NATIONAL STRATEGIC PLAN FOR THE PREVENTION AND CONTROL OF NON-COMMUNICABLE DISEASES 2020-2025

Health is both a contributor to, and a beneficiary of, all of the Sustainable Development Goals (SDGs). Tedros Adhanom Ghebreyesus. Director-General, World Health Organization[1]

Non-communicable diseases are widespread. They have many dimensions, numerous causes, and countless undesirable consequences. But, there are proven ways to prevent and manage them. António Guterres. UN Secretary-General 2018.

We will also need to confront lifestyles diseases such as high blood pressure, diabetes, cancers and cardiovascular diseases. President of the Republic of South Africa, Cyril Ramaphosa, SONA 2018

We will tackle Non-Communicable diseases working with partners– we will screen and put people on treatment for diabetes, hypertension, cancer, and we will provide integrated mental health services. We will accelerate our efforts on screening and early detection of cancers to ensure that we provide timeous oncology services. We will continue to address risk factors and promote health and prevent these silent killers. Dr Zweli Mkhize, Minister of Health, Budget vote 2019

Non communicable diseases continue to outstrip infectious diseases in South Africa according to STATS -SA. A huge chunk of the deaths are due to diabetes and cardiovascular diseases including strokes. Cancer has also been rising to epidemic levels. These developments can be attributed to urbanisation, commercial determinants of health, risk behaviour such as tobacco use, harmful use of alcohol, unhealthy diets and lack of physical activity. Dr Joe Phaahla, Deputy Minister of Health, Budget vote 2019

“The COVID-19 pandemic in South Africa underscores that living with an NCD makes us significantly vulnerable with an even greater risk of dying prematurely. The pandemic exposes NCDs inequity in the health system requiring urgent, coordinated all-of-society and all-of-government policy and implementation along with adequate resources. “
Dr Vicki Pinkney-Atkinson, CEO NCD Alliance and person living with multiple NCDs since birth

FOREWORD

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GLOSSARY OF TERMS

A **non-communicable disease**, or **NCD**, is a medical condition or disease which by definition is non-infectious and cannot be passed from person to person. NCDs may be chronic diseases of long duration and slow progression, or they may result in more rapid death such a sudden stroke. According to the World Health Organisation (WHO), the four main types of non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancer, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

Disease Prevention for the purposes of this strategy; refers to actions that are aimed at eliminating or minimizing the impact of disease, disability or death.

Health In All Policies: Health in All Policies is an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts, in order to improve population health and health equity

Health Promotion is defined here as a "social enterprise" to improve health and equity. That is, through strengthening of communities; social, political and economic capital can be mobilized; enabling a "social enterprise" which can take action to address the negative.

Mission: A mission is a written description of the purpose and areas of legitimate operation for the country.

Modifiable risk factors are behavioral risk factors that can be reduced or controlled by intervention, thereby reducing the probability of disease. The four major ones include; physical inactivity, tobacco use, harmful use of alcohol, and unhealthy diets (increased fat and sodium, with low fruit and vegetable intake).

NCD MAP's goals are broad statements of intent (general, intangible, abstract, strategic, long range) which reflect the expected outcomes for NCD prevention and control based on national circumstances. Goals and targets should be specific, measurable, achievable, realistic and within a timeframe.

NCD indicators An action plan indicator in NCD prevention and control is a number, proportion, percentage or rate that helps measure ("indicate") the extent to which planned activities have been conducted (process and output indicators) and achievements have been made (outcome and impact indicators).

Non-modifiable risk factors are mainly biological factors which cannot be reduced or controlled by intervention; for example: age, gender, race, and family history or genetics.

Primary Prevention: actions that aim to protect the health of individuals through personal and communal efforts

Primordial Prevention: population level measures that prevent the development of risk factors and include policy, programs, education and environmental changes to support health behavior.

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.

Secondary Prevention: measures available to individuals and communities for the early detection and prompt intervention to control disease and minimize disability

Tertiary Prevention: measures aimed at softening the impact of chronic disease and disability thereby minimizing suffering and maximizing years of useful life

SMART: refers to objectives that are Specific, Measurable, Achievable, Realistic and Timebound.

Vision: A vision statement outlines what a country aims to be in the future. It is a guiding image of success and sets expectations on what is ultimately desirable for a country.

LIST OF ABBREVIATIONS

AIDS	Auto Immune Deficiency Syndrome
CBOs	Community Based Organizations
CCMDD	Centralised Chronic Medicines Dispensing and Distribution
COPD	Chronic obstructive pulmonary diseases
DHS	District Health Service
DoH	Department of Health
FBOs	Faith based Organizations
FCTC	WHO Framework Convention on Tobacco Control
GDP	Gross Domestic Product
HIAP	Health In All Policies
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
ICSM	Integrated Clinical Services Model
MAP	National Multi-sectoral Action Plan
NAPHISA	National Public Health Institute of South Africa
NCDs	Non-Communicable Diseases
NDoH	National Department of Health
NDP	National Development Plan 2030
NGOs	Non-governmental Organizations
NIDS	National Income Dynamic Survey
PDoH	Provincial Department of Health
SADHS	South African Demographic and Health Survey
SAGE	Study on Ageing and Adult Health
SANHANES	South African National Health and Nutrition Examination Survey
SASH	South African Stress and Health
SDGs	Sustainable Development Goals
SDH	Social Determinants of Health
T2DM	Type 2 Diabetes Mellitus
TB.	Tuberculosis
TC	*National NCDs Technical Committee*
UNGA	United Nations General Assembly
WHO	World Health Organization

SECTION I: INTRODUCTION

CHAPTER 1: BACKGROUND

1.1 INTRODUCTION

Non-Communicable Diseases (NCDs), including mental disorders, currently pose one of the biggest threats to health and development globally, particularly in low and middle income countries[2]. It is predicted that unless proven interventions are rapidly implemented in countries, in the short to medium term, health care costs will increase exponentially and severe negative consequences will ensue not only to individuals and families but to whole societies and economies. NCDs are already a major burden in South Africa, but without added rigorous and timely action the health and development consequences may well become catastrophic. Immediate and additional, high quality, evidence based and focussed interventions are needed to promote health, prevent disease and provide more effective and equitable care and treatment for people living with NCDs at all levels of the health system. The problem is further compounded by the rising global prevalence of multi-morbidity (defined as the coexistence of two or more chronic diseases in one individual).

In South Africa, over the past two decades a number of critical interventions have been introduced to combat morbidity and mortality from NCDs. However, these need to be strengthened and additional catalytic interventions to be introduced. This National Strategic Plan directs the actions that will be undertaken between 2020 and 2025 across sectors to redress and to reverse the growing threat posed by NCDs. The overarching objective of this Plan is to prepare the country for reaching the Sustainable Development Goal related to NCD (to reduce, by one-third, premature mortality from non-communicable diseases (NCDs) through prevention and treatment and promote mental health and well-being by 2030 (Goal 3.4)[3]. Gaining value for investments is central to this Plan. The clinical as well as cost effectiveness of different interventions have been analysed by the World Health Organization (WHO) and "*Best Buys*" for the reduction in NCD mortality and morbidity have been identified[4a] and are incorporated here. Although many of these interventions focus on primordial and primary prevention/promotion (due to the comparatively low financial and other resource inputs required to achieve critical health outcomes), the importance of secondary and tertiary preventions would also be discussed. This Strategic plan, thus, takes a comprehensive, person centered approach, within the context of Universal Health Coverage (UHC) and implementation of National Health insurance (NHI) in South Africa by 2025. Multi-sectoral involvement is crucial to this and is thus central to this Plan.

Noting the critical focus on primordial and primary prevention, a cascading model (similar to *90/90/90* model for HIV) is adopted as a part of implementation for this plan, in which, target will be set for people's knowledge about their own status, initiation and adherence to treatment and treatment outcomes.

Over the past decade South Africa has placed considerable emphasis on developing a service platform for the management of people living with HIV and Tuberculosis in primary care and achieved significant successes in achieving this, however, with the introduction of the Integrated Clinical Services Management (ICSM) model[5], this platform has been extended to include an integrated basis for all chronic disease management within Primary Health Care[6b.] In addition to cost-effectiveness, the principles of equity, person centeredness, a life-course approach and a gendered and ethical focus are highlighted.

It has been estimated that by 2030, the cumulative lost output to the global economy through NCDs will be $47 trillion (baseline 2010)[7]. In 2015, the economic burden of diabetes alone in sub-Saharan Africa was US$19.45 billion, or 1.2% of cumulative gross domestic product (GDP) of the whole sub-

[a] While there is concern that the studies that have influenced these "best buys" have mainly come from developed countries, these are currently the best available proposals.
[b] This is modelled on the HIV 90/90/90 targets. Given current baselines having a similar target for NCDs is not realistic and therefore a 90/60/50 target has been set for 2025.

Saharan African region. Unchecked, the economic burden from NCDs is projected to increase to between $35.33 billion and $59.32 billion by 2030[8]. The accumulated losses to South Africa (SA)'s GDP between 2006 and 2015 from diabetes, stroke and coronary heart disease alone are estimated to have cost around R26 billion[9]. It has been estimated that the economic cost due to productivity losses arising from absenteeism, presenteeism and early retirement due to ill health in South Africa, largely from NCDs, equated to a total of 6.7% of GDP in 2015 and is expected to increase to 7.0% of GDP by 2030[10]. It is estimated that for diabetes alone, in 2018, public sector costs of diagnosed patients in South Africa was approximately R2·7 billion and would be R21·8 billion if both diagnosed and undiagnosed patients are considered[11]. In real terms, it is estimated that the 2030 cost of all type 2 diabetes mellitus (T2DM) cases will increase to R35·1 billion. On the other hand, the WHO's global business case for NCDs shows that if low and low-middle income countries put in place the most cost-effective interventions for NCDs (including for both prevention and control), by 2030 they will see a return of $7 per person for every dollar invested[12]. In addition, evidence shows that treatment for depression would yield USD $5 for every one dollar spent[13]. Similar high returns on outlay would certainly be expected in South Africa. Investing in prevention and control of NCDs is thus both essential for growth and development and, when carefully planned and prioritised, is highly cost effective., The WHO North and South American Region (PAHO) estimated that 80% of all heart disease, stroke, and T2DM and over 40% of cancer could be preventable through multi-sectoral action[14]. Given that many of the countries in the PAHO region share socio-economic similarities with South Africa, analogous figures are probable in South Africa too.

The significant cost, burden of disease and disability highlighted above may be avoided through robust, evidence informed and comprehensive health prevention and promotion strategies[15] that address the modifiable risk factors associated with NCDs. To achieve this, a multi-sectoral approach is critical. Poverty, rapid urbanization and industrialization, population ageing, the effects of globalization of marketing and trade, and other social, cultural and commercial determinants of health are among the main contributing factors to the rising incidence and prevalence of NCDs. There is now overwhelming and broad consensus, including from the United Nations General Assembly (UNGA) that a "Health-in-all-policies" (HiAP), "*Whole-of-government*" and "*Whole-of- society*" approach must be adopted in order to comprehensively address NCD mortality and morbidity[16]. It is almost certain that without comprehensively addressing these determinants of health, Sustainable Development Goal 3.4. as well as the majority of the nine voluntary NCD targets set by the WHO Global Action Plan for the Prevention and Control of NCDs[17] will not be reached. Given this, the WHO High level Commission on NCDs and the 2018 UNGA Declaration both stated that Heads of State and Government, not Ministers of Health only, should oversee the process of creating ownership at national level of NCDs and mental health[2,8].

Figure 1.1 Relation between SDG target 3.4 and other SDGs[18]

The South African National Development Plan 2030 (NDP) also asserts that health is not just a medical issue and that greater inter-sectoral and inter-ministerial collaboration is central to good health. The Plan states that the SDH would be required to be addressed as a matter of urgency, including promoting healthy behaviours and lifestyles[19]. A number of government sectors are fundamental to achieving effective promotion of health and the prevention of disease. Furthermore, one of the key priority of the plan is to unite all South Africans around a common programme to achieve prosperity and equity[19].

1.2 HEALTH SECTOR INTERVENTIONS TO COMBAT NCDS

The Health sector itself has a vital and dynamic role to play in a continuum starting with promotion/prevention/protection and encompassing early identification, , control, rehabilitation and palliative care at all levels within a health system. Given the breadth of the required health sector involvement in reducing NCDs, together with the number of different NCDs that require specific emphasis and that have unique objectives, this Strategic Plan for the most part provides the broad strategic framework for specific interventions rather the details of them. Non-governmental organizations (NGOs) Faith based Organizations (FBOs), Community Based Organizations (CBOs) and Patient Advocacy Groups also have an essential role with regards to promotion and prevention of NCDs and to a lesser extent, screening, detection and referral, as they work in and with communities. The private sector that impacts on health (including through manufacturing and retailing of food, alcohol and tobacco) too is critical in adopting strategies to promote health and that put health before profit. .Figure 1.2 below highlights NCD activities across various levels of the health sector

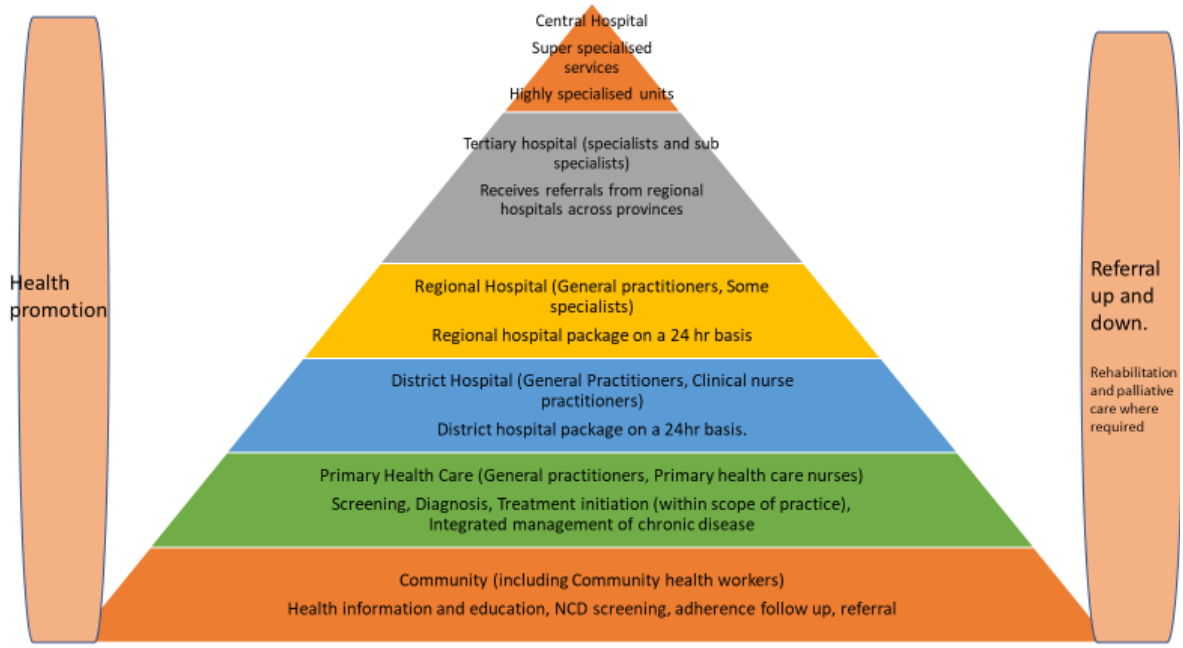

Figure 1.2 Levels of NCD intervention with the health system

1.2.1 INTEGRATED CARE

A central objective of this Strategic Plan is to facilitate the explicit inclusion of NCDs and their risk factors into the development and implementation of health systems plans and services as well as to facilitate integration with relevant programmes, policies, strategies and across levels of care[c]. This Plan takes a comprehensive and integrated approach to dealing with NCDs rather than creating a separate parallel service for NCDs. In particular, the integration of NCD care at primary care level with other health service areas is critical, predominantly with chronic communicable diseases and with maternal, youth, child health and nutrition services. Many people live with multiple morbid chronic conditions (whether communicable or non-communicable or both) and many women have pregnancy and maternal related NCDs that have both short and longer term health consequences. Hence, an approach that treats the person holistically rather than a particular disease within a single integrated system is central. As seen in Figure 1.3 as part of the ICSM, all chronic diseases, whether they are communicable or non-communicable, are treated equally and within the same health stream. The same applies to all users whether they have one or a number of chronic conditions. This is particularly important as people with HIV are now living longer and also developing NCDs. Within this model people are treated for all their conditions in a single session by a single health practitioner.

[c] South Africa suffers from a Quadruple burden of Disease. The other main burden areas are communicable diseases (including HIV and TB), maternal and child health and injuries and violence.

