

REPUBLIC OF GHANA

MINISTRY OF HEALTH

National Policy for the Prevention and Control of Chronic Non-Communicable Diseases in Ghana

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FOREWORD

Non-communicable diseases (NCDs) contribute significantly to illness, disability and deaths in Ghana. The major NCDs in Ghana are cardiovascular diseases, cancers, diabetes, chronic respiratory diseases and sickle cell disease. The first four share common risk factors namely, tobacco, harmful use of alcohol, unhealthy diet and physical inactivity. Their burden of the first four common NCDs are projected to increase due to ageing, rapid urbanization and unhealthy lifestyles. Given these unhealthy statistics, it is not surprising that up to 48% of Ghanaian adults have hypertension and 9% have diabetes.

It was in recognition of their impact on public health that the Ministry of Health introduced the Regenerative Health and Nutrition Programme (RHNP) in 2006 and developed a health policy which clearly prioritizes the promotion of healthy lifestyles and healthy environments and the provision of health and nutrition services. The RHNP approach is therefore an integral part of NCD control. The NCD Policy has been inspired by the national health policy and the health objectives of the Ghana Shared Growth and Development Agenda 2010-2013. It provides the technical direction and framework for implementing NCD-related programmes. It recognises that effective implementation depends on enabling public sector-wide policies in trade, food and agriculture, transportation, urban planning, etc. It is essential to enact or enforce relevant legislation to provide the backbone for food, tobacco and alcohol policies.

The NCD-policy prioritises health promotion and early detection and health system strengthening. It proposes an integrated approach to implementation of NCD-related programmes. It provides the template for the development of NCD strategic plans and is coherent with other related plans and policies.

I thank the World Health Organization and the West Africa Health Organization for their technical and financial contribution to this process. I thank the NCD Technical Working Group, Ghana Health Service and the other agencies of the Ministry of Health, other sectors, departments and agencies, our Development Partners and all the stakeholders who made inputs into this policy. I call on all sectors of the economy and the general public to support the implementation of this NCD policy.

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List of Abbreviations

BMC	Budget Management Centre
BMI	Body Mass Index
CEPS	Customs and Excise Prevention Services
CHIM	Centre for Health Information Management
CVD	Cardiovascular disease
DALY	Disability-adjusted Life Year
DHIMS	District Health Information Management System
EIB	Exercise-Induced Bronchospasm
EPI	Expanded Programme on Immunization
FCTC	Framework Convention on Tobacco Control
FDB	Food and Drugs Board
GAPA	Global Alcohol Policy Alliance
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GOG	Government of Ghana
GSGDA	Ghana Shared Growth and Development Agenda
HPV	Human Papilloma Virus
IDSR	Integrated Disease Surveillance and Response
LMIC	Low and Middle Income Countries
MOH	Ministry of Health
MOWAC	Ministry of Women and Children
NCDs	Non-communicable Diseases
NGO	Non-governmental Organization
NHIS	National Health Insurance Scheme
PEN	Package of Essential NCD Interventions
PSA	Prostate Specific Antigen
SHEP	School Health Education Programme
VIA	Visual Inspection with Acetic Acid
VILI	Visual Inspection with Lugol's Iodine
WAHO	West Africa Health Organization
WHA	World Health Assembly
WHO	World Health Organization

1 Introduction

This national policy sets out the broad path Ghana will pursue in its efforts to prevent and control the chronic non-communicable diseases (NCDs). It draws inspiration from various national and international policy and strategy papers including those of the World Health Organization (WHO).

Chronic NCDs have been defined as diseases or conditions that occur in, or are known to affect, individuals over an extensive period of time and for which there are no known causative agents that are transmitted from one affected individual to another.¹ The World Health Organization (WHO) defines the scope of NCDs to include cardiovascular diseases, mainly heart disease and stroke; cancers; chronic respiratory diseases; diabetes; others, such as mental disorders, vision and hearing impairment, oral diseases, bone and joint disorders, and genetic disorders.

Chronic NCDs account for 60% of the estimated 58 million global deaths each year and 44% of premature deaths. The age-standardized disability-adjusted life year (DALY) rates for NCDs are higher in low and middle income countries (LMICs) than in high-income countries. Eighty percent of chronic disease deaths occur in LMICs, where most of the world's population lives. People in these countries tend to develop disease at younger ages, suffer longer, and die sooner than those in high income countries.

Globally, the World Health Organization (WHO) estimates that mortality from NCDs will increase, overall, by 17% in the next 10 years. The largest increase in mortality will be seen in developing countries –and about 27% in the African region. Global cancer deaths are projected to increase from 7.4 million in 2004 to 11.8 million in 2030, and global cardiovascular deaths from 17.1 million in 2004 to 23.4 million in 2030. NCDs are projected to become the commonest cause of death in sub-Saharan Africa by the year 2030.² Much of the increase in the NCDs is due to globalization, rapid unplanned urbanization, population ageing, and lifestyle changes such as tobacco use, decreasing physical activity, and increasing consumption of unhealthy foods.

NCDs have a high economic burden and have the potential of tipping households into poverty and maintaining them in it. WHO estimates that in developing nations experiencing rapid economic transition, heart disease, stroke, and diabetes alone reduce gross domestic product (GDP) by between 1% and 5% each year. In a study of 23 LMICs, it was estimated that US\$84 billion of economic production could be lost from heart disease, stroke, and diabetes alone in these between 2006 and 2015.³ NCDs also undermine the attainment of MDGs through biological and social pathways. It has been estimated that each 10% higher NCD mortality is associated with a 7.6% reduction in progress toward tuberculosis mortality targets, a 5.6% reduction in the achieving the child mortality target and a 6.3% reduction in achieving the infant mortality targets.⁴

2 Burden of NCDs in Ghana

In Ghana, the major NCDs can be grouped into four clusters:

1. Chronic NCDs which share common risk factors – cardiovascular diseases, diabetes mellitus, cancers, chronic obstructive pulmonary disease

2. NCDs of genetic origin – Sickle cell disease and other haemoglobinopathies
3. Injuries
4. Other special NCDs such as oral disorders, eye disorders and mental ill-health.

Analysis of institutional data in Ghana suggests several NCDs have been increasing in both absolute and relative terms. The reported outpatient cases of hypertension in public and mission facilities other than teaching hospitals increased from about 60,000 cases in 1990 to about 700,000 cases in 2010. Hypertension has ranked in the top five outpatient diseases for more than 15 years, accounting for 3.0%-5.0% of all new outpatient diseases across all ages. It ranks as the third most common newly diagnosed outpatient disease among adults.

