National Policy

And

Strategic Plan of Action

On

Non-Communicable Diseases (NCDs)

Non-Communicable Disease Prevention and Control Programme
Federal Ministry of Health
Abuja, Nigeria.
May 2013

Foreword

In Nigeria, there is an epidemiological transition from Communicable Diseases to Non-Communicable Diseases (NCDs) while the NCDs are increasingly becoming an important contributor to the global and national disease burden and therefore a major public health problem. Major NCDs in Nigeria include hypertension, diabetes mellitus, coronary heart disease, sickle cell disease, cancers, asthma, oral health diseases, mental health, alcohol, and related substance use disorders, and road traffic injuries including violence. The modifiable risk factors for NCDs are unhealthy diet, physical inactivity, use of tobacco and harmful use of alcohol. Other risk factors include climate change, occupational exposure, advancing age and unhealthy reproductive or sexual behaviour. In 2005, NCDs accounted for about 35 million (60%) deaths worldwide of which 80% occurred in developing Countries including Nigeria. Death toll from NCDs are projected to increase by a further 17% over the next decade unless something positive is urgently done. NCDs are virtually without a cure, extremely expensive to treat and notorious for causing debilitation, discomfort, morbidity, disability as well as death. Nigeria is a signatory to the political declaration at the UNs General Assembly High Level Meeting on NCDs in September 2011

I am indeed very delighted to write the foreword to this maiden edition of National Policy on Non-Communicable Diseases (NCDs) which is borne in recognition of the nature, magnitude and severity of NCDs in Nigeria and the challenges it presents including complications. Its mission is to develop and ensure the implementation of policies and programmes that will engender and guarantee a healthy lifestyle and quality health for all Nigerians. The core sections include background, scope of the policy, policy goal, strategic thrusts for implementation, programme management and coordination, roles of stakeholders and partnership coordination. It is expected that with the adoption of this policy, the control and prevention of NCDs and their associated risk factors will be well integrated at all levels of government and health care delivery system in Nigeria. This policy document therefore is commendable and is a stepping stone towards the development of guidelines for the prevention and management of NCDs.

In conclusion, I would like to express my profound appreciation to experts and stakeholders on NCDs for their commitment throughout the development stages of this policy. Their effort is warmly and heartily acknowledged. I am assuring you that this policy document would be circulated at all levels of government including private organizations for immediate implementation.

Professor C.O. Onyebuchi Chukwu
Honourable Minister of Health
May 2013

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47	Nigerian Association of Nephrology		
48	Diabetes Association of Nigeria		
49	NigeriaCancer Society		
50	Nigerian Heart Foundation		

51	Nigerian Hypertension Society
52	Christian Association of Nigeria
53	Supreme Council of Islamic Affairs
54	National Council for Women Society
55	Federal Road Safety Commission
56	Sickle Cell Disease Network of Nigeria

Dr Bridget Okoeguale
Director, Public Health
May 2013

Abbreviations and Acronyms

Abbreviations/acronyms	Meaning
AIDS	Acquired Immuno-deficiency Syndrome
ACEHO	Assistant Chief Environmental Health Officer
ACSO	Assistant Chief Scientific Officer
CCO	Chief Clerical Officer
CNO	Chief Nursing Officer
CEO	Chief Executive Officer
CSO	Civil Society Organization
CBN	Central Bank of Nigeria
CHD	Coronary Heart Disease
CBO	Community Based Organization
DALYs	Disability Adjusted Life Years
DHS	Demographic Health Survey
DM	Diabetes mellitus
DAN	Diabetes Association of Nigeria
DPC	Disease Prevention and Control
EBV	Epstein Barr Virus
FBOs	Faith Based Organizations
FCT	Federal Capital Territory
FMOH	Federal Ministry of Health
FRSC	Federal Road Safety Commission
FCTC	Framework Convention on Tobacco Control
GDP	Gross Domestic Product
GNP	Gross National Product
GYTS	Global Youth Tobacco Survey

Hg	Haemoglobin
HHV-8	Human Herpes Virus 8
HIV	Human Immune deficiency Virus
HBV	Hepatitis-B Virus
HCV	Hepatitis-C Virus
HPV	Human Papilloma Virus
IDSR	Integrated Disease Surveillance and Response
ISH	International Society of Hypertension
LGA	Local Government Area
LGHD	Local Government Health Department
MO	Medical Officer
MLT	Medical Laboratory Technologist
MSG	Monosodium Glutamate
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
NBS	National Bureau of Statistics
NFELTP	Nigerian Field Epidemiology and Laboratory Training Programme
NCS	Nigeria Cancer Society
NHS	Nigerian Hypertension Society
NHF	Nigerian Heart Foundation
NGOs	Non-Governmental Organizations
NPHCDA	National Primary Health Care Development Agency
NPC	National Population Census
NCDs	Non-Communicable Diseases
NE	North East
NCWS	National Council of Women Society
NDHS	National Demographic Health Survey
NC	North Central
NW	North West
NHIS	National Health Insurance Scheme
NHMIS	National Health Management Information System
NEEDS	National Economic Empowerment Development Strategy
NAPEP	National Poverty Eradication Programme
NTDs	Neglected Tropical Diseases
OH	Occupational Health
PHC	Primary Health Care
PLCC	Primary Liver Cell Carcinoma
PSA	Prostate Specific Antigen
RCORTI	Regional Centre for Oral Health Research and Training Initiatives for Africa

SMOH	State Ministry of Health
SCD	Sickle Cell Disease/Disorder
SHC	Secondary Health Care
SE	South East
SW	South West
SS	South South
THC	Tertiary Health Care
UN	United Nations
UNDP	United Nations Development Programme
UCTH	University of Calabar Teaching Hospital
UCH	University College Hospital
UBTH	University of Benin Teaching Hospital
VIA	Visual Inspection of Cervix Stained with Acetic Acid
WHA	World Health Assembly
WHO	World Health Organization

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SECTION A: POLICY

1.0. Background

1.1. Introduction

Nigeria has an area of 923, 768 square kilometers and is located along the west coast of Africa. It lies between latitudes 4^0 and 14^0 North of the equator and between longitudes 2^0 and 14^0 East of the Greenwich Meridian. The land mass covers the mangrove swamp lands, creeks along the coast, tropical forest, savannah woodland and grassland in the middle part stretching to the Sahel in the far north. There are two marked seasons: the dry season lasting from November to March and the rainy season lasting from April to October. The climate is drier further north with extremes of temperatures, sometimes reaching as high as 44^0C and falling as low as 14^0C. Temperatures at the coast seldom rise above 32^0C but humidity is high. There are mountainous areas with rocky belts which stretch from the northwest and northeast through the middle belt to the south.

The country is a Federation of 36 states and the Federal Capital Territory, Abuja and is divided into 774 Local Governments Areas (LGAs). According to the 2006 National Population Census figures the average population of a Local Government Area ranges from 13,660 (Bakassi in Cross Rivers State) to 1,319,571 (Alimosho in Lagos State). Nigeria is a heterogeneous country made up of about 380 ethnic groups. The three main spoken languages are Hausa, Igbo and Yoruba, while English is the official language.

The population of Nigeria is estimated at over an estimated ?167.5 million(NPC/NBS, 2006check up and update from recent projection 2012??)of which 51% are males and 49% are females. The male to female ratio is 1.1:1 (105:100). The population has a pyramidal structure characterized with those less than 15 years old accounting for 41.8% while 3.2% of the population is over 65 years of age. The population growth rate is 3.2% with a fertility rate of 5.7 births per woman. The life expectancy of Nigerians at birth is 53.2 years, 52.6 years for males and 53.8 years for females (FMOH, 2008). This has been attributable to both communicable and non-communicable diseases. Maternal Mortality ratio is 545 per 100,000 live births while infant mortality rate is 75 per 1000 live births, the under-five mortality rate is 157 per 1000 and neonatal mortality rate is 40 per 1000 live births (FMOH, 2008). **More recent data????**

Nigeria is experiencing rapid urbanization with rural to urban migration, particularly by the youths and the unemployed. The rate of urbanization is 4-10% nationally. The country is undergoing a demographic transition with concomitant increase in risk factors for Non-Communicable Diseases (NCDs). The 2008 National Demographic and Health Survey (NDHS) indicates that the literacy level has improved with specific higher levels in males (74.4%) than females (53.7%); in urban areas (90.9% males and 76.6% females) than the rural areas (68.3% males and 40.9% females) and in the South (90.9% males and 79.6% females) than in the North (63.3% males and 30.5% females).

Nigeria's main source of revenue is the crude oil and this accounts for over 90% of the value of export. The Gross Domestic Product (GDP) per capita is $1,418 and the Gross National Product (GNP) per capita is $310 (CBN, 2008). The human development index (0.511) and human poverty index (36.2) for Nigeria shows that poverty level is still high, and this significantly drives and sustains NCDs(UNDP, 2009). **Most recent????**

1.2. Health Services

Nigeria has three levels of health care delivery system comprising tertiary, secondary and primary which are provided by federal, state and local governments respectively. The private sector and NGOs complement health care delivery at all levels. The country is experiencing a double burden of communicable and non-communicable diseases with an increasing demand on the health services (WHO, 2005). Use 2012 document. The disposition of health personnel and health indices are as shown below:

Table 1: Distribution of Health Facilities by Type and Ownership

Type of Health Care Facility	2007			2008		
	Public	Private	Total	Public	Private	Total
PHC	10,912	3,898	14,810	15,955	6,754	22,707
SHC	537	2,188	2,725	887	2,307	3,194
THC	456	03	459	????50	26	76

Total	11,905	6,089	17,974	16,892	9,087	25,979
% of Total	**66.2%**	**38.8%**	**100%**	**65%**	**35%**	**100%**

Source: Federal Ministry of Health, Abuja Recent doc. to be provided by Dr Usoro

Table 2: Three years of Health Manpower Situation in Nigeria (2005-2007)

Human Resources	2005	2006	2007
Registered Medical Practitioners:	Na	na	55,376
Nigerian	Na	na	52,408
Non-Nigerian	Na	na	2,968
Registered Dental Practitioners:	Na	2,571	2,571
Nigerian	Na	2,356	2,356
Non-Nigerian	Na	215	215
Optometrists:	847	na	1,415
Nigerian	845	na	Na
Non-Nigerian	2	na	Na
Registered Midwives	2,138	1,838	90,489
Registered Nurses	3,284	4,182	128,916
Registered Psychiatric Nurses	207	250	6,005
Dispensing Opticians	5	na	Na
Registered Nurses Tutors	Na	na	Na
Registered Public Nurses Tutors	Na	na	Na
Registered Public Nurses	132	69	Na
Registered Nurses/Nurse Administrator	16	7	1,228
Registered Nurses Anaesthetists	27	48	517
Newly Admitted Student Community Midwives	Na	na	Na
Medical Record Officers	Na	na	Na

Source: National Bureau of Statistics (2009) Get statistics from other sources e.g MDCN, NCN etc. as well as NBS (2012) 'na' – data not available

Table 3: Health Indicators for Nigeria (2008)

Indicator	Size
Life expectancy at birth	53.2 (males 52.6 & females 53.8)
Total fertility rate	5.7 births per woman
Maternal mortality ratio	545 per 100,000 live births
Infant mortality rate	75 per 1000 live births
Neonatal mortality rate	40 per 1000 live births
Under-five mortality rate	157 per 1000 live births
Children <5 years of age who are underweight	27.%
Breast feeding rate 12 – 15 months	73% urban & 79.4% rural (MICS 2007)
Complete immunization coverage before 1st birth day	27% urban & 10% rural (NBS 2005)

Source: National Demographic and Health Survey (2008)

1.3. Situation Analysis/Justification for Non-Communicable DiseaseControlPolicy

NCDs are becoming increasingly a major cause of morbidity and mortality in Nigeria. In the 1990-1992 national survey, the prevalence of hypertension was 11.2% while that of diabetes mellitus was

2.7% (1.05 million Nigerian above 15 years). However with the definitional shift of 140/90mmHg in 1999 (WHO/ISH, 1999), the prevalence of hypertension now exceed 20%. The prevalence of sickle cell disease is 0.5% and that of the sickle cell trait (AS) accounts for 23.04% of the population. There was a survey on NCDs and risk factors in the 6 geopolitical zones that is being analyzed whichwill provide more recent data for the country.If nothing is done, the projected cumulative annual economic loss for the period 2005-2015 from deaths due to heart diseases, stroke and diabetes would be $ 7.6 billion (12.2 trillion naira) which currently amounts to $0.8 billion (128 billion naira) average annual loss in income for Nigeria (WHO, 2006 Ref)

1.3.1. Factors Driving NCDs

The current forces of globalization, urbanization and industrialization have not only created development but also imposed new lifestyles and risky behaviours with the emergence and sustenance of chronic diseases. Infections e.g. viral (HBV, HCV, HPV, EBV, HIV, HHV8), some bacterial and parasitic diseases are also known causes of NCDs including cancers. Occupational health hazards, some harmful cultural practices and beliefs in Nigeria can also sustain NCDs. The trade, foreign investments and promotional marketing involved in the economic development of the country encourages some unhealthy risky behaviours.

The lack of up-to-date evidence for decision making and misconception by the community are important factors hampering the drive for NCDs prevention and control. There is poor awareness by the general public on the knowledge of NCDs and the need for routine medical checkup. NCDs prevention and control is further compounded by inequitable distribution of NCD care delivery services especially at the primary health care level.

The main modifiable risk factors for NCDs include physical inactivity, unhealthy diets, tobacco use, substance abuse and harmful consumption of alcohol. The NCDs are further compounded by lack of affordable and accessible health facilities to the majority of the populace.

1.3.2. Risk Factors

There are clustering of risk factors in individuals and communities as a result of adoption of new hazardous lifestyles and behaviours. . These modifiable shared risk factors include tobacco use (smoked and smokeless forms) , harmful use of alcohol (local and factory brewed), unhealthy diets (such as excessive consumption of red meat, salt, saturated fat, refined sugars in foods and drinks, suboptimal consumption of the following - fibre, micronutrients [such as zinc, iron, selenium, molybdenum, etc], vitamin A , folic acid, vegetables, fruits etc), and physical inactivity

Other risk factors include hereditary conditions such as sickle cell carrier status, albinism, G-6 PD deficiency, etc.,use of illicit drugs, unsafe sex, unsafe water, poor sanitation and hygiene, outdoor and indoor smoke from solid fuels,. Exposure to harmful radiation (domestic or industrial), infectious agents such as bacteria, viruses and parasites in the environment as well as climate change contributes to an emerging increase in NCDs.