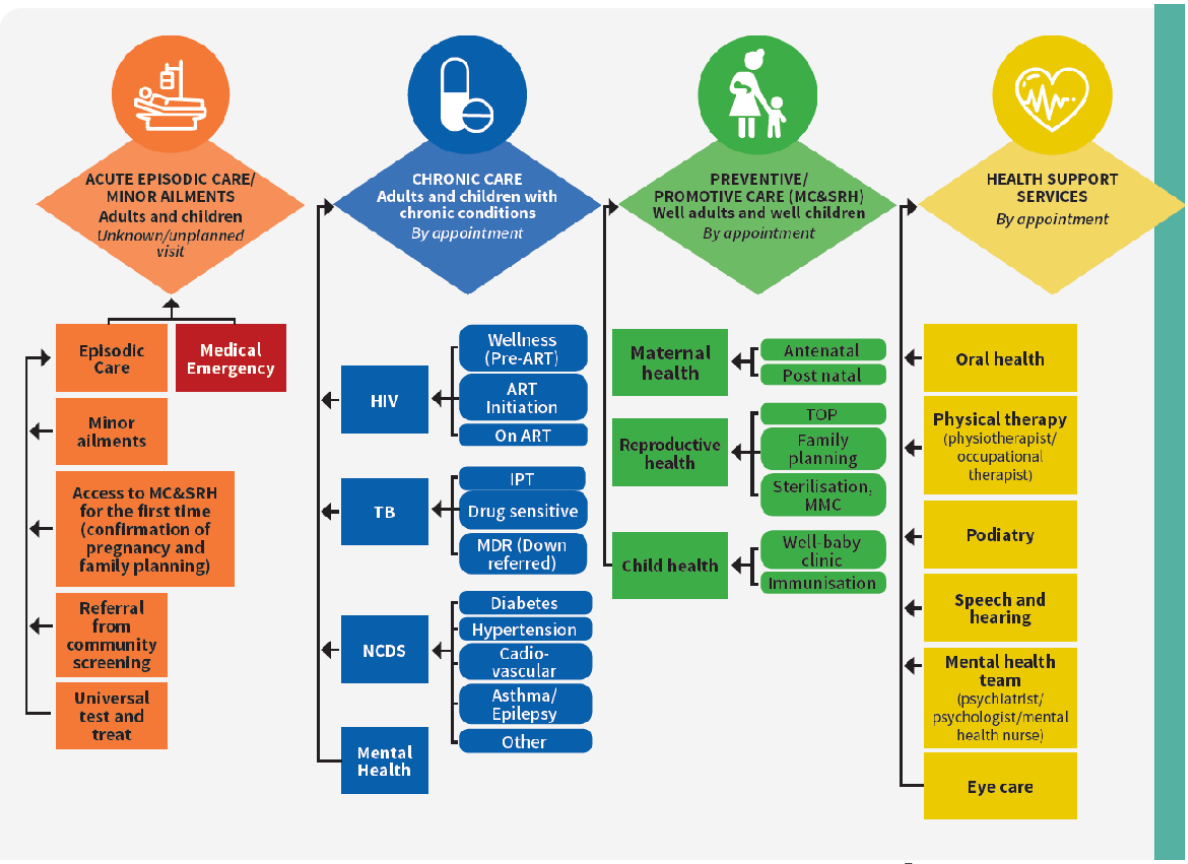

Figure 1.3 ICSM Model: services offered within the four streams of care.[5]

1.2.2 MORE SPECIALISED NCD SERVICES AND PLANNING

Notwithstanding the importance of both primary level services for NCDs and for integration of services at this level, at higher levels of health care, very focussed and specialized services are essential for specific disease types and more specific disease focussed planning is also required. This is already occurring within the Department of Health where for example the Integrated Clinical Disease Management model complements specific and strategic documents that deal for instance with diabetes[20], mental health[21] and cancer[22]. Plans are also in place to deal with cross cutting areas such as palliative care[23] and rehabilitation[24]. There are, however, still policy and planning gaps for specific diseases and therefore timeframes for their development are included as part of this Strategic Plan. All care interventions though will be delivered through the existing health system which must be then be geared to effectively implement them.

1.2.3 EQUITY IN HEALTH SERVICE DELIVERY

Achieving equity in health service delivery is fundamental to achieve the target sets under the plan. This would include ensuring access to services for vulnerable populations, for example rural and disadvantaged communities and those requiring inter-provincial services as well as addressing stigma associated with diseases such as breast cancer. Doing so would require redistributing public sector health care resources between and within provinces, increasing primary care utilization levels for currently disadvantaged groups, introduction of National Health Insurance.

1.3 STATUS AND TRENDS OF MAIN NON-COMMUNICABLE DISEASES AND THEIR DETERMINANTS

Globally NCDs kill 41 million people annually, equivalent to 71% of all global deaths. Each year, 15 million people die from an NCD between the ages of 30 and 69 years with over 85% of these premature deaths occurring in low- and middle-income countries[25]. The WHO estimates that deaths from NCDs

are likely to increase globally by 17% over the next 10 years, and the Afro Region will experience a 27% increase. This amounts to 28 million additional deaths from these conditions, which is projected to exceed deaths due to communicable, maternal, perinatal and nutritional diseases combined by 2030[26].

Statistics South Africa suggest that NCDs contribute 57.8% of all deaths, of which 60% are premature (under 70 years of age).[d] The South African Medical Research Council publishes an annual report on mortality which highlights that the probability of dying prematurely, between the ages of 30 and 70, due to selected NCDs including cardiovascular disease, cancer, diabetes and chronic respiratory diseases is 34% for males and 24% for females – 29% for both sexes. There has been no significant change between 2011 and 2016. The highest single cause of death from NCDs is cardiovascular disease, followed by cancer, diabetes and chronic respiratory disease[27].

In addition to the mortality data above, there is an urgent need to determine the morbidity associated with NCDs, as many of the NCDs may not lead to mortality but significant disability. For example, the South African Stress and Health (SASH) survey found that 16.5% of adults have experienced a mood, anxiety or substance use disorder) in the previous 12 months[28], which led to significant morbidity. Furthermore, it has been further found that risk factors for NCDs tend to cluster together, particularly in people with common mental disorders, where they may have multiplicative effects. [xxx] Figure 1.4 below highlights the conditions associated with the most disability in South Africa from 2007-2017[29].

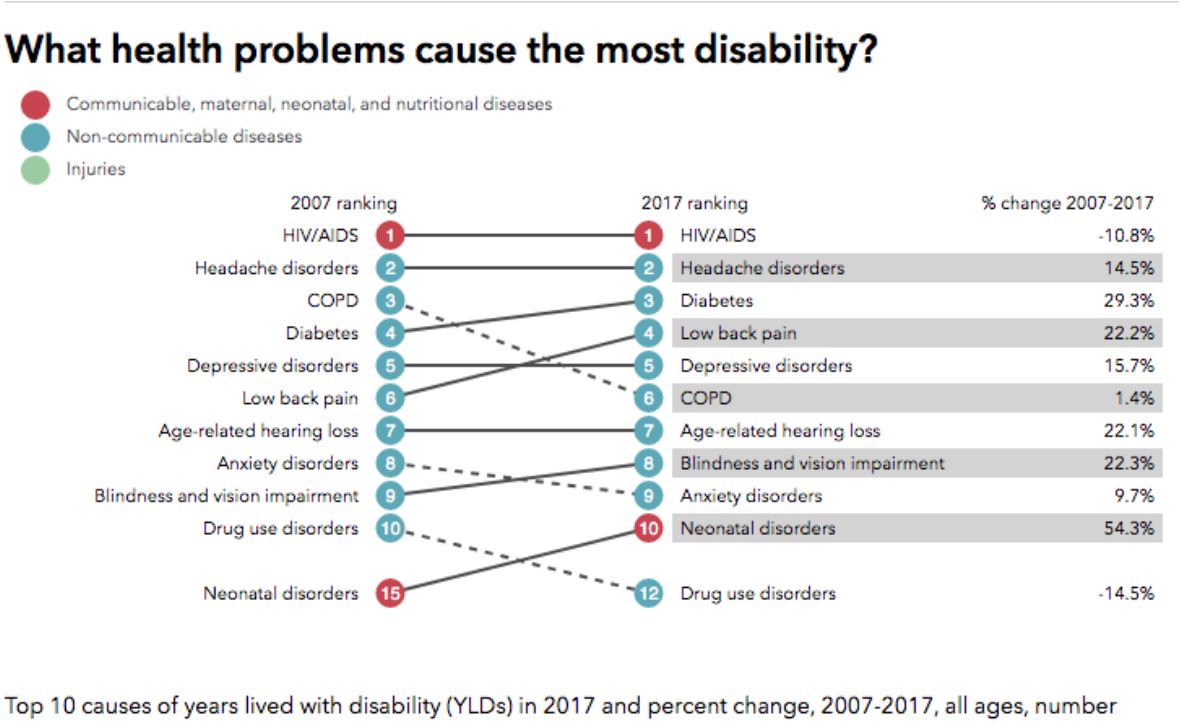

Figure 1.4 Top ten causes of years lived with disability (YLD) and percentage[29]

Another challenge with management of NCDs is its coexistence with other diseases, thereby leading to multi-morbidities. According to a Lancet publication people living with chronic communicable diseases such as tuberculosis and HIV/ AIDS and more recently persons with NCDs are more likely to experience more serious sequalae and even death when infected with COVID-19[30]. In addition, coexisting communicable and non-communicable diseases augment the risk or effect of the other[31,32].

[d] This is assuming that deaths from unknown causes are equally distributed between communicable diseases, non-communicable diseases and non-natural deaths.

For example, diabetes has a very high prevalence and the WHO estimates that diabetes triples the risk of TB. Moreover, as people living with HIV grow older their risk of developing an NCD increases, as it does for those without HIV and the risk of metabolic disease is also increased in HIV-infected patients on lifelong combined antiretroviral therapy.

1.3.1 BEHAVIOURAL RISK FACTORS FOR NCDS

Genetic/biological factors are extremely important in the development of NCDs and some conditions will develop irrespective of personal behaviours or the environment that shapes these behaviours However, the WHO has identified and highlighted 5 highly influential and reversible risk factors; namely tobacco and alcohol use, diet, physical activity and air pollution. This section outlines the current status of these risk factors in South Africa.

Tobacco is one of the main causes of premature deaths in the world. Smoking has negative impacts on all the major NCDs including lung and other cancers, chronic obstructive pulmonary diseases (COPD), heart disease, stroke and diabetes. Tobacco is also known to negatively impact mental health and alcohol use. According to the SADHS, 37% of men and 8% of women currently smoke tobacco products. Of everyday smokers, the majority (75% women and 64% men) smoke between 1 and 9 cigarettes a day while 12% of women and 18% of men smoke 15 or more. Fortunately, there appears to have been a consistent downward trend in tobacco use between 1993 (33%) and 2012 (18%) with a possible rise in 2016 (22%).

As with tobacco, alcohol has been associated with all the main NCDs. A review of the relationship between alcohol and NCDs[33] found alcohol to be causally linked (to varying degrees) with cardiovascular outcomes, including hypertension, haemorrhagic stroke and atrial fibrillation; eight different cancers i.e. oral, pharynx, larynx, oesophagus, liver, colon, rectum, breast (with risk linked to volume consumed); liver disease (fatty liver, hepatitis and cirrhosis); pancreatitis and diabetes. In 2010, the WHO estimated the average annual per capita consumption of alcohol for South Africa (persons over 15 years of age) as 11 litres; and the numbers of heavy episodic drinkers as 25.6%. The numbers of people abstaining from alcohol consumption was estimated at 51% males and 79% female[34]. Therefore, the number of drinkers that consumed alcohol at heavy episodic levels was very high, requiring urgent attention.

With respect to dietary practices, South Africa, as with many low and middle income countries, suffers from the coexistence of undernutrition along with overweight, obesity, or diet-related NCDs, within individuals, households and populations, and across the life-course. A systematic evaluation[35] of dietary consumption patterns across 195 countries showed that the leading dietary risk factors for NCD mortality are diets high in sodium, low in whole grains, low in fruit, low in nuts and seeds, low in vegetables, and low in omega-3 fatty acids; each accounting for more than 2% of global deaths.

Additionally, low rates of exclusive breastfeeding of babies play an important role in the later development of NCDs. The 2016 South African Demographic and Health Survey (SADHS) found that only 32% of babies are exclusively breastfed at 6 months. Poor diet amongst young children is characterised by significant intake of sugary drinks and snacks and salty snacks. Unhealthy food environments, including access to and affordability of healthy foods, foster unhealthy diets[36]. This is especially true for communities with predominantly low-income, low socio-economic status. Healthier food options typically cost between 10% and 60% more when compared with unhealthier options at retail outlets. In South Africa, from 1994 to 2012, there has been an overall increase in energy intake, sugar-sweetened beverages, processed and packaged foods, animal source foods, and added caloric sweeteners, while the consumption of vegetables actually decreased. In particular, the consumption of processed and packaged food, such as soft (sugary) drinks, sauces, dressings and condiments, and sweet and savoury snacks had the most drastic increase (>50%). These findings show significant changes in food consumption patterns that may be due to the changing food environment[37].

Among the dietary ingredients, salt, sugar and saturated fat are the biggest risk factors for NCDs. The association between sodium and hypertension has been well established. Moreover, high salt intake promotes gastric cancer, is associated with osteoporosis, increased asthma severity, renal stones, progression of renal disease and obesity. High intake of free sugars (particularly in the form of sugary drinks) increases overall energy intake and may threaten the nutrient quality of diets, leading to an unhealthy diet, weight gain and increased risk of NCDs[38] including heart disease, stroke, diabetes and

cancer. Saturated and trans-fats increase cholesterol levels and trans-fats lower HDL level, thereby increasing the risk of coronary artery disease.

Physical inactivity has been estimated to cause 6% of the global burden of disease from coronary heart disease, 7% of T2DM, 10% of breast cancer, and 10% of colon cancer. Inactivity causes 9% of premature mortality[39]. On the other hand, higher levels of physical activity are associated with lower mortality rates for both younger and older adults. Low levels of physical activity result in fewer calorie burned thus contributing to high prevalence of obesity. A recent study of SA learners aged 8 - 14 years found that 57% engaged in moderate levels of physical activity (PA)[40]; 31% did not meet internationally recommended amounts of moderate to vigorous physical activity and overall, males reported higher PA levels than females. Physical activity levels declined with age from 11 to 14 years by 14% and 20% in males and females, respectively. A cross-sectional survey from the Cape Town (urban) and Mount Frere (rural) found that 74% of participants engaged in moderate-to-vigorous physical activity but women were 34% less likely to engage in vigorous physical activity[41].

Finally, in considering air pollution, the WHO reported that 25-33% of deaths from heart disease, stroke, lung-disease and cancers are due to this risk factor[42]. A recent study by the Forum of International Respiratory Societies' Environmental Committee, estimated that about 500,000 lung cancer deaths and 1.6 million Chronic Obstructive Pulmonary diseases (COPD) deaths could be attributed to air pollution. The study further states that air pollution may also account for 19% of all cardiovascular deaths, 21% of all stroke deaths and is associated with many other NCDs including diabetes[43]. A 2016 report by the World Bank estimated that around 20 000 South Africans die from air pollution related causes annually[44], while a study by the International Growth Centre puts the number of deaths at 27 000[45].

1.4 CURRENT RESPONSES TO NCDs IN SOUTH AFRICA

Important developments have taken place in South Africa for the promotion of health and prevention of NCD diseases, attainment of better management and control and for strengthening effective rehabilitation and palliative care. Though it is acknowledged that much more is still required, a number of important interventions (such as Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-17) have taken place that are already impacting on NCDs and or their risk factors or that form the foundation for further interventions.

South Africa has taken a number of legislative, regulatory and policy steps to prevent NCDs. A National Health Promotion Policy and Strategy was adopted in 2015. Specific preventive interventions include (by main risk factors): the Tobacco Products Control Act No 83 of 1993,(as amended), a proposed Draft Control of Tobacco Products and Electronic Delivery Systems Bill (2018), Liquor Bill (2016), Regulations regarding warning labels on alcohol products (2017), Regulation on Trans-fats in Foodstuffs (2011), **Regulations relating the Labelling and Advertising of Foods (2010 came into effect in 2012),** Regulation on reduction of sodium in 13 categories of foodstuffs that are the most common source of sodium (2013 and amended in 2017)[46], a levy on sugar sweetened beverages (Health promotion levy) (2018),[lxxvi] Air Quality Act, 2004 (Act No. 39)[47], Human Papilloma Virus (HPV) vaccination programme (2014). In addition, the National and Provincial Departments of Health (PDoH) work closely with partners for a number of initiatives such as Salt Watch campaign (with Heart and Stroke Foundation), Annual National Nutrition Week and National Obesity Week, Annual Move for Health campaign, National Recreation Day.

A number of policies, action plans and guidelines have been developed since 2013[e]: National Cancer Strategic Framework 2017-2022 (2017); Cervical cancer policy (2017), Breast cancer policy (2017). Updated Management of T2DM in Adults at Primary Care Level (2017), Mental Health Policy Framework and Strategic Plan 2013-2020 (2013), National Policy Framework and Strategy on Palliative Care 2017-2022 (2017), Framework and Strategy for Disability and Rehabilitation Services in South Africa 2015-2020 (2015), National Adolescent and Youth Health Policy, Infant and Young Child Feeding Policy, Guideline for the Management of Acute Asthma in Adults (2013 updated), Guidelines for Maternity Care in South Africa, 2016, Strategy for the Prevention and Control of Obesity in South Africa 2015-2020. In addition, a number of important health systems changes have been introduced that have included and benefitted persons with NCDs such as an Integrated Clinical

[e] The previous Strategic Plan for the Prevention and Control of NCDs was introduced in 2013.

Services Model that incorporates all chronic diseases (whether communicable or non-communicable, as a part of Ideal Clinic initiative), integration of NCDs in the Primary Health Care Service Package (2015) (incorporating most common NCDs (including Asthma/COPD; Cardiovascular Disease, Diabetes, Mental Health conditions; Epilepsy, Musculoskeletal Disorders)[48], Centralised Chronic Medicines Dispensing and Distribution (CCMDD) model for distribution of medicine.