Based on limited institutional data, cardiovascular diseases (CVD) accounted for 8.9% of institutional deaths (excluding teaching hospitals) in 2003 compared to malaria which accounted for 17.1% of the deaths. In 2008, CVDs became the leading cause of reported institutional deaths accounting for 14.5% of institutional deaths compared to malaria which accounted for 13.4% of the deaths.⁵

WHO estimates that NCDs account for an estimated 34% deaths and 31% of disease burden in Ghana. NCDs kill an estimated 86,200 persons in Ghana each year with 55.5% of them aged less than 70 years and 58% of males being affected. The age standardized NCD death rate is 817 per 100,000 for males and 595 per 100,000 for females. They cause 2.32 million DALYs representing 10,500 DALYs lost per 100,000 population.

The prevalence of adult hypertension in Ghana appears to be increasing and ranges from 19% to 48%.⁶ Up to 70% of persons identified to have hypertension are not on treatment and only 0%-13% of those with hypertension have their blood pressures well controlled. Nearly half of persons identified with hypertension have target end organ damage suggesting that these persons have had long-standing disease without appropriate treatment.⁷ The prevalence of adult diabetes in Accra and Kumasi is 6% to 9%.^{8,9} The prevalence of asthma based on exercise-induced bronchospasm (EIB) among school children aged 9–16 years in and around Kumasi increased from 3.1% to 5.2% from 1993 to 2003. The prevalence of sensitization to at least one allergen based on skin test among the school children increased from 7.6% to 13.6% over the same period.¹⁰ The prevalence of asthma in adults in Accra is about 3%.

The burden of NCDs in Ghana is projected to increase due to ageing, rapid urbanization and unhealthy lifestyles. Studies show that the proportion of women aged 15-49 years who are overweight or obese more than doubled from 13% in 1993 to 30% in 2008.¹¹ The proportion of children under five years of age who are overweight increased from less than 1% in 1988 to 5% in 2008. According to the Ghana Demographic and Health Survey (GDHS) 2008, less than 5% of adults consume adequate amounts of fruits and vegetables. The GDHS 2008 also indicated that 41% of adults had not engaged in any vigorous physical activity 7 days prior to the survey. The prevalence of tobacco consumption in males 15 – 49 years reduced from 11% in 2003 to 9% in 2008. However, 15% of adult males aged 35 years and above reported using tobacco 24 hours preceding the survey in 2008. Alcohol misuse has been found to be relatively high. In a survey in the Greater Accra Region in 2006, 20% of respondents reported heavy alcohol use in the 7 days preceding the survey.¹²

Out of a total of 343,375 babies were screened in public and selected private institutions in Kumasi between February 1995 and December 2011, 6031 (1.8%) tested positive for sickle cell disease. About 22%-24% of babies have sickle cell trait, AS or AC. Among 582 women evaluated in Accra FOR haemoglobin types, 0.08% had SCD-SS, 74.3% had normal (AA) genotype and 23.7% had sickle cell trait (AC variant in 9.4%, AS genotype in 14.3%).¹³

NCDs exert a significant psychosocial toll of sufferers and their caregivers and so the development of psychosocial interventions will be prioritised in the national response. Complications and physical disabilities arising from NCDs have a negative impact on mobility, ability to work and quality of life. The financial cost of care is prohibitive. The financial impact often has a knock-on impact on family livelihood and relations, as well as the long-term treatment choices of individuals living with NCDs.

A rural-urban study of diabetes experiences showed that many poor rural men and women with diabetes often relied on financial support from their immediate and distant family members.¹⁴ This dependence on family members who themselves were financially insecure caused family tensions and frictions, which in some cases led to family abandonment and social isolation. Recourse to ethnomedical and faith healing systems is often due to the high cost of biomedical treatment. Some NCDs are stigmatized. Rural individuals living with uncontrolled diabetes - which leads to rapid and extreme weight loss – experience HIV/AIDS-related stigma. Women experience a greater burden of stigma compared to men.

3 Policy Framework

This policy document focuses on the four major NCDs that make the largest contribution to overall NCD mortality in resource poor countries and Sickle Cell Disease. The four, namely cardiovascular disease, diabetes, cancers and chronic respiratory disease share common risk factors - tobacco use, harmful alcohol use, unhealthy diet, and physical inactivity. They can be prevented through an integrated approach.

The current policy draws inspiration from existing national and international resolutions, policies and strategies such as:

- National Health and other programmatic health policies within the health sector
 - Ghana Shared Growth and Development Agenda (GSGDA), 2010-2013
 - National Health Policy 2007
 - Health Sector Medium Term Development Plan 2010 -2013
 - Health Promotion Policy 2005
 - Expanded Programme on Immunization (EPI) Policy, 2010
 - Child Health Policy 2007-2015
 - Regenerative Health and Nutrition Programme Strategic Plan 2007-2011
 - Disease Control Strategy 2010-2014
- World Health Assembly (WHA) resolutions

- May 1998: WHA request for a global strategy for NCD prevention and control, WHA51.18
 - May 2000: Reaffirmation of global strategy for prevention and control of NCDs, WHA53.17
 - May 2001: Transparency in tobacco control process, WHA54.18
 - May 2002: Development of a Global Strategy on Diet, Physical Activity and Health (DPAS), WHA53.23
 - May 2003: Adoption of WHO Framework Convention on Tobacco Control (FCTC), WHA56.1
 - May 2004: Endorsement of DPAS, WHA57.17
 - May 2004: Health promotion and healthy lifestyles, WHA57.16
 - May 2005: Cancer prevention and control, WHA58.22
 - May 2005: Public-health problems caused by harmful use of alcohol, WHA58.26
 - May 2006: Sickle-cell anaemia, WHA59.20
 - May 2007: Prevention and control of NCDs: implementation of the global strategy. Call to prepare an action plan, WHA60.23
 - May 2008: Endorsement of a six-year Global Action Plan 2008-2013, WHA61.14
- WHO strategy papers and plans of action
 - A strategy for the African Region on NCDs, WHO AFRO 2000
 - WHO Framework Convention on Tobacco Control (FCTC), 2003
 - Global Strategy for Diet, Health and Physical Activity 2004
 - 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases, 2008
 - Global Status Report on NCDs 2010
 - Political Declaration on UN high level meeting on NCDs, 2011

4 Vision, Mission, Goal and Objectives

The **vision** of NCD Prevention and Control is to create a healthy nation that lives longer with optimal physical and mental health.

The **mission** is to contribute to reducing avoidable NCD-related morbidity and mortality through health promotion, provision of enabling environment, strengthening of health systems, provision of health resources, partnerships and empowerment of communities.

The **goal** of the Ghana NCDs policy is to ensure that the burden of NCDs is reduced to the barest minimum so as to render it of little public health importance and an obstacle to socio-economic development.