1.4. Priority Non-Communicable Diseases (NCDs)

Non-Communicable Diseases are responsible for significant morbidity, disability and mortality in Nigeria and are considered priority diseases for intervention. The common NCDs in Nigeria include the following: cardiovascular diseases (hypertension, stroke, rheumatic heart diseasecardiomyopathies, coronary heart disease,, cancers, diabetes mellitus, sickle cell disease, bronchial asthma, mental health, alcohol and other substance use disorders, violence and road traffic injuries, and oral health disorders. Diabetes, hypertensionand other heart diseases, sickle cell disease in pregnancy are among the major causes of maternal mortality in Nigeria.

1.4.1. Cardiovascular Diseases

1) Hypertension

People are usually not aware of a raised blood pressure hence the use of the term a 'silent killer' for hypertension. The national data from the survey on NCDs in Nigeria between 1990 and 1992 revealed that only 33% of hypertensives were aware of their condition. Using a blood pressure (BP) greater than 160/95 mmHg criterion, the study identified hypertension in 11.2% (4.3million) of Nigerians aged 15 years and above. With the shift in paradigm using a cut-off point of 140/90 mmHg, the prevalence of hypertension is now in excess of 20% in the population. There was an observed higher prevalence in the urban than rural areas. People at both extremes of socio-economic spectra had higher prevalence of hypertension. Overweight and obesity, cigarette .smoking, harmful alcohol intake as well as physical inactivity were associated with increased prevalence of hypertension. The 2007 surveillance report in Lagos state shows an overall prevalence of hypertension in 18.2% of the population. Find reference –Dr Lanre

2) Stroke

Stroke is a major cause of neurological admissions in Nigeria(reference?). Its prevention has been reported to be dependable on public knowledge of stroke, warning signs and risks factors. The main risk factors for stroke are hypertension, diabetes, obesity, smoking and sickle cell disease. The mortality rate for stroke is as high as 40-50%(reference?) within the first three months of diagnosis. Hospital based data are highly selective, incomplete and unreliable as only brain scan and post mortem studies can give accurate diagnosis. About 20%??reference Dr Biodun/Dr Chinenyeof stroke is misdiagnosed as the condition often mimics other clinical entities like hypoglycaemia, seizure disorders, chronic subdural haematomas and encephalopathies.(find reference) Dedicated stroke units and comprehensive rehabilitation centres should be established in Nigeria.

3) Coronary Heart Disease (CHD) include prevalence from hospital based data- Dr Akinroye

Coronary heart disease (CHD) appears to be an uncommon entity in Nigeria, probably as a result of lack of data and insufficient autopsy studies on sudden deaths. Notably, an assessment of total cholesterol as a risk factor for CHD in the 1990-1992 national survey showed that the level was within the normal range (urban 45.1 ±21.0 mg% and rural 35.3 ± 16.0 mg%) check up- Dr Chinenye. It is pertinent to note that there are increasing reports of angina and myocardial infarction in hospital settingreference.

1.4.2. Diabetes Mellitus (DM)

Diabetes Mellitus is associated with urban living, overweight, physical inactivity, alcohol use and parental family history.In 1990-1992 survey, the prevalence of Diabetes Mellitus was 2.7% (1.05 million Nigerians over 15 years). (Recent prevalence from Dr Chinenye)Only 21% (225,000) were aware of their condition and 18% (198,000) were on treatment. The prevalence was higher in the urban than rural areas (Lagos metropolitan, 7.2%, semi-urban area of Portharcourt, 6.8% and rural Mangu in Plateau state, 0.65%).(confirm)-Chnenye et al, 2008.Drs Akinroye/Chinenye/Malau In a recent large general population survey in Lagos state, the prevalence of diabetes was reported to be 4.3% (Lagos, 2008) confirm/reference Drs Akinroye/Chinenye/Malau

Common complications of diabetes include diabetic gangrene, chronic renal failure, hypertension, visual impairment/blindness, and multiple organ damage associated with atherosclerosis.

A landmark prospective study was conducted by Diabcare Study Group in 2008 across seven tertiary health centres in Nigeria. The objective of study was to assess the clinical and laboratory profile as well as evaluate the quality of care of Nigerian diabetic patients. Diabetes complications found were peripheral neuropathy 59.2%, retinopathy 35.5%, cataracts 25.2%, diabetic foot ulcers 16.0%, cerebrovascular disease 4.7%,and nephropathy 3.2%.

The survey clearly showed that diabetes care in terms of glycaemic control, control to goal of other cardiovascular risk factors, management practices as well as prevention of complications were below standard. (Chinenye et al, 2011).

1.4.3. Cancers

Cancers are major contributors of morbidity and mortality in Nigeria and are linked to tobacco use, excessive consumption of alcohol, unhealthy diet, obesity, physical inactivity, chronic infections, exposure to radiation, chemical agents and family history. There is an ongoing effort to establish a national population-based cancer registry in Nigeria. However, data from the 11 hospital-based cancer registries located in Abuja, Calabar, Enugu, Ile- Ife, Ilorin, Ido-Ekiti, Maiduguri, Nnewi, Port Harcourt, Zaria, Lagos, show that the 5 commonest cancers in Nigeria are as follows:

A. In females;

1. Breast (40%)
2. Uterine cervix (17.9%)
3. Ovary (3.7%)
4. Lymphomas (3.1%)

5. Skin excluding malignant melanomas (2.3%)

B. In males;

1. Prostate (27.2%)
2. Colorectal (7.1%)
3. Lymphomas (6.6%)
4. Liver (4.2%)
5. Skin excluding malignant melanomas 4.2%)

In children, Burkitts lymphoma, retinoblastoma and nephroblastoma (Wilms tumour) are common. EBV in association with immunosuppression by malaria contributes to high proportion of Burkitts lymphoma in children.

HIV associated cancers e.g. Kaposi sarcoma, Non-Hodgkin's lymphoma and invasive squamous cell carcinoma of the conjunctiva are also on the increase. Hepatitis B and C viruses are associated with hepatocellular (PLCC) carcinoma and there is a high carrier rate of hepatitis B in Nigeria with a reported prevalence rate of 10 to 20% from some hospital based survey (Kolawole et al, 2012).High risk HPV serotypes such as 16, 18, 52 etc. are associated with cervical cancer in Nigeria. (reference? Dr Nnodu-Ibadan study) Routine screening for cancers is not being provided at primary health care level and majority of cancers in Nigeria are diagnosed at a very late stage. There are also few centres offering radiotherapy and other oncology services.

1.4.4. Chronic Respiratory Diseases (CRDs)

Chronic Respiratory Diseases (including bronchial asthma, chronic bronchitis, emphysema, chronic occupational lung diseases) affecting both children and adults are common in Nigeria. There are limited data on the national prevalence on CRDs. There is a strong association with house dust mites, fungi, exposure to tobacco smoke and smoke from domestic sources as well as industrial and environmental pollutants (fumes from solid fuels, airborne allergens, diesel exhaust gases, asbestos dust).(Enrich from Prof Irabor/ Dr Chukwu via Dr Usoro)

1.4.5. Mental, Neurological and Substance useDisorders

Mental, Neurological and Substance use Disorders (MNS) together contribute 25%to years of potential life lost due to premature mortality and the years of productive life lost due to disability (DALYs) in Nigeria (WHO Global Burden of Disease 2008). Mental health has a major impact on quality of life as well as social and economic viability of families, communities and the nation.A large community study in Nigeria estimates around 1 in 5persons would experience a significant problem in their lifetime requiring long-term commitment to treatment. The proportion receiving any treatment, orthodox or otherwise, within the previous 12 months is about 10% (Gureje et al) Check up date. As a result of the high prevalence, relatively low mortality rate, low identification rate and poor utilization of treatment, the MNS disorders arethe largest single group, among NCDs contributing to disability.

Mental disorders are common in Nigeria as they are everywhere else in the world, and contribute to disability, mortality, loss of economic productivity and poverty. The prevalence of psychosis is at least 0.5% of the general population, and the prevalence of common mental disorders (depression, anxiety, hysteria, somatisation) is at least 10%, with increased rates in highly deprived groups. There is evidence that depression is particularly common among Nigerian elderly, with over 7% reporting major depressive disorder in a 12-month period and over 25% reporting same in the course of a lifetime.Prof Udofia to provide referencesAt present, government services are provided mainly in large tertiary institutions (Federal Neuro-psychiatric Hospitals, University Teaching Hospitals, Psychiatric and Federal Medical Centres). Some States have psychiatric hospitals. The focus of all these services is in large cities, which makes access to care difficult for the majority of the population.

There are <150 psychiatrists in the country (around 1 per 1 million population) and very few neurologists, with many newly trained specialists leaving the country to work abroad. There are around 5 psychiatric nurses per 100,000 population and only very few other mental and neurological health professionals like clinical psychologists, social workers, neuro-physiotherapists, and occupational therapists. The systems that support delivery of services are currently weak, with poor availability of psychotropic drugs and lack of incorporation of mental and neurological health measures in health information systems.

Good quality community-based services with hospital support has been shown to be the most effective form of comprehensive mental health care. The Federal Ministry of Health is committed to the provision of evidence-based care through the expansion of accessible anddecentralized services in Nigeria, which will address the mental health access gap that currently exists in the country.

No countrywide studies have been conducted to verify the prevalence of these MNS disorders but the large scale study on Health and wellbeing (Gureje et al) provide ref/date and estimates from the WHO (GlobalBurden of Disease 2008) include Depression, Drug use disorders, Epilepsy, Schizophrenia, Bipolar Affective Disorders and Anxiety disorders as the most prevalent disorders.

1.4.6. Sickle Cell Disease (SCD)

Sickle Cell Disease (SCD) is the commonest genetic disorder in Nigeria. According to WHO, Nigeria accounted for 75% cases of infants SCD in Africa with a prevalence of over 19 abnormal haemoglobins per 1000 live births. About 200,000 babies are born each year with SCD, more than half of whom will die before their fifth birthday, 90% before attaining adulthood if poorly managed in childhood. SCD is thus contributing to childhood under-five mortality which will affect the achievement of the MDGs 2, 4 and 6 if efforts at control are not instituted.(Weathered et al, 2006; WHO, 2002)

In 1990-1992 national survey, 0.5% of adult Nigerians of age 15 years and above had SCD compared to prevalence rates in newborns due to loss of affected sufferers in early childhood. In that survey, 23% of adults had the Sickle cell trait (AS), however the recent national community survey

carried out in 2011 across the six geo-political zones of the country revealed that Sickle Cell Trait (AS) varied from 24---------- to 25-------% (Preliminary report-FMoH, 2010)

1.4.7. Violence and Injuries

Violence: There is an upsurge of violence in Nigeria which is linked to attitude, social pressures, stress, frustration, poverty, unemployment and political uprising. Religious and ethnic conflicts also contribute to growing scourge of violence in the country(Ref?? Dr Akinroye)

Injuries: The following forms of injuries occur in Nigeria:

1. Road traffic injuries
2. Injuries from sports
3. Injuries from communal clashes amongst cult/rival groups, ethno-religious and political conflicts etc.
4. Harmful traditional practices such as unorthodox tonsillectomy, uvulectomy, circumcision, female genital mutilation etc.
5. Injuries sustained from torture by security agents such as the police, state security service, military etc
6. Domestic violence from child, spouse battering
7. Injuries from sexual abuse

1) Road Traffic Injuries: According to data from Federal Road Safety Commission (FRSC), over 26,000 injuries and 7,000 deaths are recorded annually from road traffic crashes (FRSC). As at 2001, Nigeria ranked second on the weighted scale of countries with very high road traffic crashes (WHO, 2004)**.** According to FRSC between 1990 and 2001 a total of 81,657 deaths and 238,573 people injured. From 2000-2002, the annual death toll from road crashes in Nigeria stood at more than 8,400 from about 17,000 road crashes. Nationwide, a total of 208,361 cases of road traffic crashes were recorded by FRSC from 1990-2001. In the year 2006, a total of9,972 deaths and 38,067 injuries were reported (FRSC, 2006)**.** (Preliminary report on UNs from WHO will be given to the desk officer to update FRSC). FRSC annual reports from 2008 to 2011, show a total of 6,661, 5,693, 4,065, 4,372 deaths and27,980, 27,270, 18,095, 17,464 Injuries respectively (FRSC, 2012) There is an observed reduction over the 4 years period probably as a result of the campaign by the FRSC. In 2011, this figure translates to approximately 49 injuries per day. Road Traffic Injuries contribute to an economic cost of 3 billion naira annually (3% of GNP) (FRSC, 2012 check website)

2) Gender-based Violence

There are gender issues of domestic violence spread across the country and an upsurge of reported cases of violence against women. The Beijing declaration states that violence against women violates and impairs the fundamental rights of women in all societies. Women and girls are subjected to sexual, physical and psychological abuse which cut across lines of income, class and culture. These issues include sexual abuse of children, rape, domestic violence, sexual assault and

harassment, trafficking of women and girls, and harmful traditional practices including genital mutilation. These leave deep psychological scars and also damage reproductive and sexual health and in some instances result in the death of the victim. The United Nations Resolution 1325 of October 2000 was adopted by member countries to ensure access to peace and security by women(UN, 2000). The key provisions of the resolutions are captured in the three P's:

1. *Protection* of the human rights of women and girls during times of conflict
2. *Prevention* of gender-based violence and
3. Equal *Participation* of women in peace building and reconstruction.

3) **Injuries in Childhood and the Elderly:** Childhood injuries are significant cause of hospital admission in Nigeria and mostly occur in children under the age of 10. The common causes of childhood injuries are road traffic accidents, domestic accidents, burns, accidental poisoning (kerosene, caustic soda, rat poisons, prescription drugs, and carbon monoxide from generators), aspiration or ingestion of foreign bodies.(Gukas)

There is a growing population of the elderly in Nigeria (above the age of 65). In the 1991 population census they constituted 3.37% of the population and by the year 2020(update from NBS), this proportion is expected to increase to 5.2%. In the elderly, there is an increased risk of falls related to their multiple co-morbidities including disabling osteoarthritis, (Bekibele and Gureje, 2010) and orthostatic hypotension from drugs, peripheral neuropathy and sensory impairments such as hearing loss and blindness. An average of The presence of osteoporosis which this group of adults are susceptible to increase their risk of more complications even from minor falls.(Ref??? Dr Ismaila, Dr Lanre, Dr Usoro)

1.4.8. Oral Health Diseases

Oral health problems of high priority in Nigeria are oral cancers, dental fluorosis, cancrum oris (noma), dental caries and periodontal diseases. Others include oro-facial malformations (clefts of the lip and palate), oral manifestations of HIV/AIDS and maxillofacial trauma.

1) **Oral cancers:** Are among the most common cancers of the head and neck region and each year, about 30 new cases are recorded. The risk factors for oral cancers include use of tobacco and/or kolanut, use of alcohol and immuno-suppression from nutritional deficiency factors and HIV/AIDS. In Northern Nigeria 70 – 90% of oral cancers present in adults while 50 – 65% in 15 – 40 years old. At least 80% of cases usually present in advanced stage of the disease (Otoh , 2004 2005 2009).