There are a number of surveys that are (or have been) conducted periodically in South Africa that collect data on NCDs such as South African Demographic and Health Survey (SADHS), the South African National Health and Nutrition Examination Survey (SANHANES), the National Income Dynamic Survey (NIDS), the Study on Ageing and Adult Health (SAGE), the Youth Risk Behaviour Survey and others.[f] Unfortunately, these studies are not regular and are not standardised and therefore data are usually not comparable. There are also a number of studies that looked at specific risk factors such as smoking, drinking, nutritional intake, physical activity, salt intake and so on but these also tend to be one off and also do not use standardised and comparable methodology. It would be expected of survey data to be regular and comparable, so that one would be able to make health planning decisions on this data. A significant step towards having standardised data on NCDs and their risk factors was the Bill on National Public Health Institute of South Africa (NAPHISA); one of the objectives of this Bill is to strengthen epidemiology and surveillance of communicable diseases, NCDs, cancer, injury and violence prevention and occupational health and safety.

In addition, numerous research studies, including epidemiological studies, clinical trials, health systems and outcomes evaluation research have been conducted by academic and research institutions that could have provided DoH with valuable information. This includes research by government supported institutions including the Medical Research Council, the Human Sciences Research Council and the Council for Scientific and Industrial Research, Universities, Research Consortia, Non-profit Organizations and the private sector. There is a need to create a repository of these studies.

The links between NCDs and HIV/AIDS, tuberculosis, and child and maternal health among others mean that intervention for reducing risk factors for NCDs are implemented by various clusters within the Department of Health. Besides the NCD cluster, other clusters involved include Child, Youth and School Health, Health, Maternal Neonatal and Women's Health, District Health Services, HIV/AIDS and TB, Health Promotion, Nutrition, Oral Health, Environmental Health and Food Control and Environmental Health. There is a need for a strong coordination and integration of NDC response within the Department of Health.

cIn addition to the Department of Health, eleven different government sectors/departments have been identified for as essential to addressing NCDs. These are: - Agriculture, Land Reform and Rural Development; Basic Education; Communications; Co-operative Governance and Traditional Affairs; Environment, Forestry and Fisheries; Finance/National Treasury; Higher Education, Science and Technology; Social Development; Sport, Arts and Culture; Trade and Industry and Economic Development; Transport. As such, there are policies and strategies in non-health sectors that are important to to the NCD Strat Plan which provide a basis for multisectoral action and therefore, their utilisation must be strengthened to effect coordinated and mandated cohesive outputs. A list of these policies and strategies can be found in Appendix C.

Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-17

In 2013 the Department of Health adopted the first Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-17. Nine Strategic targets were set for 2020g and one for 2030, with "check-in" points on 20 specific objectives, including for the end of the Strategic plan in 2017. The Department commissioned a review in 2018 to assesses the merits and limitations of this Strategic Plan, the extent of its implementation and reaching of its targets and provides analysis and context for future strategic planning for Non-Communicable Diseases in South Africa[49], which identified a number

[f] The WHO STEPS is not conducted in South Africa. While STEPS questions are included in some of the surveys mentioned, this is not a formalised STEPS survey.

[g] While targets on physical inactivity and cervical cancer do not specifically refer to 2020, this should be assumed given that the heading states "The 2020 goals and targets".

of strengths and weaknesses and made some specific recommendations which are incorporated in this document.

These recommendations include:
(a) setting up a set of national NCD targets aligned with the global ones (b) routinely collecting Information on these targets (c) increasing inter-sectoral collaboration (d) allocation of resources. (financial and human) (e) preparing guidelines for specific conditions supplementary to the strategic plan (f) No dedicated person at district level, to be responsible and accountable for reaching the objectives and each of the targets set in the plan (g) integration of care from community to highest level of care (h) taking a life course rather than a disease based approach (i) Putting cost effectiveness at the centre of the Plan; and (j) lastly keeping this document at a high level with inclusion of a number of NCDs and then having specific policies and plans focussing on different areas and/or allowing provinces to prioritise from a broad list proposed in the National Strategic Plan

CHAPTER 2: PROCESS OF DEVELOPING NATIONAL NCD MAP

2.1 STRUCTURE AND SCOPE OF THE PLAN

This National Strategic Plan is focused primarily on NCDs that are responsible for the highest morbidity, mortality and disability in South Africa as well the main causes of these diseases

Despite the above prioritization, there are many other NCD conditions of critical public health importance, most of which have high health burden, though relatively lower mortality. They include renal, endocrine, neurological, haematological, gastroenterological, hepatic, musculoskeletal, skin and oral diseases and genetic disorders; disabilities, including blindness and deafness; epilepsy and violence and injuries. NCDs also have close relationship with various communicable diseases such as HIV and TB and with maternal and child health concerns, including hypertension and diabetes in pregnancy.

This plan therefore takes a two pronged approach to address the NCDs with the highest morbidity and mortality whilst laying the groundwork for the inclusion of other NCDs in subsequent strategic plans. (Also provides the platform for the development of Policies and Guidelines for the priority NCDs e.g. CVD & stroke)

Achieving the goals of this NSP will require collaboration between various health and non-health stakeholders. Within the Department of Health, the responsibility to meet NCD goals reside in a range of different directorates of the National Department of Health, within provincial health departments and in health districts and their sub-districts. Hence different Directorates within the Department of Health and not just the directorate responsible for NCDs as well as provinces and districts, will assume the responsibility and accountability for reaching identified targets.[8]

[8] While the DoH has a section dealing with NCDs, it is often other sections within the Department that are required to implement policy and plans to meet the NCD prevention and control needs. For example, if particular drugs need to be made available at primary care level for prevention of cardiovascular diseases (See indicators 18 and 19 of the WHO targets on pg. 8), then Affordable Medicines, rather than the NCD section, need to ensure that this occurs. The human resource needs for providing good NCD interventions need to planned through the involvement of different sections and implemented primarily through Human Resource development.

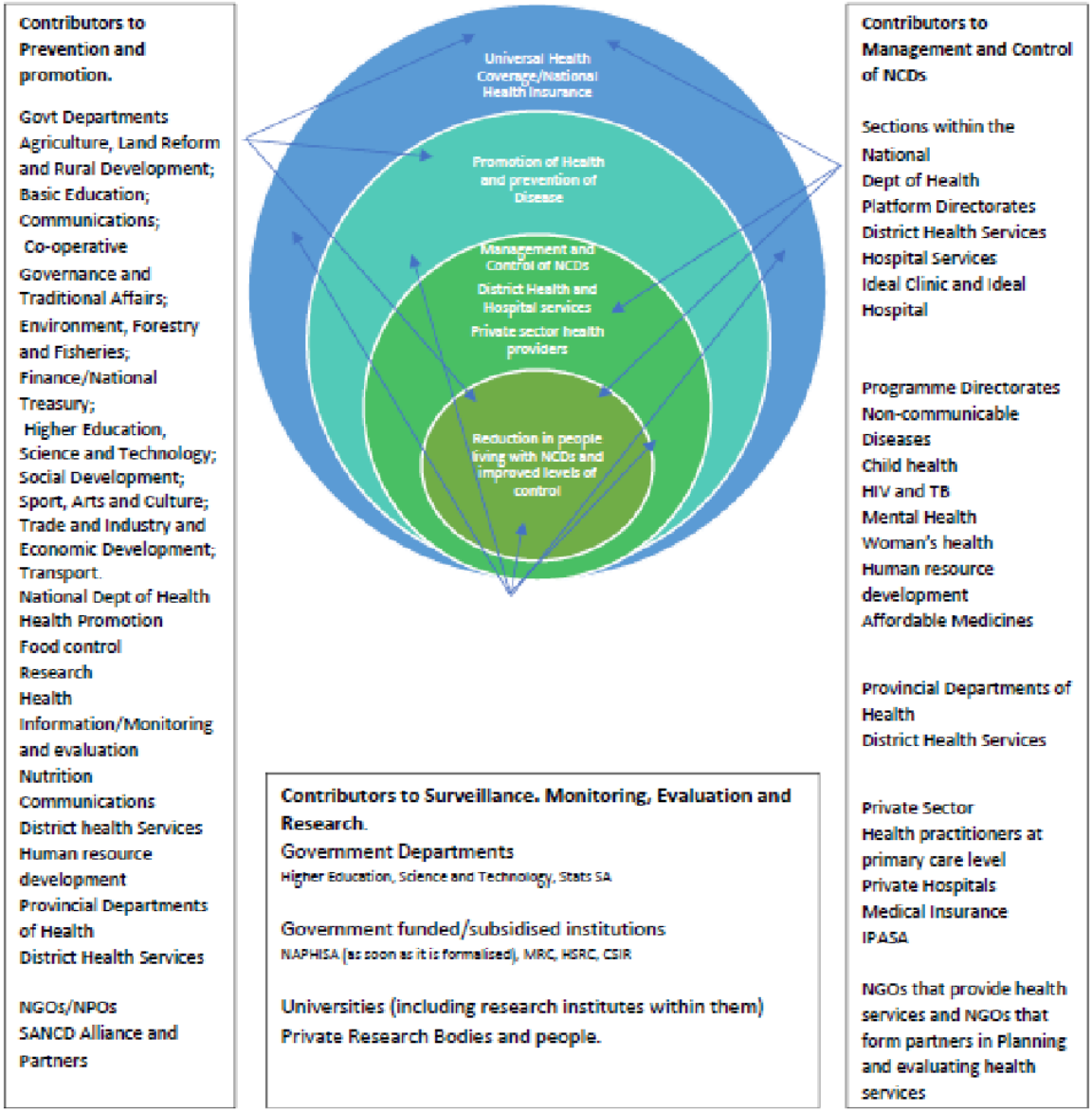

Figure 2.1 Contributors to meeting NCD goals

With regards to the strategy to achieve NCD goals, health services and systems themselves need to be reoriented to fully include health promotion, prevention and control of NCDs**.** These are crucial to UHC policies and plans as well as to the strengthening of the key "*building blocks*" for improved health care. For example, NCDs including health promotion, prevention and priority health care interventions, as well as access to essential medicines and technologies must be included in minimum benefit packages for NHI. Similarly, human resource development and training must fully embrace the needs for NCD prevention and care.

Preventive measures for NCDs (including, primordial, primary, secondary and tertiary preventions) within an integrated health system are critical as the early detection and treatment of these conditions would avoid interventions that are far more stressful to these individuals and their families and costlier, e.g. cardiac bypass surgery, draining both individual and government budgets.

An ICSM model remains key to improved, integrated and holistic health delivery and all people with NCDs should receive interventions to detect and treat their diseases through the implementation of this strategic plan.

2.2 INITIATION AND COORDINATION

The preparation of this plan was initiated through collaboration by all relevant sectors. The National Department of Health (NDoH) has established a coordination mechanism for consultation with various stakeholders namely Provincial Departments of Health from nine provinces, NGOs FBOs, Patients Advocacy Groups, Academic and International Organizations.

The consultation took place through physical and virtual meetings as well as electronic communication. Various stakeholders actively participated and contributed throughout the planning process. Through these consultations, a process was initiated to prioritize actions selected from the list of potential actions based on the 25 indicators and nine voluntary targets for NCDs (see Figure 2.2 below).

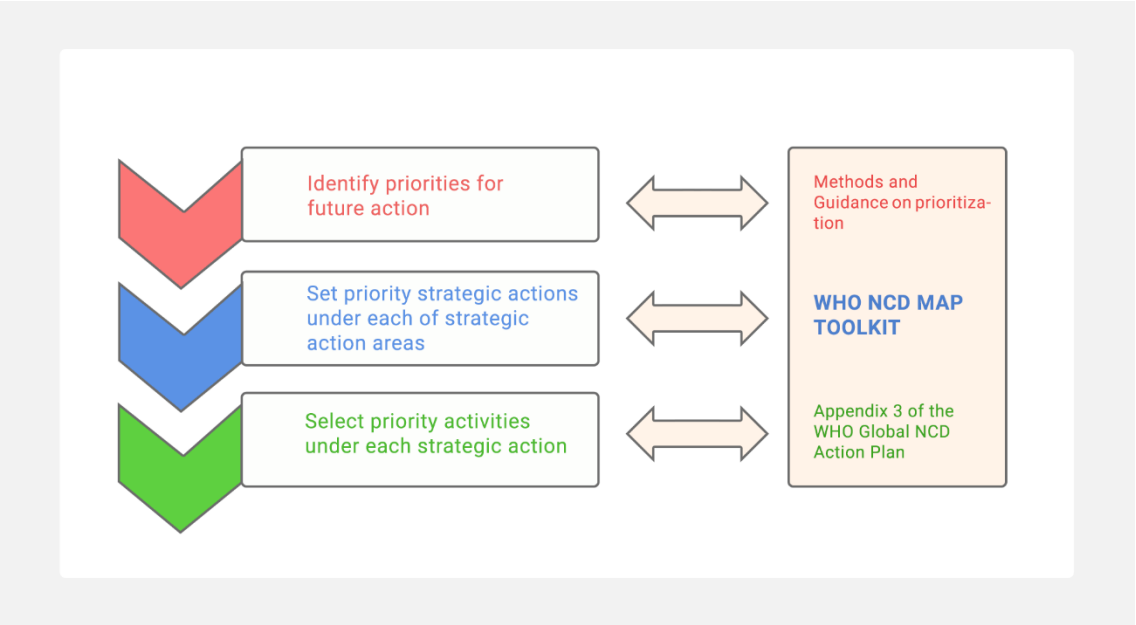

Figure 2.2 Process flow for prioritization

SECTION II: NATIONAL MULTI-SECTORAL ACTION PLAN FOR NCD PREVENTION AND CONTROL

CHAPTER 3: NATIONAL STRATEGIC AGENDA FOR NCDs

This chapter outlines the ***National Strategic Plan For The Prevention And Control Of Non-Communicable Diseases*** encompassing the key aspects of 'National Multi-sectoral Action Plan' that includes the vision, mission, and objectives, the national NCD goals and targets, the guiding principles for action within the strategic areas and priority actions.

3.1 NATIONAL ACTION FRAMEWORK FOR NCD PREVENTION AND CONTROL

The ***National Strategic Plan For The Prevention And Control Of Non-Communicable Diseases*** Incorporates all relevant elements such as vision, mission, targets, objectives, strategic areas and actions, implementation plan, and monitoring & evaluation of the national NCD MAP. The logic model for the NCD MAP was utilized to provide a linkage among NCD MAP resources, activities, outputs, audiences, and short-, intermediate- and long-term outcomes related to a specific NCD or risk factor.

3.2 OUTLINE OF THE NATIONAL NCD MAP'S VISION AND MISSION

3.2.1 VISION

A long and healthy life for all through prevention and control of non-communicable diseases

3.2.2 MISSION

To enhance multi-sectoral collaboration (& strengthen the health sector response)for alleviation of the burden of avoidable and premature morbidity, disability and mortality due to NCDs so as to promote a healthier population

3.3 NATIONAL NCD GOALS AND TARGETS

3.3.1 NATIONAL NCD GOALS AND TARGETS

NATIONAL NCD GOALS

The National NCD goal for South Africa, in accordance with the National Development Plan:

Significantly reduce prevalence of non-communicable chronic diseases

This will be attained within the Framework of Universal Health Coverage (UHC). Five central themes are embedded and mainstreamed across these goals[9]:-

- A people centred and integrated approach
- A life course approach
- A cost-effectiveness approach
- A gendered approach
- Equity based approach

[9] These four areas were identified as critical following a review of the Strategic plan for the prevention and Control of NCDs 2013-2017. These are also identified as important principles in the WHO Global Action Plan 2013-2020. Other guiding principles outlined in this Plan such as Evidence-based strategies; Universal health coverage; Human rights approach and Equity-based approach are also seen as important and are captured throughout this document.

TARGETS

The comprehensive target for South Africa, in accordance with the SDG Goal 3.4, is to:-

Reduce, by one-third, premature mortality from non-communicable diseases (NCDs) through prevention and treatment and promote mental health and well-being by 2030

The specific targets of this Strategic Plan are the 25 indicators (including nine voluntary targets) agreed to by Member States of the WHO to be reached by 2025; implementation of the National Cancer Strategic Framework and screening for mental health in people with chronic conditions and vice versa. The WHO targets consist of mortality and morbidity goals, behavioural risk factors and national health sector response. Besides the nine voluntary targets, the Plan has proposed other targets for the remaining 16 indicators. The objectives to be reached and indicators[10] for measuring outcomes are outlined in Table 3.1.

3.3.2 NATIONAL NCD TARGET AND INDICATORS

The NCD targets and indicators for South Africa are developed on the basis of WHO "*Global monitoring framework on NCDs*". It tracks implementation of the "NCD global action plan" through monitoring and reporting on the attainment of the 9 global targets for NCDs, by 2025, against a baseline in 2010[50]. These targets and indicators were developed in collaboration with multiple stakeholders (government, NGOs, private sector, international partners) based on a scientific review of the current situation and trends, and a critical assessment of feasibility. Setting these targets has taken into account the global and regional NCD targets, recommendations from the situational analysis.