The **objectives** are to:

- Reduce the incidence and prevalence of chronic NCDs
- Reduce exposure to the risk factors that contribute to NCDs
- Reduce morbidity associated with NCDs
- Improve the overall quality of life in persons with NCDs

5 Guiding Principles

The principles that guide the development and implementation of NCD policy include the following:

- Evidence-informed – policy and interventions which have scientific and/or historical evidence of being productive will be given priority
- Cost-effective – all things being equal, the most cost-effective interventions will be selected as these give value for money. Of course, other considerations, such as side effects, social cost, cultural and political acceptability are all important criteria to consider in the evaluation of interventions.
- Primary Health Care approach
 - Culturally relevant – to the extent possible, interventions would respect the cultural sensibilities of the communities in which they will be implemented. For example, recommended fruits and vegetables will give priority to those that are available or favoured locally
 - Gender sensitive – in line with international initiatives to draw attention to the vulnerability and impact of NCDs on women and children (owing partly to their low socio-economic, legal and political status), Ghana’s NCD policy will respond to the gender dimensions of NCDs
 - Reduced inequity – besides being gender-responsive, NCD programmes will seek to reduce inequities between groups and geographical areas in the vulnerability and health outcomes of NCDs and their risk factors
 - Community-participation – the District Assembly, traditional authorities, opinion leaders and lay communities will be involved in the planning and implementation of NCD programmes.
 - Integrated services – for efficiency and to reflect their shared common risk factors, NCD programmes for specific diseases will be integrated. The policy also advocates for integration of related programmes such as TB control and NCD control. In line with the Political Declaration from the UN High-level Meeting in September, 2011, NCD-related services will be integrated into primary health care services through health systems strengthening, according to capacities and priorities
 - Affordable technology – the best evidence-based interventions may not necessarily be affordable in a poor resource setting such as Ghana. The most affordable technology, medicines and delivery systems will be employed in the implementation of the NCD policy
- Life course approach – NCDs programmes will target pregnant women, through newborn and infants to the elderly population. As several childhood risk factors track into adulthood, the NCD policy will target the youth, in collaboration with the Adolescent Health Programme of MOH, the Ministry of Youth and Sports, and other institutions

- Partnerships and Collaborations

6 Process

The process started with a joint West Africa Health Organization (WAHO) and World Health Organization-sponsored workshop for Anglophone West Africa in Banjul, The Gambia in March-April 2010. The purpose of the workshop was to build the capacity of country teams to develop or finalize integrated policies and action plans for NCDs prevention and control. Ghana was represented by the NCD Control Programme Manager, the then Ag. Deputy Director Health Promotion Dept. of the GHS, the national School Health Education Programme Coordinator, and the WHO Country Advisor on NCDs. A Technical Working Group (TWG) was constituted and members assigned various topics (Annex 1). Preparation of the document involved review of existing policies and strategies, international resolutions, strategic plans of various programmes and general literature review to identify cost-effective interventions.

Various drafts of the policy were developed and discussed at meetings of the TWG. A sub-group of the TWG was responsible for editing the document. The document was initially presented to a small group of selected stakeholders from various MDAs. Later, a revised version was presented to a wide group of stakeholders at a consultative meeting.

7 Governance and leadership

The Ministry of Health has the responsibility for policy formulation, resource mobilization and allocation within the health sector, and monitoring and evaluation of the overall health sector performance. The MOH has a number of regulatory bodies and agencies, the Ghana Health Service being the largest of the agencies (Annex 2). Health Service delivery is provided at five levels namely; national, regional, district, sub-district and the community. The GHS is responsible for service delivery and provides primary, secondary and limited tertiary services. The Teaching Hospitals have the responsibility for tertiary level health care.

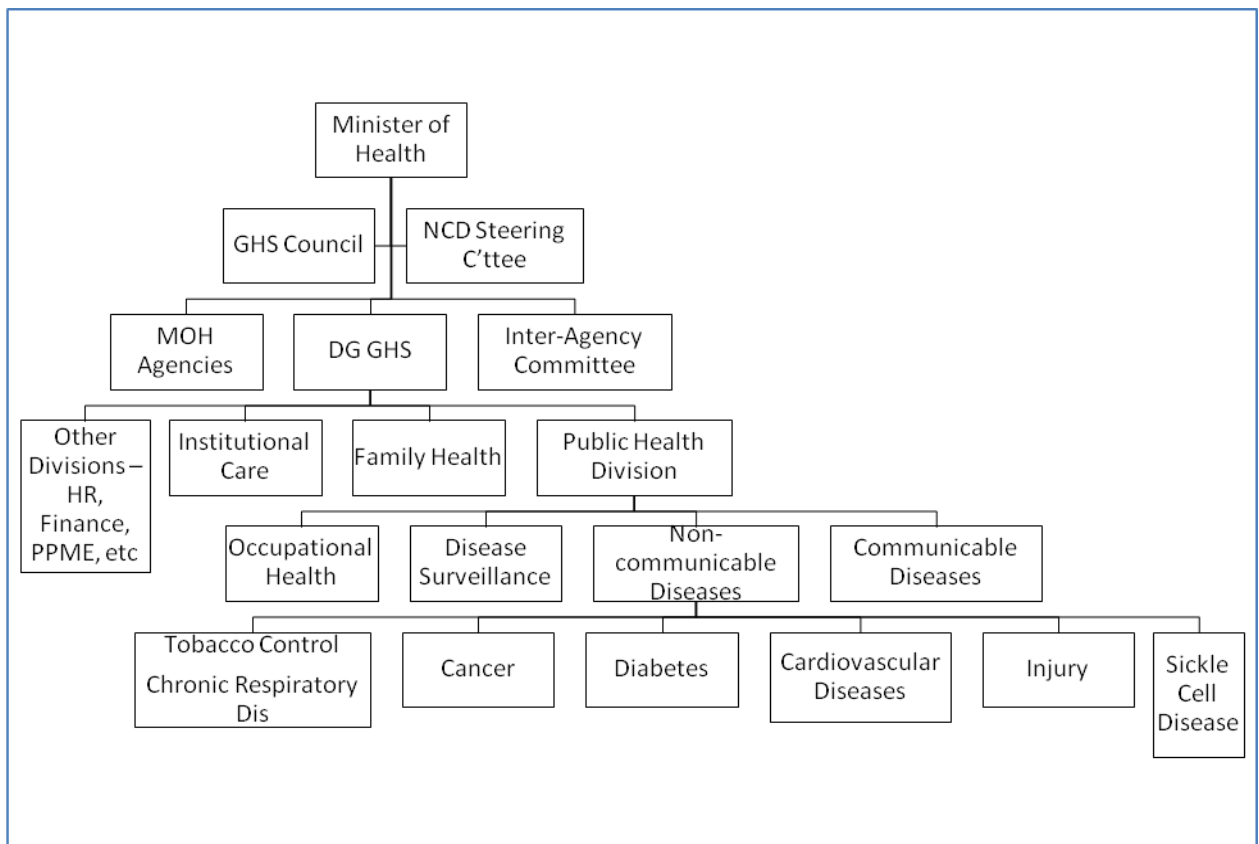
The Ghana Health Service has a governing council, divisional, regional and district health directorates. The divisions are made up of departments with programmes responsible for specific operational areas.