2) **Dental fluorosis:** Is dependent on factors such as fluoride concentration, climatic conditions (ambient temperature, altitude) and body weight especially during the developmental period and mineralization of teeth. In children below 10 years, the lower the body weight, the greater the burden. In most part of the country, fluoride concentration is less than 0.6 ppm, and mostly less than 0.3 ppm particularly in the southern parts of Nigeria. However this concentration is greater than 1.5 ppm in some parts of Nigeria

especially in the North Central and parts of the North East zones and this result in high prevalence of severe brownish discolouration of teeth (Akpata E.S, 2004).

3) **Noma:** Is an acute devastating oro-facial gangrene that occurs mainly among children. The incidence in Noma Children Hospital, Sokoto in North Western Nigeria is 6 per 1000 children (Dr. Otoh to explain the denominator and provide ref). Noma is an urgent public health problem that is most prevalent in communities ridden with poverty, poor implementation of preventive healthas well as poor nutritional status.

4) **Dental caries (tooth decay):** This is high in Nigeria with a national prevalence of 30 – 44% for ages 12 – 44 years according to the 1990 – 1991 National Pathfinder Oral Health Survey. Recent survey in Northern Nigeria showed that the prevalence of caries ranged between 15.7% – 26.6% for all age groups (Otoh et al, 2006).

5) **Periodontal diseases:** Are very high in Nigeria. Majority of cases have dental calculus, shallow and deep pockets. However, the percentage of healthy gums is very small, about 4% in all age groups (Adegbembo A.O et al, 1995). A survey conducted in Northern Nigeria in 2005 show a prevalence of 95% (5-6 year olds) and 100% for all other age groups (Otoh et al, 2006)

A new National survey is about to commence on oral health disorders.

Training of primary health care workers on oral health has been ongoing in Plateau, Nasarawa, Gombe and Ogun states with a plan to cover the whole country.

1.5. Notable risk factors for NCDs

To limit the burden of these NCDs, definite measures should be put in place to reduce the following modifiable risk factors:

1. Tobacco use (smoked and smokeless forms) and exposure to second hand smoke
2. Harmful use of alcohol
3. Unhealthy diet
4. Physical inactivity
5. Other modifiable risk factors including genetic disorderssuch as sickle cell gene carrier status,albinism, G-6 PD deficiency, Communicable diseases (including bacteria, viruses and parasites) environmental pollutants (outdoor and indoor smoke from solid fuels), exposure to harmful radiation (domestic or industrial) and climate change

1.5.1. Tobaccouse

Tobacco is increasingly associated with NCDs. According to the WHO, it is one of the preventable causes of death(include data –globally/locally and give Refs). In the recent Global Youth Tobacco Survey in Nigeria involving a total of 5459 students, a prevalence rate of 2.6 – 6.2% was obtained. There is an increasing prevalence of cigarette smoking among the youths especially the girls. The above survey also suggested significant exposure of youths to tobacco smoking and exposure in public places to be high(EkanemI.A., 2008).Recent study among university students in Abuja,

Nigeria show 33.3% prevalence of current smokers and 32.8% prevalence of life-time smokers (Nnodu and Jamda, 2012). According to the WHO report on global tobacco epidemic, the current smoking rate for adult Nigerian males is 9.0% and 0.2% in females**. If nothing is done to check this high prevalence of tobacco use among youths, the clustering** of risk factors that have been observed with tobacco smoking would reach an epidemic proportion resulting in NCDs such as – diabetes mellitus, hypertension and high blood cholesterol with attendant high morbidity and mortality.

1.5.2. Harmful alcohol use

Harmful use of alcohol is one of the main risk factors for NCDs contributing significantly to premature deaths and avoidable disease burden and has a major impact on public health and socio-economic status.It was estimated by WHO[7] that per capita consumption of alcohol in Nigeria is 10.57 litres (ranking among the highest in Africa)Ref…policy brief 7. It ranks close to tobacco and is responsible for a high disability-adjusted life years (DALYs) lost, with mental health disorders and violence and injuries from road traffic crashes, burns, drowning and falls accounting for most DALYs lost (check up more recent DALYS with figures WHO, 2005)**.**Among the disease conditions associated with harmful alcohol use are hypertension, diabetes mellitus (type 2), liver cirrhosis, cancers (e.g. liver and stomach), aspiration pneumonitis, malnutrition, diseases of the pancreas, Mallory-Weiss Syndrome (vomiting, excessive wretching and haematemesis), neuropsychiatric conditions (e.g. dependence, psychoses and depression), violence and injuries (e.g. deaths/disability from road traffic crashes, burns, drowning and falls). Harmful use of alcohol also contributes to the burden of infectious diseases, including sexually-transmitted infections and HIV infection, through association with unsafe sexual behaviour and interference with effective treatment regimens and procedures.

1.5.3. Physical inactivity

Sedentary life style from increasing urbanization and mechanization is progressively reducing our levels of physical activity. The World Health Organization studies showed that 60% of the global population is not sufficiently active (Global Health Improvement and WHO: Shaping the Future 2005 WHO Global report find more recent study Dr Akinroye).

Physical activities, at any age protect against a multitude of chronic health problems including obesity, osteoporosis, certain cancers (breast, endometrial and bowel), premature aging, and all forms of cardiovascular diseases. It has been found that two hours of moderate physical activity or an hour of fairly vigorous physical activity every week or at least half an hour daily will not only promote mental well being but also reduce the risk of coronary heart disease by about 30% (Ref?? Dr Malau). Physical activities

1.5.4. Unhealthy diet

Unhealthy diet contributes to the development of NCDs. There is increasing patronage of fast food outfits by the population. In Nigeria consumption of proteins, fruits and vegetables is low while excessive intake of salt and refined sugarsis common(add source Drs Usoro/Akinroye).). Excessive salt intake is a recognized risk factor for CVDs in Nigeria (Ref-Dr Akinroye). This results from

additional salt at table, salty pastries, canned foods, dried fish and local delicacies (such as suya, kilishi, isi-ewu, ngwo-ngwo)Another source of excessive sodium intake includes Monosodium glutamate (MSG) products. There is need to reduce salt intake to less than 5g (1 teaspoonful) of sodium chloride per day(WHO, 2006 update ref GMF?**.**

There is increasing intake of sweetened products – carbonated drinks, pastries, candies, and other refined sugars all of which predispose to the development of NCDs. Of interest, is the high caloric intake resulting from these sugars promoting overweight and obesity. There is need to lower the consumption of sugar contents of foods to acceptable levels (which is equivalent to 40 – 50g per person per day or 6 – 10% energy intake per day)(Ref. Dr Lanre/Malau).

Women and children constitute a vulnerable group in the development of nutritional disorders.. Micronutrient deficiencies (iron, folate, vitamin A, iodine) during pregnancy predisposes to the development of anaemia, low birth weight and congenital malformations. Childhood malnutrition could also have an effect on mental and physical development of the children later in life. The acceptability of exclusive breastfeeding is not yet optimised thus limiting the benefits of breast feeding. A back up policy is expected to promote exclusive breast feeding. (

1.5.5. Other modifiable risk factors

These include

Hereditary conditions such as **sickle cell carrier status.**About 24-2% of our population have the sickle cell trait and union of two individuals with the trait is responsible for the 2% prevalence of sickle cell disease in our population (3.34 million) This disorder manifests early in life and has divers clinical complications including cardiovascular and renal diseases, thus fueling major NCDs.(WHO, 2002)**Albinism** is a known risk factor for skin cancer following exposure to UV radiation. The problem is currently being addressed by the National policy on albinism in Nigeria.(Ref-frompolicy doc). ; **G-6 PD deficiency** is a known risk factor for CVDs which causes chronic haemolytic anaemia (Ademowo and Fanusi, 2008) ,

Unhealthy sexual practices such as unprotected sex, early sexual debut, multiple sexual partnersare risk factors for HIV associated malignancies including cervical cancer. Other sexually transmitted viruses such as HPV and HBV which cause cervical and liver cancer respectively.

Other communicable diseases such as Helico-bacter pylori gastritis,schistosomiasis, Epstein barr virus causing cancers of the stomach, bladder, lymphomas including Burkitts lymphomas and Kaposi sarcoma. .

Exposure to harmful radiation such as radiation from medical equipments, nuclear reactors, volcanic eruptions which are associated with anaemia, leukaemia, skin cancers, thyroid cancers, etc. (domestic or industrial),

Environmental pollutants such as domestic and industrial toxic wastes including outdoor and indoor smoke from solid fuels, domestic stoves, car exhaust fumes, generators, pesticides and herbicides, oil spillages, heavy metal poisoning, gas flaring, etc.

Climate changethat results from depletion in the ozone layer leading to an emerging increase in NCDs such as skin cancers, stress related CVDs and CRDs.,,

2.0. Scope of Policy

Nigeria is a member state of the WHO and is signatory to the resolution and conventions adopted at the World Health Assembly (WHA) and other meetings (WHA 19.38 1996, WHA 25-44 1972, WHA 29-49 1976 WHA 32-36 (find date), Regional WHA NCD strategy for Africa region FR/RC50/10 April 2011; Framework Convention on Tobacco Control (FCTC) 2003; UNGA 66/2 Sept 2011). Concerted efforts had been made since 1988 by the Federal Ministry of Health with national surveys on NCDs in 1990-1992, publication of documents for health professionals, integration of NCDs into the Primary Health Care (PHC), surveillance of NCDs risk factors in the six geopolitical zones, ongoing domestication process for the WHO FCTC and integration of NCDs into the IDSR system of reporting.

In recognition of the huge contribution of NCDs to the burden of disease in Nigeria, this policy document has been developed. There is therefore the need to raise awareness, sensitize policy-makers and commit the country to action using a multi-sectoral approach for the reduction of NCDs in Nigeria. The policy shall address the following areas: awareness creation, prevention, control, early detection, prompt referral and management (treatment/palliation and rehabilitation) of NCDs. The policy shall provide the enabling environment and promote capacity building for effective implementation.

2.1. Vision

A healthy Nigerian population with reduced burden of NCDs and enhanced quality of life for socio-economic development.

2.2. Mission

To promote healthy lifestyle in Nigeria and provide a framework for strengthening the health care system using a multi-sectoral approach for the prevention and control of NCDs

2.2.1. Specific Objectives

1) To provide relevant information and guidelinesfor lifestyle changes that promote healthy living.
2) To integrate NCDs prevention and control into the national strategic health development plan and into relevant policies across all tiers of government.
3) To reduce NCDs by engaging agencies and stakeholders that provide services impacting on the social determinants of health.
4) To serve as a guide for other nationalpolicies and programmes on NCDs prevention and control.
5) To provide guidance for the determination of prevalence of risk factors for NCDs, and the attendant morbidity, disability and mortality.
6) To specify roles and responsibilities to all tiers of government including parastatals and other stakeholders.
7) To provide framework for research on NCDs prevention and control.
8) To strengthen partnerships with stakeholders and development partners.

9) To monitor and evaluate the progress made at all levels of NCDs prevention and control.

2.3. The Guiding Principles

The policy shall be based on the following guiding principles:

1) To ensure the protection of the rights of individuals and communities.

To ensure gender equity.

2) To acknowledge the existence of cultural and religious sensitivities.
3) Uto use evidence – based information and best practiceso encourage a consultative, participatory and multi-sectoral approach.
4) To involve partnerships with stakeholders and development partners.

3.0. Legal Framework

This policy is set within the framework of the National Health policy and is subject to the provisions of the National Health Act. The policy shall be reviewed every five years or as may be requested by the Honourable Minister of Health or new state of the art knowledge as it affects NCDs. Relevant laws affecting control of NCDs with regard to their causation, prevention, early detection, management including palliative care and availability of essential drugs for the terminally ill and the elderly need to be revised, evolved and enacted.

The NCD law (when enacted) shall be supported by the following: Child Rights Act, Women Trafficking Act, Disability Act, Road Safety Act, Federal Road Safety Commission's Act, Tobacco Control Law (when enacted) , and Decree No.45 of 1988 Occupational Health Law (check up if an act or law) etc. This policy endorses the implementation of WHO FCTC 2003 and ratified in Nigeria in 2005, the recommendations of the Global Strategy for NCDs of 2008 – 2013, 2013 – 2020, the Global Strategy on diet, physical activity and health as well as the Global Strategy for infant and young child feeding

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3.1. Legislation/Legal Considerations

The legislation/Legal Considerations shall be addressed by reviewing, harmonizing, enacting and enforcing National laws and adapting/domesticating international conventions and resolutions to which Nigeria is a Signatory which would enhance the control of NCDs.

This shall be achieved by:

1. Enforcing existing national laws e.g. Tobacco Smoking (control/elimination) Act No 20 of 1990 and other related laws on smoking in public places; road traffic and safety laws to reduce injuries etc.
2. Integrating public service regulation designating all Government buildings as no smoking buildings into existing legislation to eliminate second hand smoking.
3. Legislating on fiscal policies requiring price and tax increases on tobacco products to reduce demand for tobacco products.

4. Enacting and enforcing laws requiring disclosure of contents and inclusion of bold health warnings and messages on packages of tobacco products, and prohibition of the sale of tobacco and alcoholto youths especially minors.
5. Revising all obsolete laws relevant to NCDs e.g. Lunacy law of Nigeria (which was enacted in 1916 as the lunacy ordinance after amalgamation of the two protectorates. It was adopted as lunacy the regional laws in 1958. This obsolete law is still being used till today without any modification).
6. Ensuring that the national development plans, policies, programmes and strategies e.g. National Economic Empowerment and Development Strategies (NEEDS), SURE-P (full meaning from Dr Alayo) National Poverty Eradication Programme (NAPEP), Health Sector Reform Plan give prominence to NCDs and tobacco control.
7. Ensuring that manufacturers and operators in the food industries adequately display the quantities of alcohol, salt, fat, sugar and preservatives on products' labels with enforcement by relevant government agencies.
8. Ensuring fortification of identified food items with vitamins as may be determined by current knowledge of derivable benefits.
9. Educating the population on the need to adopt appropriate behaviours and safety measures to reduce injuries at work, home and on the road through the use of personal protective devices as well as seatbelts, and car seats for children.
10. EncouragingStates including FCT and local governments to enact and enforce legislation that impacts positively on the control of NCDs.
11. Providing appropriate friendly environment and infrastructures or modification of such where they exist to cater for the need of the elderly, physically and mentally challenged individuals.

3.2. Policy Declaration

The FMOH recognizes the increasing burden of NCDs in Nigeria and the need for a policy framework for their control. The policy will ensure that the increasing prevalence of NCDs and their risk factors are reversed in order to significantly increase the life expectancy of Nigerians. This would be based on evidence and best practices, with special emphasis on an integrated approach involving existing structures at all tiers of Government, the private sector, NGOs & CBOs, communities and individuals.