Table 3.1 WHO NCD Targets and indicators

Framework element	Target	Indicators
MORTALITY & MORBIDITY		
Premature mortality from NCD	1 A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	1 Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Additional indicator		2 Cancer incidence, by type of cancer, per 100 000 population
BEHAVIOURAL RISK FACTORS		
Harmful use of alcohol	2 At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	3. Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context 4. Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context 5. Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context
Physical inactivity	3. A 10% relative reduction in prevalence of insufficient physical activity	6. Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily 7. Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
Salt/sodium	4. A 30% relative	8. Age-standardized mean population intake of salt (sodium

[10] These will also be the indicators used to measure the extent to which South Africa has reached the targets. In addition, however, specific objectives have been set that relate to these Targets and these have their own indicators to measure how well implementation has taken place.

intake	reduction in mean population intake of salt/sodium	chloride) per day in grams in persons aged 18+ years
Tobacco use	5. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	9. Prevalence of current tobacco use among adolescents 10. Age-standardized prevalence of current tobacco use among persons aged 18+ years
BIOLOGICAL RISK FACTORS		
Raised blood pressure	6. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	11. Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg) and mean systolic blood pressure
Diabetes and obesity	7. Halt the rise in diabetes & obesity	12. Age-standardized prevalence of raised blood glucose/ diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose) 13. Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex) 14. Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/ m² for overweight and body mass index ≥ 30 kg/m² for obesity)
Additional indicators		15. Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years 16. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day 17. Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥5.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration
NATIONAL SYSTEMS RESPONSE		
Drug therapy to prevent heart attacks and strokes	8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	18. Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk ≥30%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
Essential NCD medicines and basic technologies to treat major NCD	9. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCD in both public and private	19. Availability and affordability of quality, safe and efficacious essential NCD medicines, including generics, and basic technologies in both public and private facilities

	facilities	
Additional indicators		20. Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer
		21. Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programmes
		22. Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programmes and policies
		23. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt
		24. Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants
		25. Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies

Table 3.2 provides the current South African baseline for the 9 WHO targets, thereby allowing for the monitoring and evaluation of the outcomes of the activities related to this NSP. It also gives the targets which this Plan aims to achieve by 2025. In Chapter 4, an implementation Plan with activities, time frames and those responsible for meeting these targets is presented within the 3 goals pertaining to prevention, management and control and surveillance/monitoring, evaluation/research. In order to reach a number of the targets, actions are required in more than one, and even all three, of the categories. For example, reductions in the prevalence of people with raised blood pressure or halting the rise in diabetes requires all of preventive actions, management and control interventions and improved surveillance, evaluation and innovative research.

Table 3.2 NCD Baselines for South Africa

Framework element	Current situation/baseline
1. Premature mortality from NCDs[27]	29% 34% for males 24% for females
2. Harmful use of alcohol[51]	Per capita consumption 9.14 litres Alcohol consumption. 61% of men 26% of women. Risky drinking total 23% 20% of men 5% of women
3. Physical inactivity[52]	Total 40% 28.5% men 47.3% Women (< 150 of moderate/week or < 75 min of vigorous/week)
4. Salt intake[53]	Mean population intake 7g per day
5. Sugar intake[38]	Per capita intake 36 Kg per person annually
6. Tobacco use (Age 15 plus)[51]	Total 22.5% 37% men 8% women
7. Hypertension[51]	

7.1 Prevalence for raised blood pressure (Age 15 plus)	Total Prevalence 45% 46% women 44% men
7.2 Knowledge of hypertension status	51% of people with hypertension
7.3 Intervention provided for raised blood pressure	22% of people with hypertension
8. Diabetes and obesity[51]	
8.1 Prevalence for raised HBA1 (Age 18 plus)	13% of women and 8% of men age 15 and older have an adjusted HbA1c level of 6.5% or above.
8.2 Knowledge of blood glucose status	55% of people with raised blood glucose
8.3 User's blood glucose levels controlled	19% of people with raised blood glucose
8.4 Obesity and overweight	27% of women overweight and 41% obese. 20% of men overweight and 11% obese
9. Drug therapy to prevent heart attacks and strokes	Not available. Research to be carried out
10. Essential NCD medicines and basic technologies to treat major NCDs	80% availability of essential NCD medicines
11. Mental health screening.	To be determined through research
12. National Cancer Strategic Framework	National Cancer Strategic Framework 2017-2022

3.4 GUIDING PRINCIPLES FOR ACTION

3.4.1 GUIDING PRINCIPLES FOR ACTION

Guiding principles for action to implement the plan are described below:

Efficient Resource Utilization: To provide health promotive and preventive actions as well as continued primary health care and hospital care based on available resources and infrastructure.

Empowerment of People and Communities: To enable healthy supportive environments in communities to adopt healthy lifestyle and thereby reduce modifiable NCDs risk factors through their involvement in advocacy, policy, planning, legislation, service provision, monitoring, research and evaluation.
Equity-Based Approach: To realize that the creation of inclusive, equitable and economically productive services for NCDs to cater for both the vulnerable groups and the entire society, to address the inequitable distribution of social determinants of health.

Evidence Based Strategies: To provide comprehensive, affordable, culturally sensitive, cost-effective patient and people at risk- and population-oriented approaches, based on latest scientific evidence and/or best practice.

Human Rights Approach: To assure the rights of all people with NCDs to access quality and affordable health care and interventions irrespective of ethnicity, gender, language, religion, political or other opinion, nationality, as enshrined in the constitution of the Republic of South Africa.

Integration: To provide integrated comprehensive approaches towards reducing common risk factors of major NCDs including policy making, capacity building, partnership, information dissemination and implementation in all aspects.

Management of multi-morbidities[54]: To take into account care of people with multiple health conditions (multi-morbidity) which is more common in disadvantaged groups, thus contributing to health inequalities.

Multi-sectoral Action: To ensure participation of individuals, families, communities, government departments and non-governmental organizations (NGOs), Faith Based Organizations (FBOs), Community Based Organizations (CBOs), private sector and bilateral development partners for the effective prevention and control of Non-Communicable Disease using approach of Health in All Policies (HiAP).

Universal Health Coverage and National Health Insurance: To provide access; without discrimination, to nationally determined sets of comprehensive promotive, preventive, curative, rehabilitative and palliative health care services.

3.5 STRATEGIC ACTION AREAS AND OBJECTIVES

3.5.1 STRATEGIC ACTION AREAS

The following key areas were identified for implementation of this plan in line with the in the *WHO global strategy for prevention and control of NCD, global NCD action plan 2013-20*, and *WHO EB134/14* documents.

- **Governance** for NCD prevention and control including national NCD leadership, partnership, and advocacy for action in addition to strengthening national capacity for implementation
- **Reduction of risk factors** including tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity.
- **Early detection and effective NCD management** through PHC and health systems strengthening
- Promoting high quality **NCD research**
- Enhance national capacity for NCD **surveillance**

3.5.2 STRATEGIC OBJECTIVES

The Strategic action areas inform the objectives of this Plan;:

1. To raise the priority accorded to the prevention and control of NCDs at all levels through advocacy
2. To strengthen national capacity, leadership, governance, multi-sectoral collaboration and partnerships to accelerate country response for the prevention and control of NCDs
3. To reduce modifiable risk factors for NCDs and its co-morbidities and underlying SDH through the creation of health promoting and enabling environments
4. To reduce morbidity and mortality associated with NCDs
5. To strengthen and orient health systems to address the prevention and control of NCDs and the underlying SDH through people centred PHC and UHC
6. To promote and support national capacity for high-quality research and development for the prevention and control of NCDs
7. To monitor the trends and determinants of NCDs and to evaluate progress in their prevention and control

3.5.2.1 STRATEGIC OBJECTIVE 1

Strategic Objective 1: To raise the priority accorded to the prevention and control of NCDs at all levels through advocacy

The NCDs have now become a priority area for the Government. In order to sustain the attention and commitment of the Government, it would require active and continuing advocacy for NCDs. Therefore, comprehensive advocacy to both government and partners will be required to highlight the huge burden of NCDs in terms of morbidity, mortality and disability as well as ensure that Government at all levels prioritize prevention and control of NCDs through a *whole of government* and multi-sectoral approach (HiAP), acknowledging that investment in NCDs is a priority for social and economic development.

Key actions: Key strategic interventions for implementation of this objective would require:

- Raising public and political awareness on the burden and socio-economic impact of NCDs and the benefit of preventing them
- Advocating for prioritization of NCDs in the national, provincial and district development agenda and planning process
- Orienting other sectors and stakeholders, including civil society and the private sector, to create enabling legal, policy and regulatory environment which is conducive for the prevention and control of NCDs

Roles and Responsibilities for Government: The Government will, through its various Departments, formulate policies and guidelines that will address various facets of NCDs and will enable an environment for effective coordination and implementation of comprehensive NCDs prevention and control programme. This will ensure that NCDs are embedded into the national, provincial and district health-planning processes and broader development agendas. In addition, it will generate actionable evidence using HiAP approach on linkages between NCDs and SDGs, including other related issues such as poverty alleviation, economic development, sustainable cities, non-toxic environment, food security, climate change, disaster preparedness, peace and security and gender equality. The Government will also ensure that appropriate multi-sectoral partnerships are forged at the national, regional and district levels.

Role of Partners: Partners will support the Government's advocacy efforts to raise the priority accorded to NCDs. This is through encouraging the continued inclusion of NCDs in their respective development cooperation agendas and initiatives, internationally and nationally agreed development goals, economic development policies, sustainable development frameworks and poverty-reduction strategies.

3.5.2.2 STRATEGIC OBJECTIVE 2

Strategic Objective 2: To strengthen national capacity, leadership, governance, multi-sectoral collaboration and partnerships to accelerate country response for the prevention and control of NCDs

A whole-of government response (HiAP) to the prevention and control of NCDs would assist in reducing the prevalence of NCDs. This would require the existence of a comprehensive mandate for multi-sectoral action and mechanisms to develop and implement policies that take the interests of different sectors into account and a framework for accountability that sets out the responsibilities of all Government Departments and partners to achieve shared goals.

The Department of Health will ensure a multi-sectoral approach and implementation of key policies. Strengthening the capacity of the NCDs Prevention and Control Programme at all levels (National, Provincial and District) is a pre-requisite for the successful implementation and monitoring of the national response to NCDs. This will specifically be done through appointment of a dyad (District based public health medicine specialist and PHC trained nurse) in line with the District Clinical Specialist teams for maternal and Child Health. They would provide requisite skills and capacities at the grass root level. They would enhance the existing NCDs program structures at provincial and district levels to support implementation of planned activities as well as to work with other sectors. In addition to multi-sectoral collaboration, implementation of interventions for prevention and control of NCDs will require a focus on population wide interventions. Effective implementation of all population-wide interventions requires the emphasis to shift from information and health education for individuals to legal, fiscal, and regulatory actions by Governments. Active involvement of civil society organizations and advocacy groups will be required to resist attempts by powerful organizations with vested interests (such as the tobacco, food, and alcohol industries) to undermine the development and implementation of effective policies and laws.

Key actions: The key strategies for implementation include:

- Establish high level NCDs multi-sectoral coordination mechanisms at National, Provincial and District levels for engagement, policy coherence and mutual accountability of different spheres of policy-making that have a bearing on NCDs
- Develop annual NCDs operational plans at all levels and allocate resources
- Strengthen District health services through appointment of District based PHM specialists and nurses
- Create registry of all policies and regulations that might influence prevention and control of NCDs
- Empower communities to adopt healthy life styles and prevent NCDs
- Strengthen Public Private Partnerships (PPP) to enhance collaboration on NCDs prevention and control interventions

Role of Government: The Government will be responsible for the formation of the NCDs multi-sectoral coordination mechanism and will ensure a *whole-of-government* and *whole-of-society* approaches. It will convene multi-stakeholder working groups, secure budgetary allocations for implementing and evaluating multi-sectoral action and monitor and act on SDH. The Government will also integrate the prevention and control of NCDs into planning processes with special attention to SDH, gender equity and the needs of vulnerable populations. It will also attempt to provide adequate, predictable and sustained resources for

prevention and control of NCDs and for UHC and NHI, through an increase in annual budgetary allocations, and other finance mechanism of Government. It will as well provide training and appropriately deploy work forces, and strengthen institutional capacity for implementing this plan.

Role of Partners: Partners will support authorities at various levels (National, Provincial and District) in implementing evidence-based multi-sectoral action. They will support the mobilization of adequate, predictable and sustained financial resources and the necessary human and technical resources to support the implementation of national action plan and the monitoring and evaluation of progress. They will also promote capacity-building of relevant NGOs at the national, provincial and District levels, in order to realize their full potential as partners in the prevention and control of NCDs.

3.5.2.3 STRATEGIC OBJECTIVE 3

Objective 3: To reduce modifiable risk factors for NCDs and its co-morbidities and underlying SDH through the creation of health promoting and enabling environments

The five major shared risk factors namely use of tobacco products, unhealthy diet, physical inactivity harmful use of alcohol and air pollution contribute significantly to the growing burden of NCDs. Reduction in the levels of these modifiable risk factors in the population significantly reduces the disease burden due to NCDs. Prevention and control of NCDs should target people at entire life span ranging from pre-natal life, infancy, childhood adolescence, adulthood and old age. Even though the NCDs often appear in adulthood, exposure to the risk factors starts early in life. Reducing exposure to the NCDs risk factors requires engagement of non-health sectors and non-state actors in the prevention of tobacco products use, reduction of physical inactivity, unhealthy diet, obesity, harmful use of alcohol and the protection of children from adverse impacts of marketing of unhealthy foods and beverages. This calls for strengthening the capacity of individuals and populations to adoption of healthier behaviour and lifestyle that foster health and well-being.

Key actions: The key strategies for implementation include:

- Creation of an enabling fiscal, legal and legislative environment and provision of a leading role in management of the behavioural risk factors
- implementation of policies for prevention and control of NCDs at all levels including work place; community, public and private institutions, schools and workplaces;
- implementation of the WHO recommendations on the marketing of foods and non-alcoholic beverages to children and adolescents
- promoting existing initiatives for optimal breastfeeding and complementary feeding.
- advocating for policy and regulations for improved urban design conducive for physical activity
- raising public awareness on the dangers of smoking/ tobacco products, alcohol and substance use and exposure to second hand tobacco smoke, especially through effective mass media campaigns;
- Assessment of the magnitude of environmental, biological and occupational hazards

creation of public awareness on prevention and control of exposure to environmental, biological and occupational risk factors for NCDs
(Add action on air pollution, I don't think we show link between air pollution and NCDs earlier in the document)

Roles and responsibilities of Government: The Government will provide enabling fiscal, legal and legislative environment and has a leading role in developing, strengthening and enforcing national policies and guidelines on behavioural risk factors for NCDs. In addition, Government will put mechanisms in place to ensure that these policies are being implemented effectively through multi-sectoral action and *whole-of-government* approach.

Role of partners: Partners will facilitate the implementation of the *WHO Framework Convention on Tobacco Control (FCTC)*; the global and national strategies for reduction of harmful use of alcohol, global and national strategies for diet, physical activity and marketing of foods and non-alcoholic beverages to children, by supporting and participating in capacity strengthening, shaping the research agenda, development and implementation of technical guidance, mobilizing financial support and regular monitoring of their implementation. (+ partners linked to air pollution)

3.5.2.4 STRATEGIC OBJECTIVE 4

Objective 4: To reduce morbidity, disability and mortality associated with NCDs

Reduction of morbidity and morbidity would require an integrated approach to clinical care through improving secondary and tertiary prevention.
Key actions: Creation of an integrated approach to health care and enabling referral system through availability of SMART a) clinical guideline (b) health technology (c) medicine and consumables (d) health work force and above all (e) integrated patient records to allow case monitoring o + M & E frameworks t. A cascading effect will be implemented to manage the various NCDs. This would be based on integration of care at all levels of health services would focus not only on five major NCDs (namely cardiovascular diseases, Chronic Respiratory diseases, Cancer, Diabetes, Mental and Neurological diseases) but also other NCDs as the majority of these NCDs cause significant morbidity and disability.

Roles and responsibilities of Government: The Government will provide enabling fiscal, legal and legislative environment and has a leading role in developing, strengthening existing health system for availability of modern health technology and access to essential medication. Government will put mechanisms in place to ensure that clinical guidelines are updated and implemented at all levels of health care. In addition, it will ensure synergies among these guidelines to ensure proper management of multi-morbidities.

Role of partners: Partners will facilitate the implementation of these guidelines as well as raising awareness among population about the NCDs and support them to improve adherence.

3.5.2.5 STRATEGIC OBJECTIVE 5

Objective 5: To strengthen and orient health systems to address the prevention and control of NCDs and the underlying SDH through cascading model people centred PHC and UHC

Implementation of the NCDs interventions needs a functioning health-care system and a stepwise approach for improvement health planning processes; health financing; capacity building of health workers; supply of essential drugs and technologies; health-information systems. This would assist in implementation of comprehensive health services delivery models for long-term patient-centred care that is universally accessible and affordable. This could require strengthening PHC as part of a service hub that provides the support needed to deliver these critical prevention and treatment services for NCDs with well-functioning referral linkages to secondary and tertiary care services. Development and implementation of a cascading model is realistic first step that need to be integrated into the primary health-care services. The key features of a cascading model where PHC is the focus of the delivery of care are: (a) Person focus across the lifespan rather than a disease focus (b) Accessibility with no out-of-pocket payments (c) Distribution of resources according to population needs rather than demand; and (d) Availability of a broad range of services including preventive services and coordination between different levels in the health system. This will ensure setting targets for 2025 for:

- People living with NCDs to know their NCD status;
- People diagnosed with NCDs to receive sustained treatment
- People receiving treatment to achieve control and to prevent complications

Key actions: The key strategies that will be implemented include: (a) continuation of cost effective NCDs interventions into the PHC package with referral systems to all levels of care; (b) Development and dissemination of integrated clinical guidelines and treatment protocols for NCDs prevention, care and treatment for all levels of health care; (c) Building the capacity of the health workforce (including CHWs in terms of numbers and skills mix, at all levels, for the prevention and control of the NCDs; (d) Ensuring availability of essential NCDs prevention and care medicines, supplies, technologies and link this to financing mechanisms to foster access, affordability and sustainability at the national, provincial and district levels.