The NCD Prevention and Control would be established as one of the departments under the Public Health Division of the Ghana Health Service (Fig. 1). The department would be headed by a Deputy Director and Programme Managers will be appointed for specific programmes or group of programmes such as sickle cell disease, cancers, diabetes, and cardiovascular diseases at the national level. The NCD Control Department, working in collaboration with various partners, would be responsible for the day-to-day management and coordination of NCD interventions (Fig. 2). Programme coordinators would be appointed at the regional and district levels. The prevention and control of NCD activities will be mainstreamed into regional and district level interventions.

The key functions of the NCD Control and Prevention Department are:

- To provide leadership in the development of policies and action plans
- To advocate and support legislation that facilitate or favour healthy lifestyle choices
- To provide support and promote NCD prevention and control interventions at all levels using accessible and affordable strategies and technologies
- To develop, support, coordinate and monitor interventions to reduce modifiable risk factors such as unhealthy diets and physical inactivity
- To develop programmes aimed at early detection of NCDs in symptomatic and non-symptomatic persons as well as programmes to improve clinical and preventive care services.
- To identify, build or mobilize financial and human resource capacity and logistical support for NCDs
- To foster operational research on NCDs and their risk factors and to monitor NCD trends and patterns
- To strengthen partnerships within the health sector and between non-governmental organizations (NGOs), civil society organizations (CSOs), the private sector and the community to promote healthy lifestyles

Fig 1: Proposed Restructuring of the NCD Control Programme with the Ghana Health Service



A National Multisectoral Committee will be established to advise the Minister of Health on actions to be taken to prevent and control NCDs and monitor their progress (Fig. 2).¹⁵ This Committee will ensure that NCDs are given high priority in the national development agenda. Members will be drawn from relevant institutions which influence the development and outcome of NCDs such as the Ministries Departments and Agencies, Universities, professional bodies and NGOs.

The NCD policy recognises that favourable sector-wide public policies in areas such as trade, urban planning, transport, agriculture, education, finance and social services are essential. Hence, whole-of government approach across all sectors would be adopted for the implementation of this policy.

8 Strategic Areas

NCD policy will relate to five strategic areas:

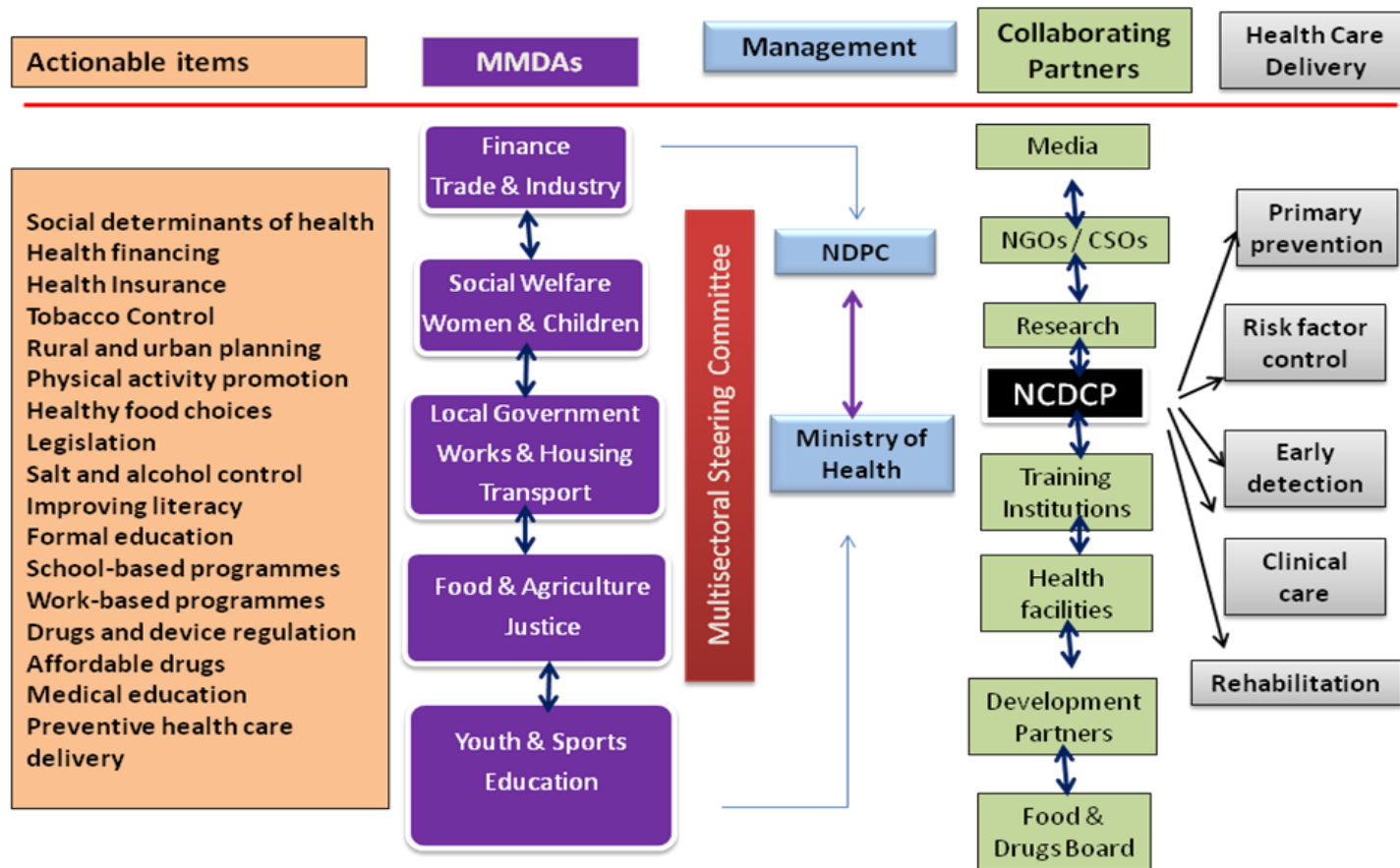
1. Primary prevention – tobacco, diet, physical activity, alcohol and immunization
2. Early detection and clinical care
 - Early detection
 - Provision of treatment services
3. Health system strengthening
 - Training of health workers and developing human resource capacity
 - Provision of essential drugs and supplies
 - Integration of NCD plans into wider health systems planning
 - Ensure financial mechanisms for improved allocation and efficient use of funds
4. Research and development
5. Surveillance of NCDs and their risk factors

