none"> • Nation-wide implementation of MNCD monitoring & supervision activities using the supervisory check list. 	<ul style="list-style-type: none"> • 2 Persons in 6 Zones @ERN 300 for 30 days, • 1 vehicle used @ ERN 2500 for 30 days, • 400 copies of checklist @ERN 1 	93,400.00	93,400.00	93,400.00	93,400.00	93,400.00	93,400.00	467,000.00
	<ul style="list-style-type: none"> • Arrange & conduct integrated supervisory activities at zonal level 	The responsibility of the program managers & the directors.	0	0	0	0	0	0	0
h. Strengthen NCD surveillance system e.g. WHO-STEP survey & others	<ul style="list-style-type: none"> • Conduct NCD WHO-STEP survey for analysis & intervention with NCD equipment provided by WHO 	<ul style="list-style-type: none"> • Hire one consultant with MA in PH or related fields @ERN2500 for 30 days, • Train 40 data collectors @ERN400 for 3 days, • Refreshment for 80 participants @ERN300 for 5 days, • Per diem for 40 data collectors for data collection @ERN400 14 days, • 80 note book, pen, eraser@ERN101 • Stationery A4 paper 5 rim @ERN450 • For 5 persons data entry @ERN120 for 5 days, • Consensus building meeting for 2 days for 50 participants, • Hall rent for 5 days @ERN2000, 	0	958,530.00	0	0	0	0	958,530.00

		<ul style="list-style-type: none"> • photo copy number of manuals (15 villages*15 households*6zobas= 1350)* (6pages*2NK) @ERN12, • vehicle rent 12 @ERN 2500, for 14 days • Copy for dissemination of final result 50 copies of 20 pages each @ERN 2 • Equipment (measuring tools & reagents) for the survey provided by WHO 						
Sub total			93,400.00	1,051,930.00	93,400.00	93,400.00	93,400.00	1,425,530.00
Total								24,792,979.16

9. Conclusion

The strategy on NCDs will be implemented through a five year plan of action. The plan shall aim at reducing smoking, high alcohol use, high dietary salt and fats intake, obesity and promoting increased intake of fruits and vegetables as well as maintaining or increasing adequate physical activity levels so as obtain healthy body weight.

In-built monitoring and evaluation systems will facilitate monitoring of progress of the strategy against set targets. More over the full involvement of the community with the commitment of the ministry will make the endeavor fruit full out comes. Successfully implementation of the strategy will lead to the reversal of the NCD disease trends and the adoption of behaviours that can reduce the risks of getting NCDs and other non-communicable diseases.

Civil society and nongovernmental organizations have an important role to play in influencing individual behaviour and the organizations and institutions that are involved in quitting tobacco smoking, healthy diet, avoidance of excessive alcohol drinking and physical activity. They can help to ensure that consumers ask government to provide support for healthy lifestyles and the food industry to provide healthy products. Nongovernmental organizations can support the Strategy effectively if they collaborate with national and international partners as well to have the idea of ‘Health in All Policies’.

This will be addressed by strengthening the capacity of the health system for prevention, early detection, treatment, rehabilitation and palliative care at all levels.

10. References

1. The State of Eritrea Ministry of Health, Health Sector Strategic Development Plan II, 2017-2021.
2. 28th Pan American Sanitary Conference 64th Session of the Regional Committee. Washington, D.C., USA, 17-21 September 2012.
3. WHO Global Action Plan for the prevention & control of Non communicable diseases 2008-2013.
4. WHO Global Action Plan for the prevention & control of Non communicable diseases 2013-2020.
5. WHO Global Strategy on Diet, Physical Activity and Health, 2004.
6. WHO Non –Communicable diseases country profiles, 2014.
7. A strategy to prevent chronic disease in Europe. A focus on public health action, The CINDI vision, 2004.
8. National Strategic and Action Plan for the Prevention and Control Non-Communicable Diseases (NCDs) in Jamaica, 2013-2018.
9. Republic of Kenya Ministry of Public Health & Sanitation & Ministry of Medical Services, National Cancer control Strategy, 2011-2016.
10. Shaping Fuji health National Strategic Plan, 2010 – 2014
11. The Cardiovascular Diseases & Diabetes Prevention & Control Program in Malaysia, (2010-2014).
12. The Republic of Uganda Ministry of Health, Health Sector Strategic Plan II 2015/06-2009/2010, Volume One.
13. The State of Eritrea Ministry of Health National Tuberculosis Control Strategic Plan, 2015 – 2017.
14. The State of Eritrea Strategic plan of action for the control of major chronic diseases (cardiovascular diseases, diabetes, and cancer), 2012-2016.
15. WHO Report 2012 Geneva, 2014.