Roles and responsibilities of Government: The Government will exercise responsibility and accountability in ensuring the availability of effective and efficient NCD services within the entire health system. It will also make progress towards UHC and NHI giving priority to financing a combination of cost-effective preventive, curative and palliative care interventions at different levels of care for NCDs and their comorbidities. It will identify competencies required and invest in improving the knowledge, skills and motivation of the current health care workers. In addition, the Government will incorporate the prevention

and control of NCDs in the training curricula of all health personnel including CHWs with an emphasis on primary health care.

Role of Partners: Partners will support the mobilization of adequate, predictable and sustained financial resources to advance universal coverage in national health systems, especially through PHC. They will support efforts of Government in strengthening health systems and expanding quality service coverage through development of appropriate health care infrastructure and institutional capacity for training of health personnel such as public health institutions, medical and nursing schools. In addition, they contribute to efforts to improve access to affordable, safe, effective and quality medicines and technologies for the prevention and control of NCDs.

3.5.2.6 STRATEGIC OBJECTIVE 6

Objective 6: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs

The National research agenda needs to be agreed upon to set priorities for research that might answer specific problems and generate information and knowledge that will support efforts for resource mobilization and monitoring effectiveness of interventions being implemented. Research in the NCDs field will be promoted to continuously strive to improve the prevention and control of NCDs as well as to inform and advocate for NCDs.

Key actions: The key strategies for implementation include: (a) identification for priority research areas on NCDs and their risk factors; (b) strengthening capacity for NCDs research; (c) advocacy for resources for research on priority NCDs and (d) facilitation of knowledge translation on conducted operational research to guide decision making by national government

Roles and Responsibilities of Government: Government will strengthen national institutional capacity for operational research and development, including research infrastructure, equipment and supplies in research institutions and human resources especially the competence of researchers to conduct quality research. In collaboration with research institutions and academia, Government will develop and implement NCDs operational research agenda and increase investment in research, innovation and development as an integral part of the national response to NCDs

It will effectively use academic institutions and multidisciplinary agencies to promote operational research, retain research workforce, incentivize innovation and encourage the establishment of networks to conduct policy-relevant operational research. It will also strengthen the scientific basis for decision making through NCD-related operational research and its translation to enhance the knowledge base for ongoing national action.

Role of Partners: Partners will promote investment and strengthen national capacity for quality research, development and innovation, for all aspects related to the prevention and control of NCDs in a sustainable and cost-effective manner, including through strengthening of institutional capacity and creation of research fellowships and scholarships. They will facilitate NCD-related research and its translation to enhance the knowledge base for implementation of the national action plan. In addition, partners will disseminate, as appropriate, information on affordable, cost effective, sustainable and quality interventions, best practices and lessons learnt in the field of NCDs

3.5.2.7 STRATEGIC OBJECTIVE 7

Objective 6: To monitor the trends and determinants of NCDs and to evaluate progress in their prevention and control

For better-informed programme planning, the NCDs surveillance, monitoring and evaluation mechanisms need to be integrated in the existing routine data collection and reporting systems and tools for population-based surveys. A framework for national and global monitoring, reporting, and accountability, with agreed sets of indicators, is essential to ensure that the returns on investments in NCDs that meet the expectations of all partners. Continuous monitoring of the national progress will provide the foundation for advocacy, policy development and coordinated action, as well as to reinforce political commitment. In addition, the monitoring and evaluation framework will serve to monitor progress of national-, provincial- and district level

strategies for the prevention and control of NCDs.

Key actions: The key strategies for implementation include: (a) Strengthening capacity for NCDs surveillance; (b) Integration of key NCDs monitoring indicators into the routine Health Management Information System (HMIS) data collection and reporting systems; (c) Conducting baseline and periodic NCDs and their risk factors surveys; (d) Establishment and maintenance of National Registries on some major NCDs (such as National Cancer Registry); (e) allocation of resources for routine and periodic surveillance of NCDs and their risk factors at all levels; and (f) dissemination of surveillance results to guide decision making by national, provincial, district and sub-district levels.

Roles and Responsibilities of Government: Government will strengthen technical and institutional capacity, including appointment PHM Specialists in the Districts, to manage and to implement surveillance and monitoring systems that will be integrated into existing health information systems, with a focus on capacity for data management, analysis and reporting in order to improve availability of high-quality data on NCDs and its risk factors. It will also integrate monitoring systems for the prevention and control of NCDs, including prevalence of relevant key interventions into national health information systems, in order systematically to assess progress in use and impact of interventions. It will identify data sets, sources of data, integrate NCD surveillance into national health information systems and undertake periodic data collection on the behavioural and metabolic risk factors (such as harmful use of alcohol, physical inactivity, tobacco products use, unhealthy diet, overweight and obesity, raised blood pressure, raised blood glucose, and hyperlipidaemia). It will also take into consideration the determinants of risk exposure such as marketing of food, tobacco and alcohol products, with disaggregation of the data (where available) by key dimensions of equity, including gender, age (such as children, adolescents, adults, elderly) and socioeconomic status in order to monitor trends and measure progress in addressing inequalities. Government will develop, maintain and strengthen disease registries (such as National Cancer Registries) if feasible and sustainable, with appropriate indicators for better understanding of needs. It will contribute, on a routine basis, information on trends in NCDs with respect to morbidity, mortality by cause, risk factors and other determinants, disaggregated by age, gender, disability and socioeconomic groups, as well as provide information to the WHO on progress made in the implementation of national action plans to achieve target sets around 25 indicators within the "*Global monitoring framework on NCDs*".

Role of Partners: Partners will mobilize resources, promote investment and strengthen capacity for surveillance, monitoring and evaluation, on all aspects of prevention and control of NCDs. They will facilitate surveillance and monitoring and the translation of results to provide the basis for advocacy, policy development and coordinated action and to reinforce political commitment. In addition, partners will promote the use of media to improve capacity for surveillance and monitoring and to disseminate, as appropriate, data on trends in risk factors, determinants and NCDs.

CHAPTER 4 - IMPLEMENTATION PLAN

This chapter outlines the detailed implementation plan including the implementation activities and how the plan should be conducted. In addition, this chapter also provides guidance on the establishment of the national coordination mechanism and summarizes the roles and responsibilities of the relevant sectors, relevant stakeholders, and the provincial and district level inter-sectoral NCD Committees.

4.1 INTRODUCTION

Effective interventions against the five key risk factors for NCDs

WHO has identified a set of population and individual level interventions which are affordable, feasible and cost-effective and which every country can implement and significantly reduce the burden of NCDs. These high priority interventions are known as "*Best Buys*"[55]. There are also other important WHO recommended interventions known as "*Good Buys*" that have been shown to be effective, but for which cost-effectiveness analysis data is not readily available. Effective and efficient implementation of these interventions would require overarching health system actions, which may include:

1. Strengthen and orient the health system to address NCDs and to mitigate risk factors through people-cantered health care and UHC
2. Integrate very cost-effective NCDs interventions into the basic PHC package with referral systems to all levels of care
3. Explore viable health financing mechanisms and innovative economic tools supported by evidence to ensure universal coverage of NCDs interventions and services
4. Scale up cost-effective high-impact interventions including interventions to address behavioural risk factors and early detection and long term care of people affected by NCDs
5. Train the health workforce and strengthen the capacity of health systems, particularly at the primary care level, to address the prevention and control of Non-Communicable Diseases
6. Improve the availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs, in both public and private facilities
7. Develop and implement a palliative care policy, including access to opioids analgesics for pain relief, together with training for health workers
8. Expand the use of digital technologies (such as electronic health records) to increase health service access and efficacy for NCD prevention, and to reduce the costs in health care delivery
9. Strengthen human resources and institutional capacity for surveillance, monitoring, evaluation and research at the district and sub-district levels as a part of strengthening PHC services
10. Establish and/or strengthen a comprehensive NCDs surveillance system, including reliable registration of deaths by cause, cancer registration, periodic data collection on risk factors and monitoring national response

4.2 MECHANISMS TO FACILITATE THE IMPLEMENTATION OF A NATIONAL NCD MAP

2.2.1 COORDINATION AND IMPLEMENTATION MECHANISM

In order to effectively coordinate the national NCDs response, including the implementation of the NCDs strategy, there is a need to strengthen the current NCD programme as part of the continued commitment of the Government for the prevention and control of NCDs. It should be highlighted that strengthening of NCDs programme is required at all levels, (namely national, provincial, district, sub-district and community levels).

The efficient and effective implementation of the National multi-sectoral strategic plan for prevention and control of NCDs would require a multi-sectoral approach with effective partnership through involvement of relevant governmental Institutions, private sectors, partners, FBOs, NGOs, CBOs as well as communities through local associations. It is important to note that this multi-sectoral approach will necessitate strong harmonization and coordination among all government sectors and stakeholders. Thus, a national multi-sectoral coordination mechanism, which coordinates the actions of different sectors for the common goal of prevention and control of NCDs, is central to the success of national NCDs prevention and control efforts and the attainment of national targets. Multi-sectoral coordination mechanisms offer a synergistic response to these diseases and their risk factors. Experiences with health concerns such as HIV and AIDS indicate that ***political leadership at the supra-ministerial level is critical to drive action within any multi-***

sectoral coordination mechanism. Three levels of coordination mechanisms are suggested namely national, provincial and district levels.

National Level

(2 levels of coordination are proposed at national level) Firstly; the mechanism has the mandate of developing policies, ensuring coordination between different sectors, mobilizing and allocating resources, reviewing progress in the implementation of the agreed action plan at the national and provincial levels, addressing obstacles to progress and reporting on international commitments. The National level committee (in line with National Health Commission in many countries) will be coordinated by the Minister of Health and the secretariat would be the National Departments of Health, while Director Generals of Departments and relevant partner organizations would be members.
In order to facilitate the needed technical support at the national level, the Director General of the National Department of Health (NDoH) will form a *National NCDs Technical Committee* with representation of the different departments of the National Department of Health and. This committee will be chaired by a designated member of the Executive Management Committee and will provide technical support for the planning, implementation and monitoring of the health system response for NCDs. This committee will also create different technical working groups (TWG) for specific thematic areas (such as cardiovascular diseases, diabetes mellitus, cancer prevention and control, tobacco products control, multimorbidities, obesity and dementia) for rendering technical support in specific areas. The NDoH will develop the terms of reference for the National NCDs Technical Committee and the different technical working groups, which will be formed under it.

Roles and responsibilities for National Multi-sectoral Coordination Mechanism for NCDs
- Provide political leadership and guidance to relevant sectors for NCDs prevention and control
- Enhance the integration of NCDs prevention and control in the policies and programmes of relevant ministries and government agencies
- Provide a dynamic platform for dialogue, stocktaking and agenda-setting, and development of public policies for NCDs prevention and control
- Facilitate development and resourcing of the MAP on NCDs prevention and control
- Coordinate technical assistance for mainstreaming NCDs in the work of relevant sectors at the national and provincial levels
- Monitor implementation of the action plan and review progress at the National, provincial, district and sub-district levels
- Report on inter-governmental commitments pertaining to NCDs prevention and control

Role of the National NCDs Technical Committee (NTC)
- Communicate with key stakeholders, Ministries, NGOs, FBOs, CBOs on NCDs prevention and control concerns
- Organize meetings of the National multi-sectoral Coordination Mechanism for NCDs
- Develop the agenda for the meeting in consultation with the chairperson and other sectors
- Facilitate the development of strategic and operational plan for NCDs prevention and control
- Request reports on progress of work from stakeholders (such as Ministries, NGOs, FBOs, CBOs) and Provincial coordination bodies
- Follow-up on decisions taken by the coordination body
- Arrange technical assistance to other Departments
- Identify knowledge gaps and advance research priorities to inform policy decisions
- Support stakeholders in accessing resources for implementing their commitments
- Facilitate monitoring and evaluation of the work of the coordination mechanism against agreed national and global NCDs targets

Provincial level

The provincial level mechanisms are largely concerned with implementation of programmes, enforcement of relevant laws and reporting on activities. The provincial level committee will be coordinated by the Member of Provincial Executive Council (MEC) of Health and the secretariat would be the Provincial Departments of Health, while heads of Departments and relevant NGOs in the province would be members.

Role of the Provincial Multi-sectoral Coordination Mechanisms for NCDs

- Ensure effective implementation of the MAP on NCDs prevention and control in the province
- Coordinate with relevant sectors to mainstream NCDs prevention and control in their programme implementation at provincial levels
- Develop provincial NCD plan and identify and access resources for implementation of the plan
- Report on implementation of the plan to the National Coordination Mechanism
- Request reports on progress of work from stakeholders (such as Departments, NGOs, FBOs, CBOs), and District coordination bodies
- Follow-up on decisions taken by the coordination body

District level

The district level mechanisms are largely concerned with implementation of programmes, and reporting on activities. The district level committee will be coordinated by the Member of the District Mayoral Council (MMC) of Health and the secretariat would be the District Health Department, while heads of Departments and relevant NGOs in the district would be members.

Role of the District Multi-sectoral Coordination Mechanisms for NCDs

- Ensure effective implementation of the MAP on NCDs prevention and control in the district and its sub-districts
- Coordinate with relevant sectors to mainstream NCDs prevention and control in their programme implementation at district levels
- Integrate with four streams of PHC Re-engineering: CHWs, DCST, Integrated School Health Programmes and Private General Practitioners
- Develop district NCD plan and identify and access resources for implementation of the plan
- Report on implementation of the plan to the Provincial Coordination Mechanism
- Request reports on progress of work from stakeholders (such as other departments, NGOs, FBOs, CBOs),
- Follow-up on decisions taken by the coordination body

2.2.2 A PHASED APPROACH TO IMPLEMENTATION

The detailed implementation plan using a phased approach is described in Appendix A. One of the main purpose of this plan is to create baseline data for the 25 indicators. This will require coordinated approach for the next five years. The plan also proposed a dyad structure similar to District Clinical Specialist Team (DCST) for maternal and child health to streamline implementation at the district level. In addition, yearly target for the above set of indicators are included as Appendix B.

2.2.3 CAPACITY BUILDING

Successful implementation of this plan would require strengthening national and local capacity for implementing the NCD MAP including:

- Facilitating networks and partnerships to improve capacity for implementation
- Promoting human resource development to ensure staff have the appropriate knowledge and skills
- Strengthening the systems and structures through promoting institutional and infrastructural capacity building.

4.3 CASCADING

In December 2013, the UNAIDS Programme Coordinating Board called on UNAIDS to support country- and region-led efforts to establish new targets for HIV treatment scale-up beyond 2015 which led to d a new, final ambitious, but achievable target: (a) By 2020, 90% of all people living with HIV will know their HIV status. (b) By 2020, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy and (c) By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression[56]. It is felt a similar focused target is necessary for improving management of NCDs. However, unlike HIV/ AIDS, NCDs are a compendium of many diseases and one set of targets may not suite all these diseases. Therefore, it is felt a baseline is necessary for each of these NCDs to set realistic targets. During the coming quinquennium, the focus will be to achieve (a) target sets for diabetes and hypertension and (b) to determine realistic targets for other NCDs which would be implemented in the next quinquennium.

Given very high levels of cardiovascular disease and diabetes in South Africa, the 90/60/50 model will be

applied to blood pressure and blood glucose.

- 90% of all people over 18 will know whether they have hypertension and/or raised blood glucose or not;
- 60% of these people with raised blood pressure or blood glucose will receive intervention and
- Lastly, 50% of them are receiving interventions will be controlled.

(Would it help if we used 2 provinces to demonstrate how these would be calculated?

CHAPTER 5 – COSTING THE PLAN AND FINANCING OF NCD MAP

2.3 COSTING ESTIMATE FOR IMPLEMENTING THE PLAN

2.3.1 A COST-EFFECTIVENESS APPROACH

"*Maximizing the impact of every dollar spent is crucial if we are to tackle one of the biggest health challenges of our time: NCDs*" (WHO 2018)[57]. This is important in every country, but particularly where health resources are in short supply such as in South Africa, where pressures on the public health system are impacting on access and quality of care. Return on Investment (ROI), encompasses the range of approaches that assess the value generated by an investment, compared to the resources put in. The WHO have calculated areas where countries can obtain the best return on investment. Not all of these actions are possible from within the DoH. However, in areas that need to be implemented by other sectors, the DoH will assist with information and support to ensure that these best buys are implemented in the country. While the WHO have recommended 88 interventions based on cost, 16 are considered the most cost-effective and feasible for implementation. These are interventions where a WHO Choice analysis found an average cost-effectiveness ratio of ≤ $ 100 per DALY averted in low- and lower middle-income countries. Many of these interventions that fall outside the control of the Health sector, particularly those related to fiscal policies, have already been proven or projections of cost savings that can be made within the South African context[58].