8.1 Primary Prevention

Primary prevention will include policies relating to tobacco and alcohol control, diet, physical activity, and immunization. All primary prevention interventions will be underpinned by systematic health promotion. In line with WHO resolutions, MOH will give high priority to promoting healthy lifestyles among in- and out-of-school youth. Health promotion policy will promote intake of fruits and vegetables; high fibre diet, moderate physical activity; reducing intake of energy dense foods, salt, trans fatty acids, and sugar; avoiding tobacco; reducing excessive alcohol intake; and undergoing periodic medical check-ups. Commercially marketed diet soda will not be encouraged due to its doubtful value and potential harmful effects. The Regenerative Health and Nutrition approach will reinforce actions to improve healthy eating, physical activity, relaxation and hygiene.

Wellness programmes will be established and supported in clinics, communities, schools and workplaces including trade learning centres. The celebration of international, national days and months will be better organized with improved geographical coverage and sustained messages. MOH will institute national awareness months for cancers, diabetes, and hypertension. Know your blood pressure, blood sugar and blood cholesterol level campaigns will be promoted.

Fig 2: Integrated Framework for NCD Control in Ghana



With regard to SCD, exposure to the beta-S gene will be reduced through culturally-sensitive methods of genetic counselling. As more persons get to know their status through neonatal screening, preconception and premarital screening, it is expected that fewer partners carrying the S-gene will decide to have children. Premarital testing programmes will also educate couples, providing accurate and unbiased information. They will be available to anyone who wants them and proper diagnostic techniques will be used. The legal, cultural, ethical and religious aspects of premarital screening programmes will be respected. Guidelines for premarital testing programmes for SCD will address confidentiality, informed consent, privacy, lack of coercion and provision of treatment for affected individuals.

8.1.1 Tobacco

Ghana was the 39th country to ratify the Framework Convention on Tobacco Control (FCTC) in December 2004. A needs assessment on the implementation of the WHO FCTC in Ghana was conducted in April, 2010. The Ghana Public Health Bill or Act provides comprehensive and consolidated legislation on several areas of public health such as declaration of infected areas, control of mosquitoes, quarantine, vaccination, environmental sanitation, tobacco control, and food and medicines.

The tobacco control measures provided by the integrated legislation cover public education, protection of people from tobacco smoke, tobacco cessation, warning about the dangers of tobacco and enforcing bans on tobacco promotion and advertising. The specific tobacco measures covered by legislation are as follows:

- Public education against tobacco use
- Prohibition of smoking in public places
- Minimum age restrictions
- Sale of tobacco products
- Treatment of tobacco addiction
- Packaging and labelling
- Health warning on package
- Point of sale warning
- Advertising in relation to tobacco and tobacco products
- Tobacco sponsorship
- Promotion of tobacco and tobacco products

In addition, the tobacco control legislation makes administrative provisions to facilitate the work of inspectors and analysts under a Food and Medicines Authority to inspect, test and confiscate tobacco products.

Priority will be given to taxation which has been established as the most cost-effective strategy to control tobacco consumption. The ban of smoking in public places has been shown to significantly

reduce the incidence of tobacco-related diseases such as cardiovascular diseases, asthma and other respiratory diseases. A comprehensive Action Plan on Tobacco control will be developed.

8.1.2 Alcohol

MOH, led by the Food and Drugs Board (FDB), has developed a non-commercial influenced draft policy with the overall aim of helping to minimise alcohol-related harm to individuals, families and society.¹⁶ The policy addresses levels, patterns and context of alcohol consumption through a combination of measures that target the general population, vulnerable groups, such as young people and pregnant women, affected individuals and particular problems such as drink-driving and alcohol-related violence.

The alcohol policy includes the following interventions:

- Coordinate and monitor alcohol prevention and control measures
 - Establish an independent body, the Ghana National Alcohol Council to oversee the implementation of alcohol-related interventions
- Regulate production
 - Produce alcoholic beverage in the formal and informal sector in approved facilities
 - Discourage sale of alcohol in handy sachets
- Regulate distribution
 - A seller shall be licensed if older than 18 years of age
 - Restriction – shall not be sold to, bought by, and consumed publicly by persons <18y
 - Alcohol will not be sold in or close to health care establishments, first and second cycle schools, places of worship, government offices precincts, public transport and lorry stations
 - Restrict licensing hours for sales outlets
- Marketing and advertising
 - Adverts should have the approval stamp of FDB or the appropriate alcohol regulatory body
 - Market and advertise alcohol beverage in a manner that will prevent harmful use
 - Reduce exposure of young persons to marketing and advertisement
 - Prohibit indirect or direct advertising, marketing, promotion and sponsorship of any sporting activity, games or social events
 - Ensure appropriate labelling information
 - Ban radio and television advertising of alcoholic beverages between the hours of 5.00am and 8.00pm
 - Advertisements should contain health warning about the negative consequences of alcohol consumption
- Prevent and manage health effects
 - Improve capacity to assess and provide counselling, clinical, psycho-social care and rehabilitation to persons with alcohol-related harm

- Provide resources for the education and training, awareness creation, advocacy, treatment and rehabilitation to individuals and families at risk or affected by alcohol-related harms
- Specific treatment guidelines for alcohol dependence and alcohol-related medical problems will be developed
- Increase alcohol-related content in curricular of health care training institutions (e.g. medical schools, community health training schools, psychiatry nursing and allied health practitioners), social service, security forces and criminal justice settings
- Develop educational materials and mass media campaigns to raise awareness on the harmful effects of alcohol
- Discourage routine use of alcohol in traditional practices

The Ghana Road Safety Commission is responsible for policies and interventions to reduce drink-driving including regular education of drivers and random roadside testing. In line with the Ghana Education Service's School Health Policy, education and counselling on alcohol, tobacco and substance abuse will be provided in all schools.

Customs and Excise (Duties and other taxes) (Amendment) Act 2007, Act 739 provides for specific excise duty rates on locally produced alcoholic, non-alcoholic and tobacco products. Access to alcoholic beverages will be regulated through pricing controls. MOH also advocates that some of the taxes on alcohol and fines levied on drink-driving offenders should be channelled into alcohol control programmes.