All tiers of Nigerian Government, the private sector, CSOs, NGOs, CBOs, FBOs, the communities, the people and all other stakeholders therefore make the following declaration in line with the National Health Policy, and hereby adopt this policy document and affirm the following:

i. That all the tiers of government recognize and agree that the control, prevention, early detection and proper management of NCDs would contribute to a better quality of life for Nigerians, leading to a reduction in illnesses, disability and deaths related to NCDs.
ii. That all the States and Local Government health personnel shall participate actively in the control, prevention, early detection, and management of NCDs and also in the monitoring and evaluation of NCDs/Health promotion activities.

iii. That the people of Nigeria strongly agree that the National Policy on NCDs shall be complementary to the National Health Policy and its strategies to achieve quality health care for all .

iv. That the people of Nigeria wish to address the leading causes of major NCDs such as tobacco use and exposure to tobacco smoke, unhealthy diet, harmful use of alcohol,physical inactivity and other modifiable NCDs risk factors.

v. That sustainable framework that will enhance the control, prevention, early detection and management of and research on NCDs shall be established.

vi. That compliance by all the tiers of government and individuals with all relevant policies and laws that support healthy lifestyles and prevention of NCDs shall be ensured.

vii. That the policy when adopted shall be made available to all the States, LGAs, the private sectors,including medical and health institutions for implementation without delay.

viii. That the policy when adopted shall be fully funded through adequate budgetary allocations at the three tiers of Government, supported by the private sector, major stakeholders and other partners for effective implementation.

4.0. Policy actions

Deriving from above declaration, Government shall:

i. Establish a sustainable framework to facilitate the implementation of effective control mechanisms for prevention, early detection and management of NCDs in the country.

ii. Establish a mechanism to reduce risk factors for NCDs arising from among others tobacco use and exposure to tobacco smoke, unhealthy diets, harmful use of alcohol, physical inactivity and other modifiable risk factors.

iii. Ensure compliance by all tiers of government, civil society, private sector, communities and individuals with all policies supporting the establishment and implementation of a sound and effective control of NCDs.

iv. Establish appropriate mechanism for the review of relevant curricula and training manuals of medical and health institutions at all levels of education in order to incorporate the prevention and control of NCDs .

v. Provide adequate budgetary allocation for the control of NCDs through increased support (financial/technical) by the FMOH.

vi. Provide the necessary framework to encourage private sector participation in the control of NCDs in Nigeria.

vii. Strengthen the capacity of the existing National Health Management Information System (NHMIS) to adequately address the dearth of data on NCDs and make provision for the inclusion of NCDs in the national regular demographic health survey (NDHS).

viii. Strengthen the capacity of NHIS to expand its coverage to include all theNCDs.

ix. Ensure the incorporation of NCDs into the surveillance system as part of the Integrated Disease Surveillance Response System (IDSR).

x. Include vaccination against known carcinogenic viruses such HBV, high risk HPV serotypes, pneumococcal vaccination of children and the use of simple and cost effective techniques

for early detection of cancers e.g. visual inspection of cervix stained with acetic acid (VIA), clinical/self breast examination, digital rectal examination, faecal occult blood test, oralexamination at all levels of health care facilitiesAvailability of screening facilities for early detection of certain cancers in specialized centres. Mammography/USS for breast cancer, pap smear for cancer of the cervix, PSA for cancer of the prostate, check for evidence to include PSA for prostate ca (Drs Ismaila/Nnodu).

xi. colonoscopy for colonic cancers and velscope for mouth cancers.

xii. Ensure the establishment of appropriate units for the management and training of health professionals in alcohol and drug addiction as well as tobacco cessation.

xiii. Establish sustainable research framework to facilitate basic and translational research in NCDs prevention and control.

xiv. Establish an effective and efficient monitoring and evaluation mechanism for NCDs programme

5.0. Availability of facilities for newborn screening for detection of haemoglobinopathies e.g. sickle cell haemoglobin and enrolment into comprehensive care for affected individuals. Strategic Thrust for Implementation

The NCDs prevention and control policy covers several disease entities and to achieve its goals and objectives through the following key strategies:

1) Social mobilization
2) Screening and early detection of NCDs and their risk factors
3) Surveys, surveillance, data management and operational research.
4) Integration of NCDs management into primary health care services
5) Monitoring and Evaluation
6) Capacity building
7) Resource mobilization
8) Multisectoral collaboration and partnerships
9) Legislation.

5.1. Social mobilization
Advocacy and Sensitization

Advocacy and sensitization on NCDs shall be carried out at all levels of Government (the Executive and Legislature), the civil society, non-government organizations, community based, faith based organizations (FBOs) and the private sector on NCDs control. This would involve the following:

- Creating awareness and community mobilization for NCDs prevention, control, early diagnosis and management.
- Sensitizing the general public on NCDs control through knowledge of risk factors and risk reduction.
- Creating awareness among health workers on the proper treatment of NCDs and their complications.

- Promoting advocacy at the highest political and traditional leadership groups, including both executive and legislative arms of government, media organizations, and important members of the public (opinion leaders).
- Encouraging communities and individuals to maintain healthy dietary practices and regular physical exercise as well as avoidance of obesity, sedentary lifestyle, harmful use of alcohol and tobacco use
- Active involvement of the media and all other stakeholders (trade and commerce, Industry, Youths and Sports, Women Affairs, National Orientation Agency and Justice) in all advocacy and social mobilization issues elaborated in this policy.

5.2. Health promotion

The policy shall ensure that health promotion activities using appropriate information, education and communication packages shall be employed. This shall be achieved by:

- Mobilizing and Involving a wide range of organizations and people in health promotion action at all levels.
- Supporting the consumer rights thrust of health sector Reform and Health Bill by:
  i. Informing the people of their rights to health and health care.
  ii. Encouraging community participation in the decision about their health.
  iii. Advocating for the enforcement of existing health protection laws and the promulgation of new ones.
- Strengthening health promotion in key sectors of the communities that can reach a large section of the community: community, schools (including primary, secondary and tertiary institutions), Health facilities, Workplaces, Unions, Trade Unions, Market women, etc.
- Assessment of information needs of different target population shall be carried out.
- Information, education and communication materials including guidelines shall be reviewed, adapted or developed and regularly updated and disseminated to different target groups of the population (with translation into local dialect where necessary).
- Information and education of the general public on adoption of lifestyle changes including diet, physical exercise, reduction of alcohol consumption, total cessation of tobacco use and avoidance of other risk factors for the control of NCDs.
- Education of the population on the need to participate in NCDs screening programmes e.g. hypertension, cancers, diabetes mellitus, Sickle Cell Disorder and obesity.
- Mandatory routine screening for hypertension, diabetes, cancers, sickle cell disorder (pre-marital, newborn).
- Training a core of health promotion personnel.
- Training of Journalists on health promotion.

Priority shall be given to strengthening the implementation of key interventions to reduce the main shared modifiable risk factors that mainly contribute to the burden of NCDs. The risk factors are:

- Tobacco Use
- Unhealthy diets
- Physical inactivity
- Harmful use of alcohol

5.2.1. Tobacco Use

The reduction of Tobacco use shall be pursued through the implementation of the articles and obligations of the WHO FCTC, to which Nigeria is a signatory. A practical and cost-effective way to scale up the implementation of the demand reduction provisions of the WHO FCTC will be through the use of the **"MPOWER"** strategy. Key actions to be pursued include:

1. **M**onitoring tobacco use prevention
2. **P**rotecting people from tobacco smoke in public places and work places
3. **O**ffering help to people who want to quit tobacco use
4. **W**arning people about the dangers of tobacco
5. **E**nforcing bans on advertising, promotion and sponsorship
6. **R**aising tobacco tax and prices

5.2.2. Unhealthy diets

Key interventions to promote healthy diets shall be pursued. These include:

1. Promotion of breast feeding and ensuring optimal feeding for infants and young children including in schools.
2. Provide information, and establish dietary guidelines:
   - reduce dietary salt levels
   - promote iodization of salts etc
   - eliminate industrially produced trans-fatty acids
   - decrease saturated fats
   - limit free sugars
   - to increase consumption of fruits and vegetables as well as legumes, whole grains and nuts
3. Promote responsible marketing of foods and non-alcoholic beverages to children
4. Ensure provision of accurate and balanced information for consumers

5.2.3. Physical inactivity

Key interventions to be pursued to prevent physical inactivity include:-

1. Development and implementations of national guidelines on physical activity for health
2. Implement school-based programmes in line with WHO health-promoting school initiative.
3. Ensure that the physical environment support safe active commuting, and create space for recreational activity by:
   - ensuring that the environment for physical activity are accessible to and safe for all
   - introducing transport policies that promote active and safe methods of travelling

- provision and improvement of sports, recreational and leisure facilities in educational institutions, workplaces and communities.
- increase the number of safe spaces available for active play.

5.2.4. Harmful use of alcohol

The following key interventions shall be pursued to reduce the harmful use of alcohol:

1. Prevent underage alcohol consumption
2. Discourage use of alcohol by women in reproductive age-group
3. Prevent driving or operating machinery under the influence of alcohol
4. Discourage binge drinking including consumption of toxic local brew
5. Identify and manage alcohol use disorders
6. Prevent consumption of illegally brewed and distributed alcoholic beverages.

5.2.5. Other risk factor in Nigeria: Sickle Cell Trait

In Nigeria, another risk factor that constitutes an important cause of NCD is a hereditary disease (e.g. Sickle Cell Trait). The effect of this disease can be reduced through:

1) Proper genetic counseling and health education for pregnant women
2) Newborn/pre-school genetic screening for sickle cell trait
3) Pre-marital counseling and testing for sickle cell traits

5.2 Capacity building and development

Capacity building and development shall be encouraged to enhance effectiveness and efficiency at National, State, LGA and community levels for the implementation of this policy.

In this regard, the following shall apply:

- Training for pre-service, in-service and informal sector shall be encouraged for all health care providers in private and public institutions as well as community based organizations
- Establishment of a core of trainers at the national level who would periodically conduct training for health workers, programme officers as NCDs focal persons at all levels. The core facilitators would be utilized to provide technical support for states, LGAs and health facility training activities.
- Capacity building workshops on risk factor reduction, smoking cessation/WHO FCTC, control of harmful use of alcohol, diet and physical exercise/activity shall be conducted for states and LGA health workers from time to time.
- Training of health workers in the areas of palliative care of the terminally ill and the care of the elderly.
- Training of the laboratory workers in utilizing the facilities for the screening and early diagnoses of NCDs.

5.3. Prevention of Complications due to NCDs

- In order to ensure that patients diagnosed with NCDs receive appropriate treatment, guidelines for the proper management of patients shall be developed and disseminated to appropriate

health workers to prevent complications. The FMOH shall organize seminars and workshops for Doctors, Nurses and other relevant health workers on the guidelines. The FMOH shall update the guidelines regularly.

- Government shall as a matter of policy, provide adequate facilities in our centers of excellence for the treatment of patients who develop complications, particularly those with end organ damage e.g. kidney failure. Government shall pursue the establishment in each of the six geopolitical zones one organ transplant center for this purpose.
- Government shall ensure that NCDs are included in the benefit package of the National Health Insurance scheme so that it will reduce the cost to the patient.

5.4. Palliative and Rehabilitative Care

1. The FMOH shall provide palliative and hospice care for terminally ill NCDs' patients.
2. Provide rehabilitative care for patients with disabilities from complications of NCDs.
3. Detoxification/drug treatment and tobacco cessation centers.

5.5. National Survey of NCDs and Risk Factors

The Federal Ministry of Health NCDs Control Programme shall carry out a national survey of NCDs and the risk factors at least once every five years to elaborate the burden of NCDs and monitor trends to enable informed policy review.

5.6. Research

The policy recognizes the importance of research in the overall attainment of its goal and objectives on a sustainable basis, and shall cover various aspect of research on NCDs and their risk factors. These would include but not limited to research in the following areas:

- Research on the implementation of the policy on NCDs
- Basic research on the prevention and control of NCDs in Nigeria.
- Epidemiological, clinical and operational research on nutrition and healthy diet for policy review.
- Research into tobacco control programmes: viz price and tax measures, supply and demand measures, tobacco sales, advertising, tobacco and poverty, prevalence of tobacco use among adults, women and children etc.
- Research on trends of NCDs and NCDs risk factors for policy review
- Research on the impact on health care burden such as chronic renal failure, congestive heart failure and disabilities from stroke.
- Other research that will have impact on NCDs and the risk factors shall be supported and carried out.

5.7. Monitoring and Evaluation

Monitoring and evaluation of the implementation of this policy shall be carried out at various levels as appropriate. The key activities and tasks that shall be carried out for a successful programme implementation are:

- Monitoring and evaluation at the national levels shall be the responsibility of the Federal Ministry of Health.
- All NCDs programmes at the state and LGA levels shall be periodically monitored and re-assessed to ensure compliance with national policy and guidelines on NCDs.
- The Federal Ministry of Health shall regularly monitor NCDs and risk factors nationwide and evaluate the impact of interventions.
- Standard monitoring and evalution tools shall be used

5.8. Supervision

Supervision shall be a continuous process designed to ensure that programme operations at all levels, are proceeding according to plan. Supervision is also necessary in order to assess the efficiency and effectiveness of NCDs control programmes.

In this regards Federal Ministry of Health shall:

- Develop supervisory schedules and checklists for NCDs control activities for all tiers of the programme with a view to attaining the targets as set in the implementation plan.
- Support supervision which shall be carried out at community and facility levels.
- Establish a mechanism to provide regular feedback at all levels.

6.0. Programme Management and Coordination

Coordination of the implementation of this policy shall be streamlined to ensure effective involvement of all stakeholders, make maximum use of resources, provide guidance and set standard for achievements as follows:

- A focal unit for NCDs control shall be identified in all health facilities, LGA PHC Departments, and State Ministries of Health.
- At the national level, the NCDs Control Programme, Federal Ministry of Health shall be the coordinating mechanism or focal point for NCDs control activities.
- At the state level, the state NCDs Control Programme shall coordinate the implementation of this policy.
- At the LGA level, the coordination of the implementation of this policy shall rest on the LGA PHC Department.