2.4 FINANCING NCD PREVENTION AND CONTROL

The majority of the intervention included in this plan are routinely carried out as a part of the implementation of the first strategic plan. Therefore, the cost associated with these activities are already included in the equitable share. However, attempts will be made during this planning period to quantify these costs.

In addition, there are some activities would be carried out during the plan which would require detailed costing. This would be submitted as a supplement to this plan.

As a part of development of this plan, an analysis was done to quantify the portion of the cost of offering NCD as per standard treatment guideline. This cost was a part of the NCD treatment offered under ICSM model. In addition, the information from National Tertiary Service Grant was analysed for estimation of cost at the tertiary level. Lastly, an integrated cost calculation was done for Hypertension and diabetes.

SECTION III: NATIONAL ACCOUNTABILITY FRAMEWORK

CHAPTER 6 MONITORING AND EVALUATION

This chapter discusses the monitoring and evaluation of the national NCD MAP to ensure accountability. This section includes information on (a) the national monitoring framework, (b) monitoring impact/ outcomes, (c) monitoring and evaluating the progress in implementing the NCD MAP, and (d) the reporting mechanism.

2.5 NATIONAL MONITORING FRAMEWORK

This section describes the establishment of a national NCD surveillance, monitoring, and evaluation system and presents the process for development. The implementation of the strategy will be monitored and evaluated through the Monitoring and Evaluation Framework, which will cover all aspects of the strategy and complementing policies. The NCDs program together with relevant programs within the DoH and other stakeholders will conduct monitoring and evaluation activities over the course of the implementation phase. Monitoring and evaluation will capture the various process measures and outputs, which will guide program implementation. Overall outcome will be evident through demonstration of NCDs risk reduction and reduction in morbidity and mortality compared to base year.

2.6 MONITORING AND EVALUATING THE PROGRESS IN IMPLEMENTING NCD MAP

The monitoring and evaluation framework is described below, incorporating the strategic goals, objectives and targets.

Figure 6.1 Set of nine voluntary targets for NCDs[59]

Among the 30 targets set for 36 indicators (25 of them are from Global framework), 15 targets are created especially for this plan to monitor these indicators

Table 6.1 Strategic framework

Strategic action areas	Strategic objective	Framework element	Target	Indicators
Governance	1 To raise the priority accorded to the prevention and control of NCDs at all levels through advocacy		1.1 Prevention and control of NCDs at all levels prioritised through advocacy documentation and sessions for public and political leaders	-Number of advocacy documents on the burden and socio-economic impact of NCDs, and the costs of inaction -Number of advocacy sessions for public and political leaders
	2 To strengthen national capacity, leadership, governance, multi-sectoral collaboration and partnerships to accelerate country response for the prevention and control of NCDs		2.1 Functional NCDs Multi-sectoral Coordination Committees in place at all levels	Number of Multi-sectoral Coordination Committees (its technical Working Groups) put in place at National., Provincial and District levels
			2,2 Development of NCDs operational plans	Number Provinces and Districts developed and implemented integrated and resourced NCD plan
			2.3 Registry of updated policies and regulations and clinical guidelines related to NCDs in place	Creation of updated National Registry of policies and regulations related to NCDs in alignment with latest global evidences
Reduction of risk factors	3 To reduce modifiable risk factors for NCDs and its co-morbidities and underlying SDH through primordial and primary prevention measures	Harmful use of alcohol	**3.1 At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context (2)**	**3. Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context**
				4. Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context
				5. Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context
		Physical inactivity	**3.2 A 10% relative reduction in prevalence of insufficient physical activity (3)**	**6. Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily**
				7. Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
		Salt/sodium intake	**3,3. A 10% relative reduction in mean population intake of salt/sodium (4)**	**8. Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years**
		Tobacco use	**3.4. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years (5)**	**9. Prevalence of current tobacco use among adolescents**
				10. Age-standardized prevalence of current tobacco use among persons aged 18+ years
		Additional indicators	3.5. A 10% relative reduction in Age-standardized total energy intake from saturated fatty acids in persons	**15. Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years**

Strategic action areas	Strategic objective	Framework element	Target	Indicators
			aged 18+ years	
			3.6. A 10% relative reduction in Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day	**16. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day**
			3.7 Policies in place for reduction of the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt	**23. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt**
Early detection and effective NCD management	4 To reduce morbidity, disability and mortality associated with NCDs	Premature mortality from NCD	4.1 A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	**1 Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases**
		Additional indicators	4.2. A 5% relative reduction in cancer incidence by type	**2 Cancer incidence, by type of cancer, per 100 000 population**
		Raised blood pressure	**4.3. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances (6)**	**11. Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg) and mean systolic blood pressure**
		Diabetes and obesity	**Halt the rise in diabetes & obesity (7)** 4.4 A 25% relative reduction in Age-standardized prevalence of raised blood glucose/ diabetes among persons aged 18+ years	**12. Age-standardized prevalence of raised blood glucose/ diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose)**
			4.5 A 25% relative reduction in overweight and obesity in school-aged children and adolescents	**13. Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex)**
			4.6 A 25% relative reduction in Age-standardized prevalence of overweight and obesity in persons aged 18+ years	**14. Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/ m² for overweight and body mass index ≥ 30 kg/m² for obesity)**
		Additional indicators	4.7 A 25% relative reduction in the prevalence of raised blood cholesterol	**17. Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥5.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration**
		Drug therapy to prevent heart attacks and strokes	**4.8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes (8)**	**18. Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk ≥30%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes**
		Additional indicators	4.9 At least 10% increased access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone)	**20. Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer**
			4.10 At least 10% increased availability of vaccines against human papillomavirus	**22. Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programmes and policies**
			4.11 At least 10% increase in Vaccination coverage against hepatitis B virus monitored by number of third	**24. Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants**

Strategic action areas	Strategic objective	Framework element	Target	Indicators
			doses of Hep-B vaccine (HepB3) administered to infants	
			4.12. At least 10% increase in proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies	**25. Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies**
	5. To strengthen and orient health systems to address the prevention and control of NCDs and the underlying SDH through people centred PHC and UHC	Essential NCD medicines and basic technologies to treat major NCD	**5.1. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCD in both public and private facilities (9)**	**19. Availability and affordability of quality, safe and efficacious essential NCD medicines, including generics, and basic technologies in both public and private facilities**
			5.2 Functional integration of NCD interventions and palliative care into all PHC facilities	Cost effective NCDs interventions (including palliative care) integrated into the PHC package with referral systems to all levels of care
			2.3 Registry of updated policies and regulations and clinical guidelines related to NCDs in place	Integrated clinical guidelines and treatment protocols for management of NCDs for all levels of care in place
			5.3 all medical schemes cover NCDs	NCDs fully covered in the medical aid schemes
			5.4 at least 80% all workers (including CHWs) capacitated on prevention and control of NCDs at sub-district level	Capacity of health providers (including CHWs) and program managers on prevention and control of NCDs strengthened at sub-district level
Promoting high quality NCD research	6.To promote and support national capacity for high-quality research and development for the prevention and control of NCDs		6.1 A repository of National repository of local operational research on NCDs created	A repository of National repository of local operational research on NCDs created for Evidence based national policy and program planning and decision making
Enhance national capacity for NCD surveillance	7 To monitor the trends and determinants of NCDs and to evaluate progress in their prevention and control		7.1 NCDs surveillance and monitoring capacity strengthened for availability of Baseline and periodic NCDs and risk factors data for monitoring and program planning	Strengthening of NCDs surveillance and monitoring capacity for baseline and periodic NCDs and risk factors data available for monitoring and program planning
			7.2 National Registry established for major NCDs	National Registry established for major NCDs

*9 voluntary targets and 25 NCD indicators are highlighted in bold

1.1 REPORTING MECHANISM

The majority of the report would be submitted monthly through District Health Information System (DHIS). This would require updating National Indicator Data Set to incorporate these indicators (such as mortality and morbidity Data, Prevalence of risk factors, Epidemiological data). In addition, each sub-district and district would submit a comprehensive annual report of activities (such as information/ data from the coordination mechanisms, all outcome measures (input and process indicators, outputs/milestones, and impact and outcome indicators).

Based on the experiences from inmplementation of first strategic plan, first 3 years of this plan would focus on collection of data from demonstration sites selected across nine provinces. The selection of these sites will be decided after consultation with the PDoH. Subsequently from year 4, authorised or approved indicators will be included in DHIS.

APPENDIX A: DETAILED IMPLEMENTATION PLAN

Strategic Objective 1: To raise the priority accorded to the prevention and control of NCDs at all levels through advocacy

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
1.1 NCDs prioritized in national development agenda	-Number of advocacy documents on the burden and socio-economic impact of NCDs, and the costs of inaction -Number of advocacy sessions for public and political leaders	1.1.1- Develop and disseminate advocacy tools on the linkage between NCDs and sustainable economic development 1.1.2-Conduct advocacy forums for raising public and political awareness on the burden of NCDs and the economic benefit of preventing them	NDoH PDoH	UN agencies, NGOs, CBOs, FBOs
1.2 Increased awareness of other sectors and stakeholders on the magnitude of NCDs and their expected role in the multi-sectoral response for the prevention and control of NCDs	-Number of advocacy forums with other sectors and stakeholders for prioritization of the prevention and control of NCDs	1.2.1- Conduct advocacy and sensitization forums for other sectors and stakeholders on prevention and control of NCDs 1.2.2- Encourage / motivate other sectors and stakeholders to create enabling legal, policy and regulatory environment which is conducive for the prevention and control of NCDs	NDoH PDoH DHS	All other Dept NGOs, CBOs, FBOs,

Strategic Objective 2: To strengthen national capacity, leadership, governance, multi-sectoral collaboration and partnerships to accelerate country response for the prevention and control of NCDs

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
2.1 National, Provincial and District NCDs Multi-sectoral Coordination Committees in place and functional	Reports of National, Provincial and District NCDs multi-sectoral Coordination Committees established and functional	2.1.1- Establish high level NCDs *Multi-sectoral Coordination Mechanisms* at National, Provincial and District levels for engagement, policy coherence and mutual accountability	NDoH PDoH DHS	NGOs, CBOs, FBOs,
2.2 National NCDs Technical Committee and disease specific TWGs in place and functional	Annual Reports of the different NCDs technical working groups/ committees	2.2.1-Establish national NCDs Technical Committee and disease specific TWGs	NDoH	UN agencies, NGOs, CBOs, FBOs
2.3 NCDs operational plans developed and resourced at all levels	NCDs action plans in place and budgeted for implementation	2.3.1 Develop annual NCDs operational plans at all levels and allocate needed resources	NDoH PDoH DHS	
2.4 Registry of policies and regulations related to NCDs in place and gaps identified for alignment with latest global evidences and	Appraisal report of NCDs related legal provisions, policies and regulations	2.4.1-Conduct desk review of existing multi-sectoral policies and regulations related to NCDs 2.5.2-Create data base of policies and regulations related to NCDs	NDoH Other Depts.	Universities Research Institutions
2.5 Policies related to all NCDs reviewed and updated	Number of Policies related to all NCDs reviewed and updated	2.5.1-Review and update Policies related to all NCD 2.5.2-Create data base of policies and regulations related to NCDs	NDoH TC	Universities Research Institutions
2.6 Functional district based clinical dyad in line with DCST	Number of district clinical dyads appointed	2.6.1 Reorganization of NCD programme in the districts 2.6.2 Appointment of posts of clinical dyads in every district	NDoH PDoH DHS	
2.7 Communities and individuals empowered to adopt healthy lifestyles	Number of NCDs related health promotion materials developed, translated, printed and disseminated - Number of social mobilization activities on NCDs	2.7.1-Devlop IEC materials on healthy lifestyles and the prevention of NCDs 2.7.2- Conduct mass media campaigns and social mobilization activities promoting healthy lifestyles 2.7.3 Strengthen counselling services during clinical contacts	NDoH PDoH DHS	UN agencies, NGOs, CBOs, FBOs,
2.8 PPP forums on NCDs prevention and control strengthened	-Number of PPP forums held on NCDs -Number of private partners engaged in NCDs prevention and controls activities	2.8.1 Strengthen PPP to support and collaborate on NCDs prevention and control activities	NDoH PDoH DHS	UN agencies, NGOs, CBOs, FBOs

Strategic Objective 3: To reduce modifiable risk factors for NCDs and its co-morbidities and underlying SDH through primordial and primary prevention measures

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
3.1 Promote Healthy Diet high in fruits and vegetables and low in saturated fat/trans-fat, free sugar and salt 3.1.1 Increased intake of healthy foods including adequate levels of fruits and vegetables	- Availability/number of policies, standards and plans on food security and healthy diet reviewed and implemented - Number of periodic implementation reports on food security programs - Availability of updated national Food Based Dietary Guidelines (FBDGs) - Number of health workers trained on FBDG and nutrition counselling skills - Number of healthy diet programs implemented at all levels	3.1.1.1- Promote availability and affordability (food security) of healthy foods to all segments of the population 3.1.1.2- Increase availability of fruits and vegetables through home gardening promotion programme 3.1 1.3- Update and disseminate national Food Based Dietary Guidelines (FBDGs) and nutrient profiling of common foods 3.1.1.4- Capacitate Health Workers on FBDGs and counselling skills 3.1.1.5- Implement mass media campaign on healthy diets, social marketing of foods and promote the intake of fruits and vegetables	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs
3.1.2 Reduced intake of salt in the diet	- Availability of national salt reduction targets and action plan	3.1.2.1- Develop and implement a national salt reduction action plan focusing on foods that contribute most to population salt intake	NDoH	UN agencies, NGOs, CBOs, FBOs
	Number of front packing labels enforced - Number of engagement sessions held with stakeholders on salt reduction measures - Number of mass media campaigns and meetings on salt reduction	3.1.2.2- Set target levels for the amount of salt in foods and meals and enforce reformulation of food products and meals to contain less salt/sodium 3.1.2.3- Enforce front-of-pack labelling 3.1.2.4- Establish policies for food procurement that encourage the purchase of products with lower salt /sodium content 3.1.2.5- Conduct behaviour change communication and mass media campaigns on salt reduction 3.1.2.6- Engage food producers, processors, retailers, restaurants and catering services to progressively reduce salt in their products 3.1.2.7- Assess the population's baseline salt intake and at regular intervals		
3.1.3 Reduced consumption of saturated fats/trans fats and sugars	- Acts and regulations on saturated and trans fatty acids, salt and refined sugar content of processed foods available - Policy on taxation of sugar-sweetened beverages and foods - Reports of monitoring of implementation of diet related policies and regulations	3.1.3.1- Develop legislation and regulations on saturated and trans fatty acids, salt and refined sugar content of processed foods and the packaging, labelling and marketing of food products and beverages 3.1.3.2- Replace trans-fats and saturated fats with unsaturated fats through reformulation, labelling and appropriate fiscal policies 3.1.3.3- Implement the WHO recommendations on the marketing of foods and non-alcoholic beverages to children	NDoH, DTI	UN agencies, NGOs, CBOs, FBOs

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
3.2 Promote Physical Activity	- Number of physical activity policy and guideline developed -Number of IEC materials on physical activity developed - Number of awareness campaigns held	3.2.1.1- Review policies and guidelines on physical activity and sports 3.2.1.2-Create public awareness on the health benefits of physical activity through mass media campaign and community based education	NDoH DSR	UN, agencies, NGOs, CBOs, FBOs
	Number of workplace wellness programs and sport clubs - Number of advocacy sessions held for urban planners and politicians on improving urban design conducive for physical activity - Number of updated policies, guidelines and curricula for strengthening physical activity and sports in schools - Number of researches on physical activity patterns conducted and shared	3.2.1.3- Develop and Implement programs that promote physical activity in the community, public and private institutions and workplaces 3.2.1.4- Advocate for policy and regulations for improved urban design conducive for physical activity 3.2.1.5- Promote organized sport groups and clubs, programmes and events 3.2.1.6- Strengthen physical activity programs in schools 3.2.1.7- Monitor trends of physical activity in the population	NDoH DHS DBE	
3.3 Reduce use of Tobacco products 3.3.1 Provisions of existing legislations and regulations on tobacco products appraised	-Number of sensitization sessions conducted -Number of authorities and stakeholders sensitized on tobacco legislations and regulations	3.3.1.1- Sensitize Legislative and Regulatory bodies on the Tobacco Control Act and related regulations and the gaps that need strengthening 3.3.1.2- Support revision of the Tobacco control legislation and regulations in order to make it more comprehensive in line with the WHO FCTC	NDoH DTI DoF,	UN, agencies, NGOs, CBOs, FBOs
3.3.2 Effective public awareness (mass media) campaigns to discourage tobacco products use conducted	-Number of awareness campaigns conducted -Evaluation report on impact of awareness campaigns available	3.3.2.1- Develop IEC materials on prevention of tobacco products use and translate into local languages 3.3.2.2- Conduct awareness programmes or trainings for media personnel and Health Workers 3.3.2.3- Conduct public awareness/mass media campaigns on the harms of smoking/tobacco products use and second hand exposure to tobacco smoke	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs,
3.3.3 Tobacco products prevention and control incorporated in the curricula of schools and higher learning institutions	-Proportion of schools and higher learning institutions with tobacco products prevention and control in their curriculum -Proportion of schools and higher learning institutions sensitized on tobacco products prevention and control	3.3.3.1 - School curriculum reviewed and revised to incorporate tobacco products prevention and control 3.3.3.2- Sensitize students and staff in schools and higher learning institutions about the harms of smoking/tobacco products use and second hand exposure to tobacco smoke	NDoH DBE DHET	UN agencies, NGOs, CBOs, FBOs
3.3.5 Tobacco products cessation services established	-Number of facility and community-based tobacco cessation services available	3.3.4.1-Develop guideline for tobacco cessation services 3.3.4.2 -Conduct training for providers on tobacco cessation interventions 3.3.4.3- Avail commodities for treatment of tobacco dependence	NDoH	UN agencies, NGOs, CBOs, FBOs