8.1.3 Diet

The priority measures to achieve healthy diets will include health promotion to increase awareness about healthy diet; increase the availability of healthier foods; use pricing controls to discourage consumption of unhealthy foods; regulate advertising of unhealthy foods and non-alcoholic beverages particularly to children; enact legislation for manufacturers to display food content labels and to manufacture foods that meet defined standards. The composition of various local foods will be studied and published. Locally relevant guidelines on healthy eating and healthy foods will be published. There will be advocacy to include healthy eating into curricula of various training institutions from the primary level upwards. The daily dietary recommendations for the average adult will be translated into local handy measures based on the following targets:

- Less than 7% of calories should come from saturated fatty acids and less than 1% from trans fatty acids
- Daily cholesterol intake should be less than 300 mg
- Total fat intake should not exceed 20% to 35% of calories

The key dietary messages will be to encourage the public to use up at least as many calories as are consumed, eat a variety of nutritious foods from all the food groups; and to limit foods and beverages that are high in calories but low in nutrients. The general public will be educated to limit

the intake of foods containing trans fats, cholesterol, added sugars, salt, and alcohol. They will be advised to consume fish, especially oily fish, at least twice a week.

In line with the WHO recommendation, the public will be educated to consume at least five servings of a variety of fruit and vegetables daily. Public will be educated to consume whole-grain, high-fibre foods, reduce intake of foods high in saturated fatty acids and to reduce consumption of red meat.

Government of Ghana will work to reduce the average daily consumption of salt from the current level of around 9 g daily to WHO recommended daily level of 5 g per day or less by the year 2025. Studies show that reducing daily salt intake to about 3 g is even more beneficial against cardiovascular diseases.¹⁷ Foods containing hidden salts such as processed foods, fast foods, takeaway, restaurant food will be targeted through legislation and education. The food industry will be compelled by law to slowly reduce salt content of all foods by 40% over the next 5-7 years. Most of salt in foods in Ghana is added at the time of cooking (including the use of stock cubes, soy sauce and spices) or added at table. Hence, education will involve target essentially women, food caterers, food vendors, market women's associations, etc. Even small reductions of salt intake have been shown to be beneficial. A consultative meeting will be organized to discuss and to draw up a plan to reduce salt consumption for implementation.

The Government will work with industry through negotiation and legislation to reduce the levels of industrially-produced trans fatty acids (IPTFAs) to less than 2% of the fats and oils used in food manufacturing and cooking.

The Government's school feeding programme will be supervised by a dietician. Balanced diet prepared under hygienic conditions will be provided. Fruits and vegetables would be an important part of the diet. MOH advocates that students in boarding schools be provided with a balanced diet. Fruits and vegetables should be included in the diet in all boarding schools and students educated on the importance of eating fruits and vegetables even at home. Sale of fizzy drinks like soda will be replaced with fruits like banana, oranges and peeled pineapples in school canteen and compounds. Students will be discouraged from taking sweetened drinks and replace them with fruits. Students will be educated on the need to limit the intake of fats, sugar and salt. Parents would be involved in planning menu for boarding schools.

An advocacy programme would be pursued to introduce fiscal levers for healthier foods and drinks, with the view to making foods such as fat-free or low-fat dairy products, foods low in cholesterol, etc cheaper than corresponding non-healthy products. Specific programs will be targeted at restaurants, 'chop bars' and street food vendors to ensure healthier foods.

8.1.4 Physical Activity

Ghana endorses the WHO recommendation for moderate-intensity physical activity such as brisk walking for at least thirty minutes on most days of the week. The general public will be encouraged to engage in normal physical activities at home, at work and during recreation with incremental vigour. The policy will also specifically target persons who are typically sedentary such as

secretaries, drivers and market women who may be at high-risk of NCDs. Adults can combine moderate- and vigorous-intensity activities to meet the weekly physical activity recommendation. Every adult should also perform activities that maintain or increase muscular strength and endurance a minimum of two days each week. The public will be educated to appreciate that even minimal physical activity is more beneficial than little or no physical activity.

Children and young adults should engage in physical activity for about one hour on most days of the week. There will be advocacy for physical education sessions in Basic and Senior High Schools to be less theoretical and more heavily practical with outdoor and indoor-games. Children and adults will be encouraged to make small incremental changes at a time, and to make them gradually.

8.1.5 Immunization

Ghana's EPI childhood immunization schedule already includes hepatitis B, a virus that can cause liver cancer. The hepatitis B immunization coverage for children and for at-risk adults will be increased. Ghana will work towards introducing human papillomavirus (HPV) vaccination of girls aged 9 to 13 years in order to prevent cervical cancer. The introduction of pneumococcal vaccine into the immunization schedule is particularly beneficial to SCD children.

8.2 Early Detection and Clinical Care

8.2.1 Early Detection

Early detection policy targets persons with NCD symptoms and persons with no NCD symptoms but who are at risk of NCDs. For persons with NCD symptoms, the objective will be to get them to report to health facilities early enough to improve their clinical outcomes. For healthy individuals, screening will aim to detect risk factors or precursors of disease in order to prevent NCDs from becoming fully established.

The general public will be educated on the early warning signs of various NCDs. Relevant educational materials will be developed. The capacity of health facilities to diagnose NCDs early will be improved and referral systems strengthened.

The nutritional status of children under-five will continue to be monitored using growth charts. The body mass index (BMI) of persons suspected to be overweight or obese will be measured. Adults aged 25 years and above will be routinely screened for high blood pressure. In addition, opportunistic screening at health facilities will cover some cancers, cholesterol, and diabetes. All persons with cardiovascular disease or diabetes will be screened to assess their cholesterol levels. Health facilities will also be made more responsive to 'well' persons who visit for medical check-up, especially when these are not part of formal required medical examinations.

Ghana will opt for a minimum of one-time screening for cervical cancer of premenopausal women with an intact uterus, and no past history of cervical cancer. This is based on the observation that

the lifetime risk of cervical cancer is reduced by 25-35% if women over 35 years undergo a single screening by means of either visual inspection with acetic acid (VIA) or HPV testing and precancerous lesions are treated.¹⁸ VIA or Visual Inspection with Lugol's Iodine (VILI) screening sites will be established in all regional hospitals and cryotherapy (or cold coagulation) provided in zonal centres. Colposcopes and other essential equipment will be strategically provided in selected regional hospitals and health professionals trained to use them. In order to reduce the turn-around time in reporting of biopsy results, pathologists will be posted to regional facilities. As HPV DNA testing would be introduced

Ghana will also develop specific policy guidelines for breast cancer and prostate cancer, these being leading cancers which are amenable to screening. Women aged 20 years and older will be taught and encouraged to perform regular self-breast examination. Priority will be given to biennial clinical breast examination (CBE) in asymptomatic women aged 35-69 years along with treatment of all stages of breast cancer. Public education will be intensified to raise awareness about breast and other cancers. Ghana will integrate breast and cervical cancer screening into reproductive health services. Women undergoing cervical cancer screening will receive clinical breast examination and also be taught how to perform breast self-examination.