7.0. Roles of Stakeholders in the National Policy

7.1. Stakeholders

For the purposes of this policy, the key stakeholders include:

- Federal, State, Local Government and their Ministries, Departments and Agencies.
- Communities
- National, State and Local Assemblies
- Development partners;
- Organized private sector including food beverages and pharmaceutical industries;
- Non-Governmental organizations (NGOs), Faith Based Organizations (FBOs), and Civil Society Organizations (CSO).
- Relevant Professional Bodies and Associations
- Media organizations and Practitioners of Journalism.
- Community, religious and traditional leaders
- Academia and research institutions.
- Line Ministries.
- Funding agencies (both internal and external)

7.1.1. Roles of the Federal Ministry of Health

The Federal Ministry of Health shall:

1. Develop a national plan of action and coordinate implementation of this policy.
2. Designate and strengthen a focal point for the prevention and control of NCDs;
3. Establish a multisectoral technical advisory committee with representation from relevant stakeholders for the NCDs Prevention and Control Programme.
4. Provide adequate budgetary allocation for the NCDs Prevention and Control Programme at the national level;
5. Facilitate and support capacity building at all levels for the implementation of this policy;
6. Facilitate advocacy and social mobilization at all levels for the prevention and control of NCDs.
7. Set standard, provide indicators and develop guidelines for prevention and control of NCDs. This shall be in collaboration with other relevant agencies.
8. FMOH shall adopt the community based health planning services system as the National model for Community Health Care incollaboration with National Primary Health Care Development Agency (NPHCDA), State Ministry of Health (SMOH), Local Government Health Department (LGHD) and communities to integrate NCDs control into Primary Health Care (PHC) services with community plans according to local need with a view to ensuring community ownership.
9. Expand access to essential medicines, basic technologies, consumables and services for the prevention and control of NCDs
10. Promote local and international partnerships in control and prevention of NCDs
11. Facilitate research on the prevention and control of NCDs.
12. Maintain a data base for NCDs including integration with integrated disease surveillance and response (IDSR).
13. Conduct supervision, monitoring and evaluation of NCDs programmes at all levels

7.1.2. Roles of State Governments

State Government shall:

1. Through its Ministry of Health with a designated focal point be responsible for the coordination of NCDs Prevention and Control Programme.
2. Provide a budgetary line and allocate adequate resources to support NCDs Control Programme
3. Facilitate and support capacity building at state and local government levels for the implementation of this policy;
4. Facilitate advocacy and social mobilization at state and local government levels for the prevention and control of NCDs.
5. Ensure access to essential medicines, basic technologies, consumables and services for the prevention and control of NCDs at state and local government levels
6. Ensure effective linkages and referrals between Primary Health Care and higher levels of care.
7. Promote appropriate partnerships in consultation with the Federal Ministry of Health to prevent and control NCDs.
8. Ensure data management on NCDs including integration with integrated disease surveillance and response (IDSR)
9. Provide effective implementation, supervision, monitoring and evaluation of this policy at state and LGA levels.

7.1.3. Roles of Local Government Areas

Local Government Areas (LGAs) shall:

1. Ensure through its health department with a designated focal point, the coordination of NCDs Prevention and Control Programme.
2. Provide a budgetary line and allocate adequate resources to support NCDs Control Programme.
3. Facilitate and support capacity building and provide adequate human resources at Primary Health Care level for the implementation of this policy.
4. Facilitate advocacy and social mobilization at community level for the prevention and control of NCDs.
5. Ensure access to essential medicines basic technologies consumables and services for the prevention and control of NCDs at Primary Health Care level.
6. Ensure effective linkages and referrals between PHC and higher levels of care.
7. Support data collection on NCDs including IDSR.
8. Provide effective implementation, supervision, monitoring and evaluation of this policy at Primary Health Care level.

7.1.4. National Primary Health Care Development Agency

The National Primary Health Care Development Agency (NPHCDA) shall:

1. Partner with the NCDs Control Programme in the integration of NCDs into the PHC system;
2. Assist in the collection and collation of NCDs surveillance data in the LGA;
3. Assist in the mobilization of the community for NCDs control activities;
4. Assist in the training and supervision of LGA staff.

7.1.5. Multisectoral Technical Advisory Committee

Under the leadership of the FMOH a multi-sectoral technical advisory committee shall be set up comprising but not limited to the academia, research institutes, line ministries, organized private sectors, international organisations and other relevant agencies and stakeholders:

Multi-sectoral technical advisory committee shall:

1. Provide technical advice for the implementation of the NCDs policy.
2. Support advocacy and resource mobilization efforts for NCDs prevention and control.

7.1.6. Roles of Development partners

Development partners shall:

1. Provide technical, financial and infrastructural support to governments at all levels in capacity building, advocacy, social mobilization and service delivery for the successful implementation of this policy in consultation with the FMOH.
2. Support research on NCDs at all levels of health care.
3. Support monitoring and evaluation of NCDs programmes at all levels of health care.

7.1.7. Roles of Private Sector

Private sector shall:

1. Support for the effective implementation of this policy;
2. Partner with relevant stakeholders including public-private partnership in the implementation of this policy;
3. Comply with laid down Government guidelines and regulations regarding NCDs prevention and control.
4. Transmit relevant data generated from their facilities to the LGA Health Department.
5. Support resource mobilization for the implementation of this policy.

7.1.8. Roles of Pharmaceutical and other health related industries

1. Local manufacturing and provision of affordable essential medicines and vaccines for management of NCDs
2. Involvement in research for NCDs prevention and control
3. Access to quality pharmaceutical products for the treatment of NCDs

7.1.9. Roles of Civil Society Organizations

Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) andFaith Based Organizations (FBOs), shall support awareness creation, community mobilization, advocacy, capacity building and resource mobilization for NCDs prevention and control.

7.1.10. Roles of Professional Bodies

The professional bodies shall:

1. Sensitize and mobilize their members for effective implementation of this policy;
2. Participate in capacity building activities involved in the implementation of this policy;
3. Support advocacy and community mobilization

4. Support and participate in research.

7.1.11. Roles of Traditional, Religious and Opinion Leaders

1. They shall support and facilitate effective implementation of this policy
2. Shall sensitize and mobilize their subjects and members for effective implementation of this policy

7.1.12. Roles of Media Organizations

Media organizations and practitioners of journalism shall:

1. Engage in advocacy and community mobilization
2. Sensitize and mobilize their members for effective implementation of this policy;
3. Disseminate information to the public on NCDs prevention and control at all levels.

8.0. Partnership Coordination

The Federal Ministry of Health shall be responsible for the coordination of the activities of all partners involved in NCDs policy implementation and resource mobilization.

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SECTION B: STRATEGIC PLAN OF ACTION

1.0. Preamble

- Burden: morbidity, mortality, prevalence, economic burden
- Regional priorities
- Overview of Health System in Nigeria: emphasis on NCDs.

2.0. Stakeholders for NCDs

3.0. Social mobilization

- Advocacy
- Sensitization
- IEC
- Launching of National NCD Policy and Strategic Plan of action

4.0. Human resource development

- Trainings at all levels including professional development
- Capacity building and training of DSNOs and HMIS on NCDs and Risk factors
- Capacity building for:
  - ✓ Resource mobilization
  - ✓ project management
  - ✓ project implementation
  - ✓ monitoring and evaluation
  - ✓ research

5.0. Referral system

- From PHC to all levels of care: need to structure the referral system
- The use of information technology (IT) in referral system

6.0. Modifiable risk factors

- Unhealthy diets
- Physical inactivity
- Tobacco use
- Harmful alcohol use
- Others

7.0. Data

- Periodic surveys
- Surveillance (IDSR and Risk factors surveillance)

8.0. Monitoring and Evaluation

- Need to integrate M & E into the health system
- Indicators/targets

9.0. Research

10.0. Resource mobilization

- Funding from governments, privates
- Comprehensive list of development partners:
  - ✓ Internal
  - ✓ external

11.0. Specific diseases

11.1. Cardiovascular Diseases

Cardiovascular diseases are a major cause of morbidity and mortality in Nigeria. The main ones are hypertension, stroke,rheumatic heart disease, cardiomyopathies andcoronary heart disease .

11.1.1. Hypertension

Objective 1: To promote advocacy at all levels and awareness among the general population using health information materials (IEC) to ≥80% in the next 5 years (see IEC section). This will be achieved by engaging the media (print and electronic), community leaders, FBOs, CBOs, schools, NGOs.

Strategies:

1. To carryout out advocacy at all levels.
2. Marking global related days e.g. World Hypertension Day, World Heart Day, World Diabetes Day and World No Tobacco Day. Days should be used to highlight the problems associated with these diseases.
3. Identification of National champions for heart related diseases.

Objective 2: Screening and early detection of hypertension and its risk factors. Screening of adults ≥18 years to 50% in next 5 years with a view to increasing to ≥80% in the next 10 years.

Strategies:

1. Promotion of screening and early detection of hypertension and risk factors in PHC settings. Target group:
   - ✓ Pre-higher institutions, pre-employment, pre-vehicle license issuance.
   - ✓ Markets and motor parks.
   - ✓ Professional Associations.
   - ✓ Legislators
   - ✓ Policy makers
2. Self measurement of blood pressure should be encouraged.

3. Increase availability of BP measuring apparatus in health care facilities.

Objective 3: Modification of risk factors

Strategies:

1. Smoking cessation must be encouraged (see section on tobacco)
2. For those who drink alcohol, reduce alcohol intake to 2 units for women and 4 units for men per day (1 unit of alcohol is equivalent to about 8g).
3. Dietary salt intake. Achieving ≥30% relative reduction in mean population intake of salt/sodium intake (WHO recommendation is less than 5g of salt or 2g of sodium per person per day).
   Target group: Food vendors, confectionaries, bakeries, fast food outlets, and local delicacies with high salt contents ('ngwongwo', Isi-ewu, suya, 'kilishi', local cheese (wara)
4. Promotion of food labeling programmes promoted by NAFDAC and Foods and Drugs Department.
5. Encourage physical activity with a view to achieving a 10% relative reduction in prevalence of insufficient physical activity.
   - ✓ Encourage aerobic exercise during work hours.
   - ✓ Establish gymnasium in workplaces.
   - ✓ Build Pedestrian friendly roads with walkways.
   - ✓ Encourage the use ofbicycles.
   - ✓ Promote school-based physical activities.

Objective 4: Strengthening the structures and capabilities for control.

Strategies:

1. Training, continuing education of PHC personnel in the detection and management of hypertension: nurses, midwives, community health workers.
2. Promotion of educational activities: conferences, workshops, seminars etc. for health care personnel in the management of hypertension.
3. Promote seminars and workshops in local languages at community level.
4. Increase availability of generic essential medicines and basic technologies to treat hypertension at healthcare settings. Increase availability of generic essential medicines and basic technologies to ≥80% in the next 5 years.
5. Promote the local manufacturing of antihypertensives.
6. Development, printing and dissemination of consensus document and guidelines for the management of hypertension.

Objective 5: Surveillance and research on hypertension.

Strategies:

1. Study on salt, unhealthy diet, physical inactivity, tobacco and harmful use of alcohol
2. Prevalence and risk factors survey for target groups e.g.- Primary School Children, - Secondary school, - Adolescents and youths.

11.1.2. Stroke

Objective 1: To promote advocacy at all levels and awareness among the general population using IEC to 50% in the next 5 years (see IEC section). This will be achieved by engaging the media (print and electronic), community leaders, non-governmental organizations (NGOs), faith-based organizations (FBOs), community-based organizations (CBOs), schools.

Strategies:

1. To carryout out advocacy at all levels.
2. Marking World Stroke day and other global related days.
3. Identification of National champions for stroke.

Objective 2: Screening and early detection of risk factors for stroke (e.g. hypertension, diabetes mellitus, dyslipidaemias, sickle cell disorder, tobacco use). Screening of adults ≥18 years for risk factors for stroke to ≥50% in next 5 years with a view to increasing to 80% in the next 10 years.

Target groups: Pre-higher institutions, pre-employment, pre-vehicle license issuance, markets and motor parks, professional associations.

Objective 3: Strengthening the structures and capabilities for management of stroke.

Strategies:

1. Establish effective referral system at the PHC level.
2. Establishment of dedicated stroke units at the secondary and tertiary health care levels.
3. Establishment of comprehensive rehabilitation centres for chronic stroke cases at the community level with models at the tertiary health centres.
4. Training and continuing education of health personnel working in stroke unit.
5. Promote seminars and workshops in local languages at community level.
6. Availability of generic essential medicines and basic technologies for management of stroke.
7. Development, printing and dissemination of consensus document and guidelines for the management of stroke.

Objective 4: Promotion of surveillance and research on stroke.

11.1.3. Coronary heart disease (CHD)

Objective 1: To promote advocacy at all levels and awareness among the general population using IEC to 50% in the next 5 years (See IEC section). This will be achieved by engaging the media (print and electronic), community leaders, FBOs, CBOs, schools, NGOs.

Strategies:

1. To carryout out advocacy at all levels.
2. Marking World Stroke day and other global related days.
3. Identification of National champions for stroke.

Objective 2: Screening and early detection of risk factors for CHDs (e.g. hypertension, diabetes mellitus, dyslipidaemias, SCD and tobacco use). Screening of adults ≥18 years for risk factors for stroke to ≥50% in next 5 years with a view to increasing to ≥80% in the next 10 years.

Target groups.

1. Pre-higher institutions, pre-employment, pre-vehicle license issuance.
2. Markets and motor parks.
3. Professional Associations.

Objective 3: Strengthening the structures and capabilities for prevention and management of CHDs.

Strategies:

1. Development, printing and dissemination of consensus document and guidelines for the management of CHDs.
2. Establishment of dedicated Cardiac Care Units at the secondary and tertiary health care levels.
3. Establish effective referral system at the PHC level.
4. Linkage with the community base comprehensive rehabilitation centres.
5. Training and continuing education of coronary health care personnel and other paramedics in the community

Objective 4: Promotion of surveillance and research on CHDs.

11.1.4. Cardiomyopathies and Rheumatic heart disease

Objective 1: To promote advocacy at all levels and awareness among the general population using IEC to ≥50% in the next 5 years (See IEC section). This will be achieved by engaging the media (print and electronic), community leaders, FBOs, CBOs, schools, NGOs.

Strategies:

1. To carryout out advocacy at all levels on heart diseases.
2. Marking World Heart Day with emphasis on cardiomyopathies and rheumatic heart disease (RHD).

Objective 2: Screening and early detection for heart diseases (e.g. cardiomyopathies and rheumatic heart disease) in the general population notably sports men and women, children, adolescent, youths, women in pregnancy and puerperium.

Objective 3: Strengthening the structures and capabilities for prevention and management of cardiomyopathies and rheumatic heart diseases.

Strategies:

1. Development, printing and dissemination of consensus document and guidelines for the management of cadiomyopathies and RHDs.
2. Establishment of centres of excellence with the capacity of diagnosis, critical care including transplantation at the secondary and tertiary health care levels.

3. Establish effective referral system at the PHC level.
4. Training and continue education on cardiomyopathies and RHDs in the community.

Objective 4: Promotion of surveillance and research on CHDs.

11.2. Diabetes mellitus

Objective 1: To promote advocacy at all levels and awareness among the general population using IEC to ≥80% in the next 5 years (See IEC section). This will be achieved by engaging the media (print and electronic), community leaders, FBOs, CBOs, schools, NGOs.

Strategies:

1. To carryout out advocacy at all levels.
2. Marking World Diabetes Day.
3. Identification of National champions, opinion leaders and other stakeholders for heart related diseases.