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
3.4 Reducing Harmful use of Alcohol and substances 3.4.1 Provisions of existing legislations and regulations on alcohol appraised	Appraisal report on provisions of existing national legislations and regulations on alcohol products and their implementation status	3.4.1.1- Appraise existing national legislations and regulations on alcohol including their implementation status	NDoH	UN agencies, NGO, CBOs, FBOs,
3.4.2 National Alcohol Policy and related regulations reviewed and updated	-Number of stakeholders sensitized on prevention of harmful use of alcohol - Number of alcohol legislations and regulations reviewed and updated	3.4.2 .1- Sensitize policy makers and stakeholders on the national alcohol Acts and regulations and the gaps that need strengthening 3.4.2 .2- Revise/update the national Liquor Act and related regulations	NDoH	UN agencies, NGOs, CBOs, FBOs,
3.4.3 Increased public awareness about the effects of the harmful use of alcohol	-Number of IEC materials on harmful use of alcohol developed, translated and disseminated -Number of awareness campaigns conducted to discourage harmful use of alcohol	3.4.3.1- Develop IEC materials on harmful use of alcohol 3.4.3.2-Conduct public awareness/mass media campaigns about the dangers of alcohol consumption and its related links	NDoH	UN agencies, NGOs, CBOs, FBOs,
3.4.4 Curriculum on harmful use of alcohol and substance abuse in schools reviewed and strengthened	- Number of schools with curriculum on harmful use of alcohol and substance abuse	3.4.4.1 - Integrate the prevention of alcohol and substance abuse into the school health curriculum 3.4.4.2 - Sensitize teachers and students on alcohol and substance abuse	NDoH DBE DHET	UN agencies, NGOs, CBOs, FBOs,
3.4.5 Alcohol and substance abuse prevention, treatment and rehabilitation services availed at all levels; health care system, community, and workplaces	-Number of facilities offering rehabilitation services -Number of Community units offering alcohol and substance abuse rehabilitation services -Number of work places with rehabilitation services	3.4.5.1 -Develop guidelines for rehabilitation of alcohol and substance abuse 3.4.5.2 -Build the capacity of health care and social services providers 3.4.5.3 -Integrate alcohol and substance abuse care and rehabilitation services at all levels	NDoH DSD	UN agencies, NGOs, CBOs, FBOs,
3.5 Environmental Risk reduction 3.5.1 Magnitude of the burden of environmental and occupational hazards documented to guide planning	Situation analysis report on the magnitude of environmental and occupational hazards	3.5.1.1-Assess magnitude of environmental and occupational hazards 3.5.1.2-Disseminate the findings and advocate for policy and regulatory actions	NDoH DSD	UN agencies, NGOs, CBOs, FBOs,
3.5.2 Existing policies, legal frameworks, standards and guidelines on environmental, biological and occupational hazards appraised and reviewed	- Number of advocacy sessions conducted - Number of legislations, policies and guidelines reviewed	3.5.2.1-Advocacy sessions conducted for policy makers and key stakeholders 3.5.2.2- Appraise/update legal frameworks, policies, and guidelines to reduce exposure to environmental, biological and occupational hazards	NDoH DSD	UN agencies, NGOs, CBOs, FBOs,

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
3.5.3 Increased public awareness on the hazards and prevention of environmental, biological and occupational risk factors	-Number of IEC materials developed and disseminated -Number of awareness campaigns carried out	3.5.4.1-Develop and disseminate IEC materials and mass media messages 3.5.4.2-Conduct public awareness campaigns including mass media communications	NDoH DSD	UN agencies, NGOs, CBOs, FBOs,

Strategic Objective 4: To reduce morbidity and mortality associated with NCDs through secondary and tertiary prevention measures

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
4.1. Development and Implementation of treatment cascades for NCDs proportions of people diagnosed with NCDs, in care, on treatment and no complications	– number of treatment cascades for NCDs developed and implemented	4.1.1 Develop treatment cascades for major NCDs *(namely diabetes, Hypertension, chronic respiratory diseases, cancer, mental health, etc.) 4.1.2. Treatment cascade being implemented and target was reviewed annually	NDoH	UN agencies, NGO, CBOs, FBOs, Universities
4.2 Secondary preventive measures being implemented	- number of people screened for all NCDs (categorized)	4.2.1 Assess magnitude of Screening for all NCDs at PHC clinics	NDoH PDoH DSS	UN agencies, NGO, CBOs, FBOs
	- number of people initiated treatment for all NCDs (categorized) - number of people adhered to treatment for NCDs	4.2.2 Assess magnitude of Treatment initiated for all NCDs 4.2.3 Assess magnitude of Adherence to treatment protocols		
4.3 Tertiary prevention measure being implemented	- number of people screened for complications associated with NCDs (categorized) - number of people developed complications associated with NCDs (categorized)	4.3.1 Assess magnitude of Screening and treatment for complications of all NCDs	NDoH PDoH DSS	UN agencies, NGO, CBOs, FBOs
4.4 Optimal utilization of health services	- number of people with NCDs (categorized) visited by CHWs (annualized) - number of people with NCDs (categorized) attended PHC facilities (annualized) - number of people with NCDs (categorized) attended Hospital OPDs (annualized) - number of people with NCDs (categorized) admitted Hospital (annualized)	4.4.1 Assess magnitude of utilization of health care facilities by the people with NCDs	NDoH PDoH DSS	UN agencies, NGO, CBOs, FBOs
4.5 Optimal referral of patients with NCDs	-- number of people with NCDs (categorized) up-referred from PHC facilities to hospitals -- number of people with NCDs (categorized) down-referred from hospital to PHC facilities	4.5.1 Assess magnitude of Up and down referral systems	NDoH PDoH DSS	UN agencies, NGO, CBOs, FBOs
4.6 Magnitude of the burden of multi-morbidities documented to guide planning	-- number of people with multi-morbidities (categorized) attended PHC facilities (annualized) -- number of people with multi-morbidities (categorized) attended Hospitals (annualized)	4.6.1 Assess magnitude of multi-morbidities	NDoH PDoH DSS	UN agencies, NGO, CBOs, FBOs
4.7. Reduced risk of overweight, obesity and cardio-metabolic syndrome	- number of people screened and initiated treatment for all NCDs	4.7.1 Screening and early treatment programme initiated for all NCDs at PHC clinics	NDoH	UN agencies, NGOs, CBOs, FBOs
4.8 Palliative care and end-of-life care integrated to primary health care	- Guidelines on end-of-life and rehabilitation care developed - Health workers trained on end-of-life care and rehabilitation -Number of PHC facilities implementing palliative and end-of-life care	4.8.1- Develop guidelines on Palliative care and end-of-life care 4.8.2- Train providers on palliative care 4.8.3- Integrate rehabilitation, palliative and end-of-life care into PHC 4.8.4- Integrate rehabilitation, palliative and end-of-life care	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs, PPP

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
		into preservice training curricula		
	Number of people accessing palliative care for morphine-equivalent consumption of strong opioid analgesics (excluding methadone) for cancer and other terminally ill patients	4.8.5 Assess magnitude of availability of palliative care for cancer patients	NDoH	UN agencies, NGOs, CBOs, FBOs
4.9. Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus	-Number of people received human papillomavirus vaccine	4.9.1 Assess magnitude of availability of vaccine for Human Papilloma virus		
4.10 Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants	Number of people received third doses of Hep-B vaccine (HepB3)	4.10.1 Assess magnitude of availability and affordability of Hep-B vaccine		
4.11. Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies	Number of women screened for cervical cancer at least once for the age group (a) less than 30 years (b) 30–49 years and (c) 50 years and above	4.11.1 Assess magnitude of availability of cervical cancer screening		
	Number of women who had colposcopy examination	4.11.2 Assess magnitude of availability of colposcopy services		

Strategic Objective 5: To strengthen and orient health systems to address the prevention and control of NCDs and the underlying SDH through people centred PHC and UHC

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
5.1 Cost effective NCDs interventions integrated into the Primary Health Care (PHC) package with referral systems to all levels of care	- The WHO Package of Essential Non-Communicable (PEN) Guideline for PHC adapted - Number of Health Workers trained on PEN Guideline - Number of facilities implementing the PEN Guideline	5.1.1- Adapt the WHO PEN Guideline and job aids for PHC 5.1.2- Train and mentor health workers on NCDs care 5.1.3- Build health workforce in numbers and skills mix for NCDs 5.1.4- Task shift basic NCDs care by optimizing the scope of practice of nurses and clinical associates and mid-level workers	NDoH HPCSA SANC SAPC	UN agencies, NGOs, CBOs, FBOs
5.2 Integrated clinical guidelines and treatment protocols for management of NCDs for all levels of care in place	-Number of guidelines and protocols developed and disseminated -Proportion of health facilities utilizing guidelines/ protocols	5.2.1-Develop integrated clinical guidelines and protocols for all levels of care especially referral facilities 5.2.2-Train providers on NCDs treatment guidelines	NDoH HPCSA SANC SAPC	UN agencies, NGOs, CBOs, FBOs, CBOs
5.3 Palliative care and end-of-life care integrated to primary health care	- Guidelines on end-of-life and rehabilitation care developed - Health workers trained on end-of-life care and rehabilitation -Number of PHC facilities implementing palliative and end-of-life care	5.3.1- Develop guidelines on Palliative care and end-of-life care 5.3.2- Train providers on palliative care 5.3.3- Integrate rehabilitation, palliative and end-of-life care into PHC 5.3.4- Integrate rehabilitation, palliative and end-of-life care into preservice training curricula	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs, PPP
5.4 NCDs fully covered in the medical aid schemes	- Proportion of medical aid schemes fully covering NCDs	5.4.1- Advocate for full coverage of NCD prevention and control services to be included in national health insurance	NDoH CMS BHF	
5.5 Capacity of health providers and program managers on prevention and control of NCDs strengthened at sub-districts	-Number of health workers, program managers trained in prevention and control of NCDs at sub-districts -Number of mentorship programs to improve quality of NCDs services at sub-districts	5.5.1-Train health workers, program managers on the prevention and control of NCDs at sub-district level 5.5.2-Establish ongoing mentorship programs to improve NCDs care at sub-district level	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs
5.6. Availability and affordability of quality, safe and efficacious essential NCD medicines, including generics, and basic technologies in both public and private facilities	- number of stock outs of essential NCD medicines, including generics, and basic technologies in both public and private facilities	5.6.1 Assess magnitude of availability and affordability of quality, safe and efficacious essential NCD medicines, including generics	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs
	- Number of out-of-service essential health technologies in health facilities	5.6.2 Assess magnitude of availability and affordability of essential health technologies in health facilities	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
5.7 CHWs capacitated in promotion of healthy lifestyles and in care and support for people suffering from NCDs in the community	-Number of CHWs trained on prevention and palliative care	5.7.1-Develop guidelines for the training of CHWs on NCDs prevention and care 5.7.2-Train CHWs on NCDs prevention and palliative care	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs

Strategic Objective 6: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
6.1 operational research areas on NCDs Identified	- Number of operational research areas identified -List of publication on identified operational research areas	6.1.1-Identify operational research areas on NCDs and their risk factors	NDoH Universities Research institutions	UN agencies, NGOs, CBOs, FBOs,
6.2 NCDs research capacity strengthened	-Proportion of NCDs budget allocated to NCDs Research and infrastructure -Number of healthcare workers trained on NCDs research	6.2.1-Advocate for resources for research on priority NCDs 6.2.2-Develop proposals and mobilize resources 6.2.3- Strengthen capacity for NCDs research (human resource, infrastructure, equipment and supplies)		
6.3 Evidence generated and used for national policy and program planning	- National repository of local research on NCDs - Number of dissemination forums for sharing research findings for policy makers and programmers	6.3.1- Create National repository of local research on NCDs 6.3.2-Develop synthesis of local research and survey findings for policy action 6.3.3- Disseminate research findings for policy makers and programmers		

Strategic Objective 7: To monitor the trends and determinants of NCDs and to evaluate progress in their prevention and control

EXPECTED OUTPUTS	INDICATORS	ACTIVITIES	LEAD AGENCIES	PARTNERS
7.1 NCDs surveillance and monitoring capacity strengthened	-Number of health workers trained on NCDs surveillance -Proportion of NCDs budget dedicated to NCDs surveillance and infrastructure - Key NCDs indicators incorporated and reported through the HIS	7.1.1-Strengthen capacity for NCDs surveillance (personnel, infrastructure, equipment, and supplies) 7.1.2- Allocate resources for routine and periodic NCDs surveillance 7.1.3-Update NCD indicators and reporting formats in the HIS	NDoH PDoH DSS	UN agencies,
7.2 Baseline and periodic NCDs and risk factors data available for monitoring and program planning	-Reports of triennial STEPs NCDs and risk factor surveys	7.2.1-Conduct triennial NCDs STEPs surveys every 5 years	NDoH PDoH DSS	UN agencies,
7.3 National Registry established for major NCDs	-Number of functional disease specific registries	7.3.1-Establish National Registry on some major NCDs	NDoH	UN agencies,
7.4 NCDs surveillance results periodically disseminated to guide decision making by national authorities	- Number of dissemination forums and publications	7.4.1 Develop annual NCDs surveillance reports 7.4.2- Disseminate the NCDs surveillance reports regularly	NDoH PDoH DSS	UN agencies, NGOs, CBOs, FBOs,

APPENDIX B: YEARLY TARGET FOR THE IMPLEMENTATION PLAN

Strategic Objective 1: To raise the priority accorded to the prevention and control of NCDs at all levels through advocacy

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
-Number of advocacy documents on the burden and socio-economic impact of NCDs, and the costs of inaction -Number of advocacy sessions for public and political leaders	1.1.1- Develop and disseminate advocacy tools on the linkage between NCDs and sustainable economic development	2020/21	X	X	--	-	-
	1.1.2-Conduct advocacy forums for raising public and political awareness on the burden of NCDs and the economic benefit of preventing them		X	X	X	X	X
-Number of advocacy forums with other sectors and stakeholders for prioritization of the prevention and control of NCDs	1.2.1- Conduct advocacy and sensitization forums for other sectors and stakeholders on prevention and control of NCDs	2020/21	X	- X	--	-	-
	1.2.2- Encourage / motivate other sectors and stakeholders to create enabling legal, policy and regulatory environment which is conducive for the prevention and control of NCDs		X	X	X	X	X

Strategic Objective 2: To strengthen national capacity, leadership, governance, multi-sectoral collaboration and partnerships to accelerate country response for the prevention and control of NCDs

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
Reports of National, Provincial and District NCDs multi-sectoral Coordination Committees established and functional	2.1.1- Establish high level NCDs *Multi-sectoral Coordination Mechanisms* at National, Provincial and District levels for engagement, policy coherence and mutual accountability	2020 - 2021	X	X	-	-	-
Annual Reports of the different NCDs technical working groups/ committees	2.2.1-Establish national NCDs Technical Committee and disease specific TWGs	2021 - 2023	-	X	X	-	-
NCDs action plans in place and budgeted for implementation	2.3.1 Develop annual NCDs operational plans at all levels and allocate needed resources	2020 - 2022	X	X	-	-	-
Appraisal report of NCDs related legal provisions, policies and regulations	2.4.1-Conduct desk review of existing multi-sectoral policies and regulations related to NCDs 2.5.2-Create data base of policies and regulations related to NCDs	2020-21	X	X	-	-	-
Number of Policies related to all NCDs reviewed and updated	2.5.1-Review and update Policies related to all NCD	2020-22	X	X	X	-	-
	2.5.2-Create data base of policies and regulations related to NCDs		X	X	X	-	-
Number of district clinical dyads appointed	2.6.1 Reorganization of NCD programme in the districts	2020-25	X	X	X	X	X
	2.6.2 Appointment of posts of clinical dyads in every district (10 per year cumulatively)		X	X	X	X	X
Number of NCDs related health promotion materials developed, translated, printed and disseminated - Number of social mobilization activities on NCDs	2.7.1-Devlop IEC materials on healthy lifestyles and the prevention of NCDs	2021 – 2025	-	X	X	X	X
	2.7.2- Conduct mass media campaigns and social mobilization activities promoting healthy lifestyles		-	X	X	X	X
	2.7.3 Strengthen counselling services during clinical contacts		-	X	X	X	X
-Number of PPP forums held on NCDs -Number of private partners engaged in NCDs prevention and controls activities	2.8.1 Strengthen PPP to support and collaborate on NCDs prevention and control activities	2021 - 2025	X	X	X	X	X

Strategic Objective 3: To reduce modifiable risk factors for NCDs and its co-morbidities and underlying SDH through primordial and primary prevention measures