Men aged 45 years and older would be encouraged to undergo screening for prostate cancer. Persons at high risk of prostate cancer, such as those with a strong family history and high baseline PSA concentrations, will be closely monitored.

In line with the newborn screening policy, all babies in Ghana shall be offered screening for sickle cell disease and other haemoglobin disorders at birth or by 28 days of life.¹⁹ It is expected that screening, confirmatory testing, and referral for medical and psychosocial care will be completed by 12 weeks of age. All babies may be tested without expressed or written consent of the parents but the parents can exercise their right to refuse the test without suffering any penalty. Screening, follow-up, and comprehensive medical care for SCD up to five years of age will be free. The families of babies found to have sickle cell trait will be educated and appropriately counselled. The newborn screening programme which was launched in Kumasi in November 2010 will be scaled up from Kumasi progressively to the rest of the country. The development and implementation programme will be under the direction of a National Newborn Screening Steering Committee.

8.2.2 Clinical care

Geographical access to NCD care will be improved through renovation or construction of new infrastructure. MOH already has a policy which guides the expansion of health facility infrastructure. Preventive and clinical services will be newly established in some geographical areas. This will include screening, vaccination, diagnostic and clinical care services for all age groups. For example, access to cervical cancer screening through VIA will be improved as new screening sites are established. In other areas, the local health authorities will educate the communities about services that are already available. The WHO Package of Essential NCD Interventions (WHO-PEN) will be used to provide NCDs prevention and control services at primary health care level.

Specialist services will be provided through the establishment of specialist clinics, specialist outreach care, and medical missions, as currently coordinated by the Institutional Care Division, GHS. Financial access to NCD care will be improved by expanding NHIS subscription and therapeutic measures such as use of generic drugs, fixed-dose combinations and avoiding poly-pharmacy. MOH will periodically review the NHIS essential medicines list. MOH will also consider expanding the coverage NHIS list of benefits package to include medical examination as well as the screening and treatment of common cancers.

A multidisciplinary approach to treatment of conditions such as diabetes and cancers will be promoted. This would involve medical and psychosocial care and establishments of institutional structures such as a Tumour Board. In addition to Korle Bu Teaching Hospital and Komfo Anokye Teaching Hospital, radiotherapy services will be made available at the Tamale Teaching Hospital. Besides the national standard treatment guidelines, treatment guidelines for specific diseases will also be updated regularly. Treatment of patients with cardiovascular diseases will be based on a risk assessment at all levels including the primary care level. Secondary prevention of persons with diabetes, cardiovascular diseases and cancers will be promoted. Lifestyle approaches to treatment of diabetes and prevention of complications will be emphasised. Palliative care will be introduced to improve care for advanced cases of NCDs including cancers.

In line with WHO recommendations, a comprehensive approach to prevention and management of SCD involving prevention and counselling, early detection, prompt treatment of illness, provision of vitamin supplements and malarial prophylaxis, penicillin V prophylaxis, psychosocial support, surveillance and research, and community education and partnership will be implemented. Sickle cell disease clinics (SCC) will be established in all Regional Hospitals to provide specialized care. At least one National Centre of Excellence as available in countries such as Benin and Nigeria will be established. For newborns identified to have possible SCD, it is targeted that the first clinic attendance should occur by age 2 months.

8.3 Health System Strengthening

8.3.1 Human resource capacity

The local production of health professionals in short supply will be prioritized. They include physicians, nurses, dieticians, health educators, counsellors, cytologists, laboratory technologists, pathologists and podiatrists. Human resources will be equitably distributed to ensure that most regions can run specialist NCD clinics.

The quality of NCD-care will be improved through pre-service, post-graduate and in-service training. The introduction and expansion of training programmes in critical areas with shortage of personnel e.g. nutrition, dietetics, smoking cessation, palliative care and counselling will be supported. MOH will also advocate for NCD-related topics to be included or emphasized in the curricula of various post-graduate programmes and pre-service training institutions.

Regions will be encouraged to include NCDs in their in-service training programmes and quality assurance programmes. Favourable relationships between health workers and patients will be developed. Adherence to the patient's charter would be encouraged. Physicians, medical assistants and nurses will be trained and encouraged to devote more time to counselling in order to improve adherence and promote healthy behaviours.

8.3.2 Provision of Essential Drugs and Supplies

There will be improved access to essential medicines and supplies for the care of NCDs. Essential drugs for NCDs will be captured by the Standard Treatment Guidelines and the NHIS Medicines List. There will be advocacy for removal taxes on insulin and NCD devices such as inhalers, peak flow meters, nebulisers, pulse oximeters, BP monitors, *etc* to help reduce the overall cost of NCD care and save more lives.

8.3.3 Integration of Services and Partnerships

Within the health sector, there will be integration of services within the same facility and between departments. There will be closer collaboration between the national Tuberculosis Control and Tobacco Control Programmes. Diabetes patients will be screened for TB, and patients on diabetogenic antiretroviral drugs will be screened for diabetes.

The partnership between the MOH agencies and the Ghana Education Service (GES) will be improved to foster health promotion, screening, treatment of minor ailments and referrals. Partnership between the MOH and the Ministry of Youth and Sports will be improved in order to reach out-of-school youth and to improve physical activity of the general public. Work-based Employee Well-Being Programmes would be established. These programmes will include physical-activity break-outs, healthy food servings in workers' canteens, and general healthy behaviour.

There will be periodic meetings with NGOs, health journalists and other stakeholders to plan and review implementation of NCD interventions across the country. Similar periodic meetings will be organized at the regional and district levels. Training programmes will be organized for NGOs, and community organizations in the regions and districts as needed. Regions and districts will continue to engage political, traditional authorities in planning and monitoring of health programmes, including NCDs. The multi-sectoral Steering Committees at the various levels will seek to foster partnerships within and between sectors.

There will be improved collaboration with new and existing patient support groups as these groups provide a forum for education and for patients and their guardians to socially network. The remit and goals of these groups would range from providing education and celebrating world days targeting to offering psychosocial support and fund-raising for palliative care.

8.3.4 Financing

In addition to government of Ghana sources, funding for NCDs will be obtained from Ghana's traditional Development Partners and from the private sector. There will be earmarked funding and increased allocation to NCDs at all levels, facilitated by specific budget line items. The national health accounts system will be developed to regularly track NCD funding. Facilities will be encouraged to use their internally-generated funds to support NCD programmes such as screening and health education programmes. Funds will be sought from development partners and other agencies through grant proposals.