Objective 2: Screening and early detection of pre-diabetes and diabetes mellitus and its associated risk factors. Screening of adults ≥18 years to ≥50% in next 5 years with a view to increasing to ≥80% in the next 10 years.

Strategies:

1. Promotion of screening and early detection ofpre-diabetes and diabetes mellitus in PHC settings. Target group: school children, adolescents, youths, pregnant women and professional groups,
2. Increase availability of point of care testing of blood glucose in all health facilities.

Objective 3: Modification of risk factors

Strategies:

1. Smoking cessation must be encouraged (see section on tobacco).
2. Weight reduction measures: Halt the rise in obesity population to ≥25% of the obese population in the next 5 years.
3. Encourage physical activity with a view to achieving a ≥10% relative reduction in prevalence of insufficient physical activity.
   i. Encourage aerobic exercise during work hours.
   ii. Establish gymnasium in workplaces.
   iii. Build Pedestrian friendly roads with walkways.
   iv. Construct bicycles routes on roads to encourage the use bicycles.
   v. Promote school-based physical activities.
4. Reduction in harmful use of alcohol.
5. Dietary salt intake: achieve ≥30% relative reduction in mean population intake of salt/sodium intake (WHO recommendation is <5g of salt or <2g of sodium per person per day).

Target group: Food vendors, confectionaries, bakeries, fast food joints, 'ngwongwo'

6. Promotion of food labeling programmes promoted by NAFDAC and Foods and Drugs Department.
7. Fats intake: achieve ≥15% relative reduction in mean proportion of total energy intake from saturated fatty acids in the next 5 years, with the aim of achieving a recommended WHO target of <10% of total energy intake.
8. Cholesterol: achieve ≥20% relative reduction in prevalence of raised total cholesterol in the next 5 years (total normal blood cholesterol is <5mmol/l).
9. Albuminuria: achieve ≥20% reduction in albuminuria in the population over the next 5 years.

Objective 4: Strengthening the structures and capabilities for control.

Strategies:

1. Training, continuing education of PHC personnel in the detection and management of pre-diabetes and diabetes mellitus: target people to be trained: nurses, midwives, community health workers.
2. Promotion of educational activities: conferences, workshops, seminars etc. for health care personnel in the management of pre-diabetes and diabetes mellitus.
3. Promote seminars and workshop in local languages at community level.
4. Establishment of a national diabetes centre with zonal coordinating centres.
5. Establishment of NCDs network involving diabetes, CVD, Cancers and chronic respiratory diseases
6. Availability of generic essential medicines and basic technologies to treat diabetes at all levels. Availability of generic essential medicines and basic technologies to ≥50% in the next 5 years.
7. Promote the local manufacturing of antidiabetes drugs/consumables.
8. Establishment of rehabilitation centres including appliance units for diabetes foots and renal replacement therapy at secondary and tertiary health centres.
9. Development, printing and dissemination of consensus document and guidelines for the management of diabetes at all levels.

Objective 5: Surveillance and research on pre-diabetes and diabetes.

Strategies:

1. Study on salt, unhealthy diet, physical inactivity, dangers of tobacco use and exposure, harmful use of alcohol, albuminuria and local dietary formulae.
2. Prevalence and risk factors survey for target groups e.g. Primary School Children, Secondary School, Adolescents and Youths.

11.3. Chronic respiratory diseases

- Background/Introduction:
- History:

- Risk factors:
- Data:
- Core diseases:
    - ✓ COPD
    - ✓ Asthma
    - ✓ Lung cancer
    - ✓ Occupational lung disease e.g. pneumoconiosis.

Risk factors:

- ✓ Direct and indirect exposure to tobacco smoke
- ✓ Exposure to indoor and outdoor air pollution
- ✓ Occupational exposure to toxic agents
- ✓ Exposure to common allergens
- ✓ Malnutrition and low birth weight
- ✓ Multiple early lung infections

Objectives:

1. Reduce/avoid personal exposure to risk factors such as air pollution, allergens, toxic agents
2. Regulating release of risk factors to the environment – pollutants, allergens, toxic agents – through legislation
3. Early detection of all chronic respiratory diseases in order to prevent further progression of the disease
4. Improve access to care for CRDs

Strategies:

1. Integrate prevention of CRDs into comprehensive NCDs prevention and control framework
2. Monitor trends in outdoor air pollutions levels including their determinants in order to develop appropriate interventions
3. Educate the populace on the dangers of exposure to the risk factors
4. Conduct research to develop innovative ways of

11.4. Cancers

Cancers are major contributors of morbidity and mortality in Nigeria and are linked to tobacco use, excessive consumption of alcohol, unhealthy diet, obesity, physical inactivity, chronic infections, exposure to radiation, chemical agents and family history. There is an ongoing efforts to establish a national population based cancer registry in Nigeria. However, data from the 11 (but 12 listed: Prof. Ekanem to comment)(Delete Jos)hospital-based cancer registries located in Abuja, Calabar, Enugu, Ile-Ife, Ilorin, Ido-Ekiti, ~~Jos,~~ Maiduguri, Nnewi, Port Harcourt, Zaria, Lagos, show that the 5 commonest cancers in Nigeria are as follows:

C. In female;

1.Breast (40%)

2.Uterine cervix (17.9%)

3. Ovary (3.7%)
4. Lymphomas (3.1%)
5. Skin (2.3%)

D. In males;

1.Prostate (27.2%)
2.Colorectal (7.1%)
3.Lymphomas (6.6%)
4.Liver (4.2%)
5.Skin 4.2%)
(Prof. Ekanem to provide reference)Jeddy-Agba E. et al (2012)

In children, Burkitts lymphoma, retinoblastoma and nephroblastoma (Wilms tumour) are common. EBV in association with immunosuppression by malaria contributes to high proportion of Burkitts lymphoma in children. HIV associated cancers e.g. Kaposi sarcoma, Non-Hodgkin's lymphoma and invasive squamous cell carcinoma of the conjunctiva are also on the increase. Hepatitis B and C viruses are associated with hepatocellular (PLCC) carcinoma and there is a high carrier rate of hepatitis B carriage in Nigeria with a reported prevalence rate of 8.3% in Zaria. Routine screening for cancers is not yet integrated into the primary health care. Majority of cancers in Nigeria are diagnosed at a very late stage and there are very few centres offering radiotherapy and other oncology services. There is therefore need to implement the national cancer control plan of 2008-2013 in the country.

Important risk factors for cancer in Nigeria include.

- tobacco use
- advancing age
- alcohol consumption
- improper diet
- obesity
- unhealthy reproductive/sexual behaviour
- occupational exposure

Objectives:

1. To integrate cancer prevention and control into the national strategic health development plan and into relevant policies across all tiers of government.
2. To strengthen the Structure and capabilities for control and management of Cancer in Nigeria.
3. To strengthen the structure and capabilities of Cancer Registries for data collection on Cancers in Nigeria.
4. To specify roles and responsibilities to all tiers of government including parastatals and other stakeholders.
5. To provide framework for training and research on cancer prevention and control.
6. To strengthen partnerships with stakeholders and development
7. To monitor and evaluate the progress made at all levels of cancer prevention and control

Strategies:

Cancer prevalence is on the increase. 100,000 incident cases of cancers are currently diagnosed annually and it is estimated that by the year 2015 the burden would have increased fivefold if nothing is done. The problem is further compounded by the lack of integration of routine screening into the primary health care. Majority of cancers in Nigeria are diagnosed at a very late stage and there are very few centres offering radiotherapy and other oncology services. There is currently no population-based national cancer data; however, using available data from some population-based cancer registries in Nigeria, WHO estimates incidence and mortality of most frequent cancers in Nigerians as shown above (GLOBOCAN 2008)

To win the battle against cancer we must first wage war against habits that are likely to cause ill health including tobacco smoking, heavy alcohol intake including locally brewed alcohol and unhealthy dietary habits. Smoking is not only injurious to the smoker but also to others in the vicinity including spouses, family members and work mates.

Cancer Plan of Action will focus on:

a) IEC activities to educate the people on cancer.
b) Strengthening the structures and capabilities for management of patients.
c) The improvement of quality of life of cancer patients and Provision of palliative care.
d) Undertaking research on cancers and related risk factors.

STRATEGY I:

Objective: To integrate cancer prevention and control into the national strategic health development plan and into relevant policies across all tiers of government.

Strategy1:
Education: Inclusion of cancer prevention and control into school curriculum at all levels at the health training institutions, curriculum on health promotion needs to be revised to incorporate NCDs prevention and control

- Tabacco Use?

Activities	Timing	Implementing agency	Need for resources	Cost	Sources of funds	Expected output	Target	Remarks
1.Inclusion of cancer prevention and control into school curriculum at all levels		FMOE, FMOH SMOE,SMOH						
2. Inclusion into curriculum for training of all HCWs information on health promotion, prevention, early detection, diagnosis treatment and palliative care for cancer		FMOH, SMOH						
3.. Sensitization campaign for promotion of Cancer awareness and early detection at all levels of healthcare in collaboration with relevant CSOs, NGOs, FBOs, and CBOs etc	Jan 1-31Dec 2014	FMOH SMOH LGA	- Consumables - Logistics		FMOH Donor Agencies		Stakeholders of Health care facilities and Political	
4. Provision of infrastructure & Training for the screening, early detection/diagnosis and management of Liver & cervical cancer at the PHC		FMOH SMOH LGA						

STRATEGY 2: Active Immunization

Activities	Timing	Implementing agency	Need for resources	Cost n	Sources of funds	Expected output	Target	Remarks
1). Immunization of high risk group (health workers)	Jan 2013-Dec 2015	FMOH SMOH LGA	Vaccines Consumables Logistics		FMOH Donor Agencies			
2.Increased the of coverage of Hepatitis B Immunization (NPI) Commenced 2004	April 1999 to Dec. 2001	FMOH SMOH LGA	Vaccines Logistics Consumables		FMOH SMOH LGA Donor Agencies	Routine Vaccination against Hepatitis B &C alongside NPI for under 5 years		
3. HPV Vaccines Vaccination of adolescent girls against high risk serotypes of Human Papilloma Viruses for the prevention of cancer of the cervix commenced (2011)	Jan 2011 – Dec 2015	FMOH SMOH LGA	Vaccines Consumables Logistics		FMOH Donor Agencies			
4. Extensive Monitoring of HPV vaccination with intensive surveillance of safety studies								

OBJECTIVE 2: To strengthen the Structure and capabilities for control and management of Cancer in Nigeria.

STRATEGY: To enhance early detection of major Cancers in Nigeria

Activities	Timing	Implementing agency	Need for resources	Cost n	Sources of funds	Expected output	Target	Remarks
1. Promotion of self Breast examination	Jan 13-Dec. 2014	NGOs LGA FMOH SMOH	- IEC Materials - Personnel - Logistics		- FMOH - Donor agencies - NGOs	Women of Child bearing age to examine Breasts regularly	80% of target population	
2(a). Training of Health personnel in STD and FP clinics on preparation of Pap smear and VIA (b). Training on interpretation of Pap smear by Histopathology, Ultrasonographers	Jan 1999-Dec 2001 May 1999 - Dec 2001	FMOH FMOH Teaching Hospital	- Training materials - Logistics - Reagents - Logistics		- FMOH - Donor Agencies -do-	Health staff trained in tertiary, Secondary Institutions and STD clinics	60% of target population trained	
3. Provision of mammography,ultrasound service and consumables in tertiary centres. at least one in the six Political zone	March 1999 to Dec 2001	FMOH	- X-ray (equipment) specific for mammography , - Ultrasound Machines - Consumables		-FMOH - Donor Agencies	6 mammogram installed	20% of target population. Services provided for female over 35 years once a year	
4. Colorectal Cancers Raising the awareness and IEC on symptoms of early Presentation								

STRATEGY II: Development of acceptable minimum standard of care for Cancer in Nigeria

Activities	Timing	Implementing agency	Need for resources	Cost n	Sources of funds	Expected output	Target	Remarks
1. Constitute a working group of experts to develop documents on acceptable minimum standard of care for cancerpatients in Nigeria.	Jan-Feb 2013	FMOH	- Meeting - Honorarium - logistics Cost of funding Expert meeting		- FMOH - Donor Agencies - Private sector Pharmaceutical Companies etc.	Draft documents on minimum standard of care for Cancer patients in Nigeria	Enhance quality of care of Cancer patients	
2. Production of document	March-April 2013	FMOH	Printing		-do-	Final document on minimum standard of care for Cancer in Nigeria	-do-	
3. Dissemination of document to HCWs at all levels of care (Tertiary, Secondary and primary).	June-Dec. 2013	FMOH SMOH LGAs	- Logistics - Advocacy meetings		FMOH Donor Agencies Private Sector	Availability of documents to health workers Nationwide.	Enhance quality of care for Cancer patients	

STRATEGY III: Capacity building to enhance care of Cancer Patients

Activities	Timing	Implementing agency	Need for resources	Cost n	Sources of funds	Expected output	Target	Remarks
1. Provision of functional radiotherapy services in 6 centres(in the six geopolitical zones)	Jan 2013-Dec 2015	- FMOH -Tertiary Institutions	- X-ray - Cobalt Unit - Logistics		FMOH IARC	Functional Unit In Ibadan, Zaria, Lagos and Enugu	100%	
2. Provision of consummables	Jan 2013-Dec 2015	-do-	- Consummables		FMOH	Consumables available in 4 centres	100%	
3. Provision of palliative care for terminal cases in primary, secondary and tertiary health institutions.	Jan 2013-Dec 2015	FMOH SMOH NGOs LGAs	- Simple drugs - Consummables - Counselors		FMOH NGOs HOSPICE	Collaborative effort with AIDS control programme (same counselors)	Compassionate terminal care achieved for 50% of patients	

OBJECTIVE III: To strengthen the structure and capabilities for data collection on Cancers in Nigeria.