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
- Availability/number of policies, standards and plans on food security and healthy diet reviewed and implemented - Number of periodic implementation reports on food security programs - Availability of updated national Food Based Dietary Guidelines (FBDGs) - Number of health workers trained on FBDG and nutrition counselling skills - Number of healthy diet programs implemented at all levels	3.1.1.1- Promote availability and affordability (food security) of healthy foods to all segments of the population	2020-2025	X	X	X	X	X
	3.1.1.2- Increase availability of fruits and vegetables through home gardening promotion programme		X	X	X	X	X
	3.1 1.3- Update and disseminate national Food Based Dietary Guidelines (FBDGs) and nutrient profiling of common foods		X	X	X	X	X
	3.1.1.4- Capacitate Health Workers on FBDGs and counselling skills		X	X	X	X	X
	3.1.1.5- Implement mass media campaign on healthy diets, social marketing of foods and promote the intake of fruits and vegetables		X	X	X	X	X
- Availability of national salt reduction targets and action plan Number of salt awareness campaigns conducted	3.1.2.1- Develop and implement a national salt reduction action plan focusing on foods that contribute most to population salt intake	2020-2025	X	X	X	X	X
	3.1.2.2- Create awareness campaigns on salt reduction		X	X	X	X	X
Front of Pack Nutrition Labelling regulation available	3.1.2.3- Develop front-of-pack nutrition labelling regulation Produce and disseminate IEC material on Fond		X	X	X	X	X
	3.1.2.4- Establish policies for food procurement that encourage the purchase of products with lower salt /sodium content		X	X	X	X	X
	3.1.2.5- Conduct behaviour change communication and mass media campaigns on sugar, salt and saturated fats reduction		X	X	X	X	X
	3.1.2.6- Engage food producers, processors, retailers, restaurants and catering services to progressively reduce salt in their products		X	X	X	X	X
- Number of engagement sessions held with stakeholders on salt reduction measures - Number of mass media campaigns and meetings on salt reduction	3.1.2.7- Assess the population's baseline salt intake and at regular intervals		X	X	X	X	X
- Acts and regulations on saturated and trans fatty acids, salt and refined sugar content of processed foods available - Policy on taxation of sugar-sweetened beverages and foods - Reports of monitoring of implementation of diet related policies and regulations	3.1.3.1- Develop legislation and regulations on saturated and trans fatty acids, salt and refined sugar content of processed foods and the packaging, labelling and marketing of food products and beverages		X	X	X	X	X
	3.1.3.2- Replace trans-fats and saturated fats with unsaturated fats through reformulation, labelling and appropriate fiscal policies		X	X	X	X	X
	3.1.3.3- Implement the WHO recommendations on the marketing of foods and non-alcoholic beverages to children Promotion of exclusive breastfeeding and appropriate complementary feeding missing		X	X	X	X	X

- Number of physical activity policy and guideline developed -Number of IEC materials on physical activity developed - Number of awareness campaigns held	3.2.1.1- Review policies and guidelines on physical activity and sports	2020-2025	X	X	X	X	X
	3.2.1.2-Create public awareness on the health benefits of physical activity through mass media campaign and community based education		X	X	X	X	X
Number of workplace wellness programs and sport clubs	3.2.1.3- Develop and Implement programs that promote physical activity in the community, public and private institutions and workplaces		X	X	X	X	X
- Number of advocacy sessions held for urban planners and politicians on improving urban design conducive for physical activity	3.2.1.4- Advocate for policy and regulations for improved urban design conducive for physical activity		X	X	X	X	X
- Number of researches on physical activity patterns conducted and share	3.2.1.5- Promote organized sport groups and clubs, programmes and events		X	X	X	X	X
- Number of updated policies, guidelines and curricula for strengthening physical activity and sports in schools	3.2.1.6- Strengthen physical activity programs in schools		X	X	X	X	X
	3.2.1.7- Monitor trends of physical activity in the population		X	X	X	X	X
-Number of sensitization sessions conducted -Number of authorities and stakeholders sensitized on tobacco legislations and regulations	3.3.1.1- Sensitize Legislative and Regulatory bodies on the Tobacco Control Act and related regulations and the gaps that need strengthening	2020-2025	X	X	X	X	X
	3.3.1.2- Support revision of the Tobacco control legislation and regulations in order to make it more comprehensive in line with the WHO FCTC		X	X	X	X	X
-Number of awareness campaigns conducted -Evaluation report on impact of awareness campaigns available	3.3.2.1- Develop IEC materials on prevention of tobacco products use and translate into local languages 3.3.2.2- Conduct awareness programmes or trainings for media personnel and Health Workers 3.3.2.3- Conduct public awareness/mass media campaigns on the harms of smoking/tobacco products use and second hand exposure to tobacco smoke	2020-2025	X	X	X	X	X
-Proportion of schools and higher learning institutions with tobacco products prevention and control in their curriculum -Proportion of schools and higher learning institutions sensitized on tobacco products prevention and control	3.3.3.1 - School curriculum reviewed and revised to incorporate tobacco products prevention and control	2020-2025	X	X	X	X	X
	3.3.3.2- Sensitize students and staff in schools and higher learning institutions about the harms of smoking/tobacco products use and second hand exposure to tobacco smoke		X	X	X	X	X
-Number of facility and community-based tobacco cessation services available	3.3.4.1-Develop guideline for tobacco cessation services	2020-2025	X	X	X	-	-
	3.3.4.2 -Conduct training for providers on tobacco cessation interventions		X	X	X	X	X
	3.3.4.3- Avail commodities for treatment of tobacco dependence		X	X	X	X	X
Appraisal report on provisions of existing national legislations and regulations on alcohol products and their implementation status	3.4.1.1- Appraise existing national legislations and regulations on alcohol including their implementation status	2020-2025	X	X	X	X	X

-Number of stakeholders sensitized on prevention of harmful use of alcohol - Number of alcohol legislations and regulations reviewed and updated	3.4.2 .1- Sensitize policy makers and stakeholders on the national alcohol Acts and regulations and the gaps that need strengthening	2020-2025	X	X	X	X	X
	3.4.2 .2- Revise/update the national Liquor Act and related regulations		-	-	X	X	X
-Number of IEC materials on harmful use of alcohol developed, translated and disseminated -Number of awareness campaigns conducted to discourage harmful use of alcohol	3.4.3.1- Develop IEC materials on harmful use of alcohol	2020-2025	X	X	-	-	-
	3.4.3.2-Conduct public awareness/mass media campaigns about the dangers of alcohol consumption and its related links		X	X	X	X	X
- Number of schools with curriculum on harmful use of alcohol and substance abuse	3.4.4.1 - Integrate the prevention of alcohol and substance abuse into the school health curriculum	2020-2025	X	X	X	X	X
	3.4.4.2 - Sensitize teachers and students on alcohol and substance abuse		X	X	X	X	X
-Number of facilities offering rehabilitation services -Number of Community units offering alcohol and substance abuse rehabilitation services -Number of work places with rehabilitation services	3.4.5.1 -Develop guidelines for rehabilitation of alcohol and substance abuse	2020-2025	-	-	X	X	X
	3.4.5.2 -Build the capacity of health care and social services providers		X	X	X	X	X
	3.4.5.3 -Integrate alcohol and substance abuse care and rehabilitation services at all levels		X	X	X	X	X
Situation analysis report on the magnitude of environmental and occupational hazards	3.5.1.1-Assess magnitude of environmental and occupational hazards	2020-2025	X	X	X	X	X
	3.5.1.2-Disseminate the findings and advocate for policy and regulatory actions		X X	X X	X X	X X	X X
- Number of advocacy sessions conducted - Number of legislations, policies and guidelines reviewed	3.5.2.1-Advocacy sessions conducted for policy makers and key stakeholders	2020-2025	X	X	X	X	X
	3.5.2.2- Appraise/update legal frameworks, policies, and guidelines to reduce exposure to environmental, biological and occupational hazards		X	X	X	X	X
-Number of IEC materials developed and disseminated -Number of awareness campaigns carried out	3.5.4.1-Develop and disseminate IEC materials and mass media messages		-	-	X	X	X
	3.5.4.2-Conduct public awareness campaigns including mass media communications	2020-2025	X	X	X	X	X

Strategic Objective 4: To reduce morbidity and mortality associated with NCDs through secondary and tertiary prevention measures

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
– number of treatment cascades for NCDs developed and implemented	4.1.1 Develop treatment cascades for major NCDs *(namely chronic respiratory diseases, cancer, mental health, etc.)	2020-25	-	-	X	X	X
	4.1.2. Treatment cascade (90/60/50) being implemented for diabetes and hypertension and target was reviewed annually		X	X	X	X	X
- number of people screened for all NCDs (categorized)	4.2.1 Assess magnitude of Screening for all NCDs at PHC clinics	2020-25	X	X	X	X	X
- number of people initiated treatment for all NCDs (categorized) - number of people adhered to treatment for NCDs	4.2.2 Assess magnitude of Treatment initiated for all NCDs		X	X	X	X	X
	4.2.3 Assess magnitude of Adherence to treatment protocols		X	X	X	X	X
- number of people screened for complications associated with NCDs (categorized) - number of people developed complications associated with NCDs (categorized)	4.3.1 Assess magnitude of Screening and treatment for complications of all NCDs	2020-25	X	X	X	X	X
- number of people with NCDs (categorized) visited by CHWs (annualized) - number of people with NCDs (categorized) attended PHC facilities (annualized) - number of people with NCDs (categorized) attended Hospital OPDs (annualized) - number of people with NCDs (categorized) admitted Hospital (annualized)	4.4.1 Assess magnitude of utilization of health care facilities by the people with NCDs	2020-25	X	X	X	X	X
-- number of people with NCDs (categorized) up-referred from PHC facilities to hospitals -- number of people with NCDs (categorized) down-referred from hospital to PHC facilities	4.5.1 Assess magnitude of Up and down referral systems	2020-25	X	X	X	X	X
-- number of people with multi-morbidities (categorized) attended PHC facilities (annualized) -- number of people with multi-morbidities (categorized) attended Hospitals (annualized)	4.6.1 Assess magnitude of multi-morbidities	2020-25	X	X	X	X	X
- number of people screened and initiated treatment for all NCDs	4.7.1 Screening and early treatment programme initiated for all NCDs at PHC clinics	2020-2025	X	X	-	-	-
- Guidelines on end-of-life and rehabilitation care developed - Health workers trained on end-of-life care and rehabilitation -Number of PHC facilities implementing palliative and end-of-life care	4.8.1- Develop guidelines on Palliative care and end-of-life care	2020-2022	X	X	-	-	-
	4.8.2- Train providers on palliative care		X	X	-	-	-
	4.8.3- Integrate rehabilitation, palliative and end-of-life care into PHC		X	X	-	-	-
	4.8.4- Integrate rehabilitation, palliative and end-of-life care into preservice training curricula		X	X	-	-	-

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
Number of people accessing palliative care for morphine-equivalent consumption of strong opioid analgesics (excluding methadone) for cancer and other terminally ill patients	4.8.5 Assess magnitude of availability of palliative care for cancer patients	**2020-2025**	**X**	**X**	**X**	**X**	**X**
-Number of girls aged 9/10??? years received human papillomavirus vaccine	4.9.1 Implement the stock visibility tracking system for Human Papilloma virus vaccine		**X**	**X**	**X**	**X**	**X**
Number of people received third doses of Hep-B vaccine (HepB3)	4.10.1 Assess magnitude of availability and affordability of Hep-B vaccine		**X**	**X**	**X**	**X**	**X**
Number of women screened for cervical cancer at least once for the age group (a) less than 30 years (b) 30–49 years and (c) 50 years and above Number of people screened/assessed for BMI	4.11.1 Assess magnitude of availability of cervical cancer screening		**X**	**X**	**X**	**X**	**X**
Number of women who had colposcopy examination	4.11.2 Assess magnitude of availability of colposcopy services		**X**	**X**	**X**	**X**	**X**

Strategic Objective 5: To strengthen and orient health systems to address the prevention and control of NCDs and the underlying SDH through people centred PHC and UHC

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
- The WHO Package of Essential Non-Communicable (PEN) Guideline for PHC adapted - Number of Health Workers trained on PEN Guideline - Number of facilities implementing the PEN Guideline	5.1.1- Adapt the WHO PEN Guideline and job aids for PHC	2020 -2025	X	X	X	X	X
	5.1.2- Train and mentor health workers on NCDs care		X	X	X	X	X
	5.1.3- Build health workforce in numbers and skills mix for NCDs		X	X	X	X	X
	5.1.4- Task shift basic NCDs care by optimizing the scope of practice of nurses and clinical associates and mid-level workers		X	X	X	X	X
-Number of guidelines and protocols developed and disseminated -Proportion of health facilities utilizing guidelines/ protocols	5.2.1-Develop integrated clinical guidelines and protocols for all levels of care especially referral facilities	2020 -2025	X	X	X	X	X
	5.2.2-Train providers on NCDs treatment guidelines		X	X	X	X	X
- Guidelines on end-of-life and rehabilitation care developed - Health workers trained on end-of-life care and rehabilitation -Number of PHC facilities implementing palliative and end-of-life care	5.3.1- Develop guidelines on Palliative care and end-of-life care	2020 -2022	X	X	-	-	-
	5.3.2- Train providers on palliative care		X	X	-	-	-
	5.3.3- Integrate rehabilitation, palliative and end-of-life care into PHC		X	X	-	-	-
	5.3.4- Integrate rehabilitation, palliative and end-of-life care into preservice training curricula		X	X	-	-	-
- Proportion of medical aid schemes fully covering NCDs	5.4.1- Advocate for full coverage of NCD prevention and control services to be included in national health insurance	2021 -2023	-	X	X	-	-
-Number of health workers, program managers trained in prevention and control of NCDs at sub-districts -Number of mentorship programs to improve quality of NCDs services at sub-districts	5.5.1-Train health workers, program managers on the prevention and control of NCDs at sub-district level	2021 -2023	-	X	X	-	-
	5.5.2-Establish ongoing mentorship programs to improve NCDs care at sub-district level		-	X	X	X	X
- number of stock outs of essential NCD medicines, including generics, and basic technologies in both public and private facilities	5.6.1 Assess magnitude of availability and affordability of quality, safe and efficacious essential NCD medicines, including generics	2020 -2022	-	X	X	X	-
- Number of out-of-service essential health technologies in health facilities	5.6.2 Assess magnitude of availability and affordability of essential health technologies in health facilities	2021 -2024	-	X	X	X	-
-Number of CHWs trained on prevention and palliative care	5.7.1-Develop guidelines for the training of CHWs on NCDs prevention and care	2021 -20224	-	X	X	X	-
	5.7.2-Train CHWs on NCDs prevention and palliative care		-	X	X	X	-

Strategic Objective 6: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs

INDICATORS	ACTIVITIES	Time frame	Year 1	Year 2	Year 3	Year 4	Year 5
- Number of operational research areas identified -List of publication on identified operational research areas	6.1.1-Identify operational research areas on NCDs and their risk factors	2020-2025	X	X	X	X	X
-Proportion of NCDs budget allocated to NCDs Research and infrastructure -Number of healthcare workers trained on NCDs research	6.2.1-Advocate for resources for research on priority NCDs		X	X	X	X	X
	6.2.2-Develop proposals and mobilize resources		X	X	X	X	X
	6.2.3- Strengthen capacity for NCDs research (human resource, infrastructure, equipment and supplies)		X	X	X	X	X
- National repository of local research on NCDs - Number of dissemination forums for sharing research findings for policy makers and programmers	6.3.1- Create National repository of local research on NCDs		X	X	X	X	X
	6.3.2-Develop synthesis of local research and survey findings for policy action		X	X	X	X	X
	6.3.3- Disseminate research findings for policy makers and programmers		X	X	X	X	X

Strategic Objective 7: To monitor the trends and determinants of NCDs and to evaluate progress in their prevention and control

INDICATORS	ACTIVITIES	TIME FRAME	Year 1	Year 2	Year 3	Year 4	Year 5
-Number of health workers trained on NCDs surveillance -Proportion of NCDs budget dedicated to NCDs surveillance and infrastructure - Key NCDs indicators incorporated and reported through the HIS	7.1.1-Strengthen capacity for NCDs surveillance (personnel, infrastructure, equipment, and supplies)	2020 – 2022	X	X	-	-	-
	7.1.2- Allocate resources for routine and periodic NCDs surveillance		X	X	-	-	-
	7.1.3-Update NCD indicators and reporting formats in the HIS		X	X	-	-	-
-Reports of triennial STEPs NCDs and risk factor surveys	7.2.1-Conduct triennial NCDs STEPs surveys every 5 years	2020 – 2025	X	X	X	X	X
-Number of functional disease specific registries	7.3.1-Establish National Registry on some major NCDs	2020 – 2025	X	X	X	X	X
- Number of dissemination forums and publications	7.4.1 Develop annual NCDs surveillance reports	2020 – 2025	X	X	X	X	X
	7.4.2- Disseminate the NCDs surveillance reports regularly		X	X	X	X	X

APPENDIX C: MULTISECTORAL POLICIES AND STRATEGIES IMPORTANT FOR NCD PREVENTION AND CONTROL

Constitution of the Republic of South Africa [No. 108 of 1996]:
The National Development Plan 2030:
The National Health Act [No. 61 of 2003]
The National Health Insurance (NHI)
Negotiated Service Delivery Agreement (NSDA), 2010 - 2014
The 10-point plan

Department of Basic Education Strategic Plan 2015 -2020
Department of Health Strategic Plan 2015-2020
Department of Social Development Strategic Plan 2015 -2020
Department of Sport and Recreation South Africa Strategic plan 2015 – 2020
Department of Sports, Arts and Culture Strategic Plan 2020-2025

Strategy for the Prevention and Control of Obesity in South Africa 2015 -2020
Integrated School Health Policy 2012

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