NHIS coverage will be reviewed to include cancer screening programmes and treatment of common cancers besides cervical and breast cancer. There will be advocacy for funds obtained from increased taxation on tobacco and alcoholic beverages to be invested in programmes to reduce tobacco use and alcohol misuse.

At the regional and district level, funds could be drawn from better-resourced programmes such as TB and EPI to support NCD interventions. For example, funds for TB education could be extended to cover education on smoking. TB funds could be used to screen diabetics for tuberculosis. EPI funding or malaria funding could be used to educate the public on childhood asthma or childhood risk factors for NCDs. Integration of services would help reduce costs and improve holistic approach to health care.

8.4 Research and Development

A national research agenda on NCDs with a focus on operational and implementation research will be developed. Epidemiological studies, qualitative studies, economics and basic science research will be encouraged. Studies may include surveys of risk behaviour, evaluation of community-based models for NCD prevention, application of lessons from communicable disease control to NCD control, knowledge of various NCDs and their risk factors, barriers to healthy lifestyle changes, evaluating the operations of food and beverage industry and how these undermine prevention efforts, economic costs of NCDs, impact of NCDs on social inequities, NCD financing mechanisms, and national capacity to manage and prevent NCDs. A knowledge platform will be created to disseminate research, intervention and policy developments to facilitate the development and sustainability of partnerships between the research, practice and policy communities.

8.5 Surveillance

Periodic surveys of risk factors for chronic NCDs will be conducted using WHO STEPS and other approaches. National surveys such as the Demographic and Health Surveys, Core Welfare Indicator Questionnaire Surveys and Ghana Living Standards Surveys organized by the Ghana Statistical Service will provide important information on NCD risk factors. Efforts to integrate NCDs into the Integrated Disease Surveillance and Response (IDSR) system will be pursued. Routine morbidity and

mortality data will be monitored. Surveillance systems will assess the capacity of districts and regions to manage, prevent and control NCDs and assess trends and distribution of NCDs and their outcomes.

Accurate, complete and timely health information on morbidity and mortality of NCDs will be routinely collected within the context of the District Health Information Management System (DHIMS) and e-Health. DHIMS is coordinated by the Centre for Health Information Management (CHIM), GHS and will be upgraded to allow web-based data entry and access. More detailed data about NCD admissions will be captured. Regions and districts will be encouraged to analyse their NCDs along with NCD risk factors for local decision-making.

A population-based cancer registration system will be established in the long-term. In the short-to-medium term, facility-based registries will be established in Accra, Kumasi and Tamale to cover the southern, middle and northern zones. The existing cancer registration protocol will be reviewed and implemented.

9 Monitoring and Evaluation Framework

There will be formal evaluation of the NCD control programme periodically. The evaluation may be undertaken as a stand-alone exercise or as part of the annual independent health sector review. A set of indicators will be developed and reviewed to guide a comprehensive assessment of NCD interventions.

References

1. Daar AS, Singer PA, Persad DL, Pramming SK, Matthews DR, Beaglehole R, et al. Grand challenges in chronic non-communicable diseases. *Nature* 2007;**450**:494 - 496.
2. Dalal S, Beunza JJ, Volmink J, Adebamowo C, Bajunirwe F, Njelekela M, et al. Non-communicable diseases in sub-Saharan Africa: what we know now. *Int J Epidemiol* 2011;**40**(4):885-901.
3. Abegunde DO, Mathers CD, Adam T, Ortegón M, Strong K. The burden and costs of chronic diseases in low-income and middle-income countries. *Lancet* 2007;**370**:1929–1938.
4. Stuckler D, Basu S, McKee M. Drivers of Inequality in Millennium Development Goal Progress: A Statistical Analysis. *PLoS Med* 2010;**7**(3):e1000241.
5. Ghana Health Service. The health sector in Ghana: facts and figures 2009. Accra: GHS; 2009.
6. Bosu WK. Epidemic of hypertension in Ghana: a systematic review. *BMC Public Health* 2010;**10**:418.
7. Addo J, Smeeth L, Leon DA. Hypertensive Target Organ Damage in Ghanaian Civil Servants with Hypertension. *PLoS ONE* 2009;**4**(8):e6672.
8. Hill AG, Darko R, Seffah J, Adanu RMK, Anarfi JK, Duda RB. Health of urban Ghanaian women as identified by the Women's Health Study of Accra. *Int J Gynecol Obstet* 2007;**99**:150-156.
9. Owiredu WKBA, Adamu MS, Amidu N, Woode E, Bam V, Plange-Rhule J, et al. Obesity and Cardiovascular Risk Factors in a Pentecostal Population in Kumasi-Ghana. *J Med Sci* 2008;**8**:682-690.
10. Addo-Yobo EO, Woodcock A, Allotey A, Baffoe-Bonnie B, Strachan D, Custovic A. Exercise-induced bronchospasm and atopy in Ghana: two surveys ten years apart. *PLoS Med* 2007;**4**:e70.
11. Ghana Statistical Service (GSS), Ghana Health Service (GHS), ICF Macro. Ghana Demographic and Health Survey 2008. Accra, Ghana: GSS, GHS and ICF Macro; 2009.
12. NCD Control Programme. Ghana STEPS Survey Fact Sheet: Greater Accra Region 2006. Accra: GHS; 2010.
13. Hill AG, Darko R, Seffah J, Adanu RMK, Anarfi JK, Duda RB. Health of urban Ghanaian women as identified by the Women's Health Study of Accra. *Int J Gyn Obstet* 2007;**99**:150-156.
14. de-Graft Aikins A. Healer-shopping in Africa: new evidence from a rural-urban qualitative study of Ghanaian diabetes experiences. *Br Med J* 2005;**331**:737.
15. Gupta R, Gupta S, Joshi R, Xavier D. Translating evidence into policy for cardiovascular disease control in India. *Health Research Policy and Systems* 2011;**9**(1):8.
16. Ministry of Health Ghana. Revised Fifth Draft of National Alcohol Policy. Accra: MOH; July 2012.
17. He FJ, MacGregor GA. How Far Should Salt Intake Be Reduced? *Hypertension* 2003;**42**(6):1093-1099.
18. Goldie SJ, Gaffikin L, Goldhaber-Fiebert JD, Gordillo-Tobar A, Levin C, Mahé C, et al. Cost-effectiveness of cervical-cancer screening in five developing countries. *N Engl J Med* 2005;**353**(20):2158-2168.
19. National Newborn Screening Programme. Draft Policy for Newborn Screening in Ghana and Technical Plan for National Scale Up of Newborn Screening for Sickle Cell Disease. Accra: Ministry of Health; December 2011.

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Annex 2: Organizational Structure of Ministry of Health