STRATEGYI: Establishment and strengthening of Cancer surveillance mechanisms and integration of Cancer control into PHC services

Activities	Timing	Implementing agency	Need for resources	Cost n	Sources of funds	Expected output	Target	Remarks
1. Strengthening of existing Cancer registries in the country:Staff training and development on use of appropriate cancer registration soft wares, Annual budgetary provision	Jan 2013-Dec. 2013	FMOH	- Procurement of computers, Vehicles, to collect Population based data. - Stationery - Annual subscription to IARC		FMOH PTF Donor Agencies	Existing cancer registries strengthened a. Staff trained b. Active data collection	Effective data collection, collection, storage and dissemination	
2. Networking of all Cancer Registries in the country	Jan-Dec 2014	FMOH	- Software's - Programming - Creating websites - Annual subscription for E-mail		-do-	All Cancer registries in the country connected to a network nationally and internationally. (ii) Access to data on Cancer in Nigeria and Globally	Enhancement of effective Cancer control	
3. Pursue the development of a National cancer Institute for comprehensive cancer management research and training.	Aug.2013-Aug. 2014	FMOH	Special investigatory Unit 100 beds - Logistics - Personnel - Additional materials/equipment		FMOH PTF Donor agencies	Centre gradually upgraded	One NCI established	
5. Increase collaborative effort with development partners	Jan 2013-Dec 2014	FMOH	- GIS software - secretarial support - Logistics		FMOH Donor Agencies	Incorporation of cancer report into GIS	Geographical mapping of Cancer prevalence in Nigeria	
6. Collaborating with other international centres on Cancer control.	Jan 2013 -Dec 2014	FMOH	- Exchange programme -E-mail etc.		FMOH Donor Agencies	Exchange visit with other Schools/institution of Oncology		

7. Integration of Cancer control into PHC Services: - Pilot training workshop for PHC workers on prevention and early detection of Cancers in 4 LGAs and then applied to 6 LGAs/ zone/year	Jan-March 2013	FMOH	- Honorarium for facilitators. -Training materials.		FMOH Donor agencies	PHC workers in 4 LGA trained in prevention and early detection of Cancers	Eventually PHC manuals and standing orders will incorporate prevention and early detection of Cancer.	
8. Monitoring and Evaluation of training workshops	March-Nov. 2013	FMOH	- Honorarium - Materials - Travels			Strength and weakness of training workshops determined.	Effective planning workshops nationwide enhanced	

11.5. Mental health disorders

Objectives 1: Establish the Prevalence and Pattern of Mental Disorders in Nigeria.
Properly designed country wide community-based studies to establish prevalence of mental disorders in Nigeria

Objective 2: Public enlightenment programmers to educate Nigerians on the Causation of Mental Neurological and Drug use disorders in Nigeria to clarify the causation of illness and thereby reduce stigma

Objective 3: Prevention of Drug Abuse among Youths in the country. Programmes should target both youths in school and out of school

Objective 4: Improve the early detection and treatment of Mental Neurological and Drug use disorders in Nigeria

1. Improve training in CHEW, CHO and Schools of Nursing in Nigeria in Mental illness and use of the WHO mhGAP
2. Improve the “Index of Suspicion” of Medical doctors for mental illness

Objective 5: Improve the Referral system for mentaland neurologicaldisorders in the country

OBJECTIVE I: To Improve Early detection of Common Mental and Neurological Disorders in Primary Care

STRATEGY: 1.1 Improve Mental Health Teaching in CH Workers & Nursing Schools

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target	Remarks
1 Adapt and Validate appropriate versions of the WHO mhGAP documents for (a) CHEW/CHO (b) Nursing Schools	Jan – June	FMOH/APN	Funding for working group meeting.	- FMOH - Donor agencies - PTF			
2. Production distribution of Validated documents to the schools	June	FMOH/APN	- Printing	-do-			
3. Training of Teachers/Lectures in use of mhGAP	June – Dec 2013	FMOH /APN SMOH LGAs	Logistics				
4 Training of CHEW, GHO, Nurses in use of mhGAP instruments	2014-2019						

STRATEGY: 1.2 Improve Index of Suspicion for Mental Illness among Doctors

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target	Remarks
1 Prepare Translate and Validate the GHQ for use in Medical Schools	Jan – June 2014	FMOH/APN	Funding for working group meeting.				
2. Integrate use of screening Instruments during Medical students Psychiatric clerkship	2014-2019	FMOH/APN/Medical Schools	- Printing	-do-		-do-	
Introduce Screening Instruments for use in Primary and Secondary health institutions	2014-2019	FMOH SMOH LGAs	Logistics	- FMOH - Donor Agencies - PTF			

OBJECTIVE 2: Strengthening of Referral Pathways

STRATEGY: 2.1 Creation of Primary/Community Mental Care Units in Federal Psychiatric / Teaching Hospitals

ACTIVITIES	TIMING	IMPLEMENTING AGENCY	NEED FOR RESOURCES	SOURCES OF FUNDS	EXPECTED OUTPUT	TARGET	REMARKS
1 Establish Primary/Community Psychiatric Units in Tertiary/Psychiatric Hospitals	Jan – June 2014	FMOH/APN	Funding for working group meeting.				
2. Identification of Secondary facilities to liaise with Tertiary and Primary centres	Jan-June 2014	FMOH/APN/Medical Schools	- Printing	-do-		-do-	
Recruitment of Primary care centres in the catchment area	2014-2019		Logistics				
Provision of Drugs for patient care	2014-2019						

11.6. Sickle cell disorder

Available data shows that sickle cell disease (SCD) affects nearly 100 million people in the world and is also responsible for over 50% of deaths in those with the most severe form of the disease. In Nigeria, sickle cell disease is among the top 10 non-communicable diseases (NCDs) causing significant morbidity and mortality. Nigeria is ranked 1st as the sickle cell endemic country in Africa with an annual infant death of 100,000 representing 8% of infant mortality in the country. The 1990 national survey of NCDs shows that about 24% adults have Sickle cell trait (AS).

The problem of SCD has not yet been addressed in a systematic manner primarily because more emphasis has been on the control of childhood communicable diseases. Secondly, the scale of the SCD problem and the limited available financial and technical resources has tended to inhabit the planning of national control programme. The falling infant and childhood mortality rates, especially in the urban areas along with improved primary health facilities, have enhancedthe survival and the presence of individuals with SCDin adulthood. This makes the need to provide relevant, well organized clinical and related services more compelling. Failure to provide services would only magnify and compound the adverse effects of SCD by encouraging inappropriate treatment, myths, prejudices as well as stigmatization.

Objective

1. Increase public awareness about SCD and disease prevention
2. To enhance detection of individuals with sickle cell disorder and establish a national database on SCD.
3. Increase access to comprehensive care for individuals with SCD
4. To Monitor and evaluate Intervention programmes
5. To monitor newborn screening which is meant to identify the newborns that are at risk of SCD complications and improve their quality of life.

The primary focus of this Plan of Action is to:

1. Ensure the best possible care for the patient and the family.
2. Provide the best possible care for the general populace through IEC. Screening and Counseling
3. Strengthening the structure and capabilities for management of patient and
4. Carry out research to address issues raised.

PLANNING OF ACTION FOR CONTROL OF SICKLE CELL DISEASES IN NIGERIA
JANUARY 2013 – DECEMBER 2017

PROGRAMME: Community Control of Sickle Cell Disease in Nigeria

OBJECTIVE I: To increase awareness in the community on the prevention, control and treatment of Sickle Cell Disease in Nigeria

STRATEGY:

- IEC at all levels
- Guideline on the control and management of SCD

Activities	Timing	Implementing Agency	Need for resources	Cost n	Sources of funds	Expected output	Target	Remarks
1. Production and distribution of IEC materials on prevalence of Sickle cell Disease i.e.- information booklets - posters, Stickers (in 5 languages-English, Pidgin, Hausa, Igbo/Efik& Yoruba).,Target group is the general public. With special focus on - School children,- Women groups - Religious leaders,- Traditional leaders		FMH SMOH LGAs	- Honorarium - Materials - Meetings - Transport		FMOH SMOH LGAs PTF Donor Agencies	Draft documents - Posters - Booklets - Stickers (in 5 languages i.e. English, Pidgin, Hausa, Igbo/Efik& Yoruba)	Increased awareness among all at risk groups about Sickle Cell Disease as a preventable and controllable disease. Early diagnosis to avoid complications.	
2. Pilot testing of materials in 12 LGAs from 6 health zones of the country (6 urban, 6 rural) and necessary amendments to be made	May – June 2013	FMOH	Logistics - Honorarium for resource persons. - Production of reviewed IEC materials.		FMOH SMOH LGAs Donor Agencies Private sector	Amended IEC materials	-do-	

Training of HCWs on use of SCD Guidelines	2013							
3. Printing of amended IEC material	July – Aug. 2013	FMOH SMOH LGAs	Funds for printing of - booklets - posters - stickers		FMOH SMOH LGAs Donor Agencies Private Sector	Final production of materials - booklets - posters - stickers	-do-	

OBJECTIVE II: To strengthen the structure and the capabilities of the health care system to achieve control of Sickle Cell Disorders in Nigeria

STRATEGY: Training and re-training of health workers.
Provision of infrastructure and facilities for comprehensive care of SCD

ACTIVITIES	TIMING	IMPLEMENTING AGENCY	NEED FOR RESOURCES	COST N	SOURCES OF FUNDS	EXPECTED OUTPUT	TARGET	REMARKS
1.Printing and dissemination of guidelines for the control and management SCD	March – Sept 2013 Sept 2014	FMOH SMOH			- FMOH - Other donor Agencies		Enhanced Patient care	
2. Training of HCW across all tires of HCS on the use of guidelines for the management of SCD	2013 2014 2015 May and Sept.	FMOH SMOH					7 CME Seminar	
3. Training of radiologists and radiographers on transcranial Doppler ultrasound screening for risk of stroke in children	2013-17	FMOH	Non imaging probes for TCD ultrasound screening			Personnel trained and SCD screening available for all children with SCD as routine care		
Establishment of comprehensive care for SCD in the MDG Sickle Cell Centres and in other tertiary health care centres in the country			Health workers knowledgeable in SCD			Individuals with SCD able to access comprehensive care services in all the geopolitical zones of the country		
4 .Training in genetic counseling on sickle cell disorders	Nov. 2013 2014 2014	FMOH			FMOH Donor Agencies			

5. Training workshop on recognition of clinical phenotypes and use of data base (registry)		FMOH			- FMOH - Donor Agencies	Health care workers in primary, secondary and tertiary health care centres trained and able to recognize individuals with SCD		
6. Training by TOT on Sickle Cell Disorders in MCH facilities (integrated approach to PHC services	Dec 2013 June & Dec 2014 June & Dec 2015	FMOH			- FMOH - Donor Agencies	A wide spread of MCH staff trained on SCDs management	5000 MCH (PHC) staff trained	
7. Training and equipment of laboratory personnel and laboratories in the diagnosis of hereditary haemoglobin disorders	2013 2014 2015	FMOH			- FMOH - Donor Agencies	Training and equipping of 6 laboratory in each of 6 zones in Nigeria		
8. Integration of SCD control into school health programme	2013 2014 2015	FMOH FMEdu FMInfor			FMOH FMEdu FMInfor	Effective Integration of SCD control into School health programme		

OBJECTIVE III: To determine the birth prevalence and natural history of Sickle Cell Disorder

STRATEGY: 1.Neonatal screening for SCD.
2. Establishment of registries of individuals identified at birth and prospectively followed up

ACTIVITIES	TIMING	IMPLEMENTING AGENCY	NEED FOR RESOURCES	COST N	SOURCES OF FUNDS	EXPECTED OUTPUT	TARGET	REMARKS
1. Integration of Neonatal screening into the PHC to determine birth prevalence of SCD in the MDGs centres in 6 zones of the country.	2013- 2015	FMOH	Funding of equipment, materials and reagent		- FMOH - Donor Agencies	Accurate birth prevalence in Nigeria. Acquisition of skills in neonatal screening.		
2. Establishment of registry of SCD in the MDG SCD centres and in all PHCs in their catchment areas	2013-2017	FMOH MDG SCD Centres/ PHC						

OBJECTIVE IV: To determine the influence of prior knowledge of haemoglobin genotypes on reproductive choices in Nigeria

STRATEGY: Expert genetic counseling, screening and follow up.

ACTIVITIES	TIMING	IMPLEMENTING AGENCY	NEED FOR RESOURCES	COST N	SOURCES OF FUNDS	EXPECTED OUTPUT	TARGET	REMARKS
Introduction of screening & Counseling Programme for SCD in Primary, Secondary and Tertiary institute across the country	2014- 2015	FMOH	Funding of research personnel, tools, equipment, and materials.		-FMOH - Donor Agencies	People should know about their Hb type while 9n school & before marriage		

11.7. Oral health diseases

National pathfinder studies conducted in Nigeria have identified the following as priority oral health diseases, oral cancers, cancrum oris (Noma), periodontal diseases and dental caries. Globally, and more specifically in Nigeria, various studies have reported the following about NCDs and more specifically oral diseases: (i) a rising mortality and morbidity indices; (ii) increasing treatment costs, with the resultant delay in reporting to health facilities; (iii) inadequate oral health facilities, and where available, these are mostly non-functional; (iv) dearth of skilled oral health manpower, with a skewed distribution where available; (v) existing national health system is "treatment-oriented", despite being a primary health care system in principle.

There is, therefore, the need to reduce the rising prevalence/incidence and mortality rates of NCDs through early diagnosis and treatment and the incorporation of the NCDs into the primary health care system. This is in line with the identified World Health Organization (WHO) priority areas for NCDs in the African Region, i.e. primary prevention, management at the PHC level, monitoring and evaluation (including research).

Objectives

– To reduce the morbidity and mortality from oral health diseases in Nigeria

Specific Objectives:

1. To raise awareness about oral health and oral health diseases in the general population and among policy makers, with emphasis on the avoidance of the associated risk factors;
2. To enhance the capacity of health workers at primary and secondary levels of health care delivery system at early diagnosis and treatment of oral diseases;
3. To implement intervention programmes aimed at risk factor reduction and the prevention of complications of oral diseases; and
4. To sustain the potential gains of these interventions by advocacy to policy makers, using findings from evidence-based researches

Strategies:

1. Sensitization of and Advocacy to policy makers on oral health and oral health diseases using findings from evidence-based researches.
2. Risk factors prevention and cessation campaign through oral health education programmes on various topics including tobacco use prevention and cessation, harmful alcohol use, oral hygiene, oral health diseases through schools and communities oral health education programmes and through the mass media;
3. Training of available health care personnel
    i. **Task Shifting**. This is the training of primary health care (PHC) workers in the diagnosis and screening for priority oral diseases. It could be formal or on-the-job training. ***Formal training*** would be conducted through the incorporation of oral health and its related

disorders into the curriculum of training institutions for PHC workers in order to increase theknowledge of oral health and its related problems.

Practicing PHC workers would be *trained on-the-job* through organized hands-on training workshops using standardized training manuals.

ii. Education of local community members on oral health through public gatherings, e.g. at religious gatherings, schools' PTA meetings, town meetings, etc through health talks.

iii. Development of a standard manual for the diagnosis and treatment of oral health diseases for primary health care workers.

4. Increasing the number of rural oral health professionals through manpower re-distribution **(Rural Pipeline)**. This would be achieved by:
   i. encouraging contacts between rural secondary schools and oral health professionals through career talks
   ii. encouraging rural exposure during formal training of oral health professionals
   iii. encouraging the selection of rural students into the dental program
   iv. ensuring the willing deployment of corper dentists and dental therapists to the rural communities, by the upward review of the rural posting allowances
   v. initiating policy advocacy measures to address the retention of the rural dental workforce in the rural areas.
5. Promote advocacy for the improvement of health care financing through the review of the current "limited and treatment-oriented" (NHIS) financing policy for oral health services to a "prevention-oriented" policy.
6. Promote advocacy for the increase in the number (at least one in every LGA) and adequacy of oral health facilities at the secondary level of oral health care for the adequate management of cases referred from the PHC clinics.
7. Establishment of a database for oral health diseases, manpower and facilities with the regular collation of data on the status of the diseases, manpower and facilities using standard indices and the WHO-STEPS.
8. Publication of annual reports on the oral health disease, manpower and facilities status for the purpose of advocacy and policy development.

Targets:

1. To increase early stage (I & II) oral cancer presentation from 20% to 60% by 2017
2. To reduce the prevalence of cancrum oris or Noma (presently 6 cases per 1000) by at least 50% by 2017
3. To reduce prevalence of periodontal diseases from 96% to at least 60% by 2017; and
4. To reduce the prevalence of dental caries from 44% to at least 20% by 2017.

List of possible stakeholders:

- Federal and States Ministry of Health
- Federal and States Ministry of Education
- Federal and States Ministry of Information
- National Primary Health Care Development Agency (NPHCDA)
- National Health Insurance Scheme (NHIS)
- Health Management Organizations (HMOs)

- Regional Centre for Oral Health Research and Training Initiatives (RCORTI) for Africa, Jos
- Chairmen of LGAs
- Directors of PHCs in all local government areas
- Community and Religious Leaders
- Regulatory and Professional Bodies of primary health care and allied health workers
- Conglomerates involved in manufacturing of oral health products
- National Assembly Legislators
- Regulatory Agencies – MDCN, Dental Therapists Registration Board
- Provosts of Schools of Health Technology
- Deans of Dental Schools
- Provosts of Colleges of Medicine

11.8. Tobacco

Cigarette smoking is a global pandemic, costing the global economy US$200 billion annually [1]. Tobacco is a risk factor for six of the eight leading causes of death globally [3]. In the 20th century, there were 100 million tobacco related deaths. If unchecked, this figure will be up to 1 billion in the 21st century [4] and 80% of these deaths will be in the developing world [4]. To address this pandemic, the World Health Organization (WHO) created the Framework Convention on Tobacco Control (FCTC). This was adopted by the World Health Assembly on 21st May 2003 and presently has 167 parties and covers more than 86% of the world's population [5]. This framework addresses different components of tobacco control at the same time.

The regional priorities are:
1. Primary prevention
2. Management at PHC level
3. Monitoring and evaluation + research

Nigeria passed the National Tobacco Control Bill in March 2011 [6], but it is yet to become functional because the president did not sign it up to six months after the assembly passed it. The bill regulates tobacco use in Nigeria by banning sales to people below the age of 21; prohibiting smoking in public places; regulating advertising, manufacturing and distribution of tobacco products and making printing health warnings on tobacco product mandatory [6]. This is a much-needed positive step in Nigeria.

In the health facility setting, smoking cessation is the main method of control. There are various options of smoking cessation available with varying effectiveness. These include unassisted (going cold turkey and gradual reduction); health care provider and system interventions; medications; community interventions; competitions and incentives; psychosocial; self-help groups; telephone counseling or quit lines; mass media campaigns; use of cigarette substitutes and alternative approaches like acupuncture, aromatherapy, hypnosis and herbs [8, 9, 10, 11]. A lot of times, combination of methods are used. It has been shown that health practitioners have a unique role to play in initiation and supporting clients through smoking cessation These roles range from identifying smokers for initiation, psycho-social support and provision of medication. [10].

GOAL: Eliminate morbidity and mortality from tobacco useand exposure

General objective: to implement all measures of tobacco control as outlined in the WHO Framework Convention on Tobacco control (FCTC)

Specific objectives:

1. To raise awareness about the dangers associated with tobacco use in the general population and policy makers
2. To reduce access to tobacco products particularly among youths
3. To enhance capacity for detection and control (including cessation)of tobacco use at all levels of health care delivery system in Nigeria
4. To enhance the working relationships with anti-tobacco coalition group in Nigeria
5. Ensuring tobacco free environment
6. Ensuring evidence based monitoring of tobacco use and research
7. Address the economy of tobacco raw materials production

Objective 1: To raise awareness about the dangers associated with tobacco use and exposurein the general population andamong policy makers

Strategies:

1. Sensitization and Advocacy to policy makers and community/religious leaders –
2. Health education campaign through -
3. School health education programmes – incorporation of anti-tobacco use messages in school curricula at all levels, community campaigns, formation of tobacco free clubs/societies in schools -
4. Community based campaigns through the mass media, folklore, town criers, labeling on packs, billboards, posters, pamphlets etc.
5. Celebration of annual tobacco free days e.g.(World No Tobacco Day)

Objective 2: To reduce access to tobacco products particularly among youths

Strategies:

Legislations and enforcement of laws (tobacco bill) that reduces access to tobacco products, ban smoking in public places, high taxation on tobacco products, prohibition of sale to under age persons, etc.

Objective 3: To enhance capacity for detection and control (including smoking cessation) of tobacco use at all levels of health care delivery system in Nigeria

Strategies:

1. Capacitybuilding for health care workers (doctors, nurses, pharmacists, CHOs etc. on tobacco cessation interventions (and encourage brief cessation interventions by all health care workers at all levels)

2. Provide facilities for monitoring of treatment
3. Including some medical cessation assistance in the essential drugs list (nicotine patch, drugs, gum, telephone quit lines
4. Increasing the number of health personnel that can provide cessation services – counseling, treatment, nicotine substitutes etc.

OBJECTIVE 4: To enhance the working relationships with anti-tobacco coalition group in Nigeria

Strategies:

1. Ensure that there is an open communication between the anti-tobacco coalitions groups and the government
2. Government to work with anti-tobacco coalition group in tobacco control activities in Nigeria

Objective 5: Ensuring tobacco free environment

Strategies:

Enforcement of and ban of Tobacco smoking in public places in Nigeria

Objective 6: Ensuring evidence based monitoring of tobacco use and research

Strategies:

1. Encourage research into tobacco use by providing grants
2. Plan (budget) for research on tobacco use and the ensure that the result is put to use

Objective 7: Address the economy of tobacco raw materials production

Strategies:

Provide economically viable alternative source of livelihood for tobacco farmers

Targets

1. Implementation of all the components of the WHO FCTC by 2015?
2. To reduce the prevalence of smoking among the general population to …5% by 2018
3. To reduce the incidence of tobacco use among youths from …12% to …<2%by 2018
4. To reduce morbidity and mortality associated with tobacco use by 25% by 2018

Stakeholders

- Federal Ministry of Health (NCD division)
- Ministry of Education (school programmes departments at state and federal level -
- Ministry of Information (BON, NOA, NTA, newspaper houses, dailys etc.) – for
- Community and religious leaders – (CAN, SCIA, etc.)
- Federal Ministry of Finance
- Federal Ministry of Agriculture
- Federal ministry of Internal Affairs – Nigerian customs services,
- Standard Organization of Nigeria (SON)

- Anti-tobacco coalition group
- Religious leaders
- Export promotion Council – to encourage the export of alternative agricultural products, to make independent of tobacco products

11.9. Violence and injuries

11.9.1. RTIs

Road Traffic Crashes (RTCs) are the leading cause of death in adolescents and young adults in the world. Data from the World Bank and World Health Organization *World Report on Road Traffic Injury Prevention* show that road traffic injuries are a major but neglected public health challenge that requires concerted efforts for effective and sustainable prevention. According to the report, of all the systems with which people have to deal every day, road traffic systems are the most complex and the most dangerous. Worldwide, an estimated 1.2 million people are killed in road crashes each year and as many as 50 million are injured. Projections indicate that these figures will increase by about 65% over the next 20 years unless there is new commitment to prevention.

The Nigerian government is presently committed to the Decade of Action on Road Safety (2010-2020) and the Accra Declaration on Reduction of Road traffic Injuries on the African continent.

Plan of action for the reduction of road traffic injuries in Nigeria, Year 2014 - 2019

Objective 1: To increase capacity for implementation of global best practices in road traffic management and safety in Nigeria.

Strategy: Training and continuing education of FRSC, Police and other relevant personnel.

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target
1. Workshops and seminars on management of road safety for road traffic personnel.	2014 -2019	FMOH FRSC Nigeria Police Traffic Division NGOs	- Logistics - Honorarium for resource persons. - IEC Materials.	FMOH Donor agencies	Road Traffic personnel have access to current thinking in road safety. Improved driving licensing at all levels	Improved management of road traffic issues and road safety.

Objective 2: To increase capacity for research in road safety in Nigeria.

Strategy: Inclusion of road safety in all curricula in all levels of health training in Nigeria.

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target
1. Engagement of Universities and research institutions in road safety research	2014 -2019	FMOH NGOs	- Logistics - Honorarium for resource persons.	FMOH Donor agencies	More research for postgraduate degrees focused on road safety	Researchers in institutions of higher learning

Objective 3: To reduce the incidence of drunk and drug-induced driving in Nigeria.

Strategy 1: Health promotion focused on increased awareness of drink driving and road safety.

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target
1. Printing and dissemination IEC materials targeted at the general population	2014	FMOH SMOH LGAs FRSC	Logistics	- FMOH - Donor Agencies	Increased nationwide awareness of the harmful use of alcohol, drink and drug induced driving	General public Print and electronic media
2. Workshops and seminars on drink driving and road safety	1999 - 2000	FMOH SMOH LGAs NGOs	- Logistics - Honorarium for resource persons. - Materials.	FMOH SMOH LGAs Donor agencies	Personnel have access to current information and thinking on drink	General public

Strategy 2: Reduction of point of sale availability of alcohol/drugs to drivers.

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target
1. Engagement of the legislature to enact point of sale laws that restricts access of alcohol in motor parks, access to minors etc	2014 - 2019	FMOH NURTW RTEAN NGOs	- Logistics	FMOH Donor agencies	Zero tolerance for alcohol sale in motor parks etc	Improved enforcement of point of sale violations

Objective 4: To reduce the morbidity and mortality associated with Road traffic injuries in Nigeria.

Strategy 1: Creation of centres of excellence for management of road traffic injuries.

Activities	Timing	Implementing agency	Need for resources	Sources of funds	Expected output	Target
1. Grassroots training on basic life support and management of RTIs	2014-2019	FMOH SMOH LGAs NGOs	Logistics Training honorarium	- FMOH - Donor Agencies	Nationwide training of health personnel on basic life support	Reduction in morbidity associated with RTIs
2. Improve input of road safety personnel in road design, construction and maintenance	2014-2019	FMOH FRSC Federal Ministry of Works FERMA State works and transportation/ maintenance agencies Local Government Works Departments		FMOH SMOH LGAs Donor agencies	Improved road infrastructure, furniture and road safety communication at all levels	

11.9.2. Other injuries apart from RTIs

These include work related, violence-(self harm, interpersonal, collective) e.g. crime-related and those related to communal clashes and terrorism. There is paucity of data on these types of injuries in Nigeria. A 10 year (1987-1996) review of factory-related injuries and fatalities described 3185 injuries with an overall case-fatality ~~of~~ rate of 2.23/100 workers. There were 71 deaths mainly from power-driven machinery, explosion and falls.[1]

However it is clear that the incidence of some of these injuries is increasing due to the armed robbery, ethno-religious crisis and terrorist attacks.

There is a need to improve existing data collection mechanisms and conduct studies to provide reliable information on other injuries apart from RTIs.

Objectives:

1. To determine the burdenof other forms of injuries not related to RTI
2. To encourage enforcement, and where unavailable enact legislation on other forms of injuries
3. To train and retrain select population and health workers on management of injuries

Objective 1: To determine the burden ofother forms of injuries not related to RTI

Strategy

Activities	Timing	Implementing agency	Need for resources	Expected output	Target	Remarks
Meeting of trauma experts to determine the burden of disease	<1yr	FMOH	Funding of meeting	Accurate national statistics to begin with	Trauma and injury experts agree on benchmark	
Surveillance study in 6 geopolitical zones	<1yr	FMOH Injury experts	Funding of the studies	Current & useful data as well as a national bench mark	Surveillance data in injuries in the 6 geopolitical zones	

Objective 2: To encourage enforcement, and where unavailable enact legislation on other forms of injuries

Strategy

Activities	Timing	Implementing agency	Need for resources	Expected output	Target	Remarks
Meeting with stakeholders	< 1yr	FMOH	Transport Accommodation	Awareness about the need for enactment & enforcement of relevant legislation	Legislators, Police, relevant professional bodies are informed of the need	Issues Buildings Factories

Follow-up meeting	<2yrs	FMOH	Transport Accommodation	Awareness about the need for enactment & enforcement of relevant legislation	Legislators, Police, relevant professional bodies are reminded of the need	

Objective 3: To train and re-train select population and health workers on management of injuries

Strategy:

Activities	Timing	Implementing agency	Need for resources	Expected output	Target	Remarks
First aid training for first responder in schools, workplaces and public buildings	February 2014; May 2014; August 2014, November 2014	FMOH Health institutions	Resource persons Venues Basic equipments	First aid skills	30% of Students, teachers, workers, traders are skilled	
Basic life support; trauma life support	December 2014	FMOH Health institutions	Resource persons Tertiary institutions Basic equipments	Widespread skilled workforce in life support strategies	80% of Health workers, firemen, police, selected workers are skilled	
Advanced trauma life support	May 2015	FMOH Health institutions	Resource persons Tertiary institutions Basic equipments	Highly skilled health workers in trauma care	80% of Health workers in primary secondary and tertiary health workers are skilled	

Action points[2]

1. Develop a sustainable and comprehensive system for injury data collection in Nigeria.
2. Integrate injury surveillance with a comprehensive population-based NCDs surveillance system.
3. Institute mechanisms for utilizing multiple sources of data for robustness (e.g., hospital-based data, police reports, reliable newspaper reports and data from other reliable sources).
4. Establish a National Safety Commission – an interdisciplinary group of stakeholders with the
5. Aim of improving safety at all levels.

6. Integrate injury prevention as part of a comprehensive NCDs behavioural change communication strategy.
7. Develop a comprehensive policy, enact and enforce legislation for occupational health and safety.
8. Develop product safety standards for household products.
9. Include preventive health in the mandate of organizations dealing with worksite safety.
10. Enforce effective legislation on building safety.
11. Study patterns of occupational injuries and their determinants with a view to defining precise targets for preventive interventions.
12. Formally evaluate interventions to reduce all forms of violence in Nigeria.
13. Improve trauma care to the extent that a credible, cost-effective analysis suggests.
14. Build capacity of health systems in support of injury prevention and control. Integrate public health programme monitoring and evaluation with NCDs surveillance.
15. Build a coalition or network of organizations at the national, state and local levels facilitated by federal and state health services to add momentum and legitimacy to injury prevention and control as part of a comprehensive effort for the prevention of NCDs.

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Appendices