

## Consensus NHF-CAFSANI Summit on Food, Drinks and Cardiovascular Health: A Multisectoral Approach to Reducing NCDs in Nigeria

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### ABSTRACT

*The increasing prevalence of non-communicable diseases (NCDs) in Nigeria, like many other developing countries, has become worrisome. With the pre-existing health burden due to malnutrition, the challenges of low productivity, poverty, reduced economic growth and development are exacerbated. It is also a significant threat to the attainment of the Sustainable Development Goals (SDGs) in Nigeria. Several risk factors have been associated with this increased burden, including genetic, environmental, and behavioural. The rise in urbanization and globalization has undoubtedly had a significant influence on consumer food and drink preferences and choices. Many of the risk factors are preventable with changes in diet, lifestyle, alcohol, and drug use, among other measures. However, to prevent the growing occurrence of NCDs in Nigeria, critical and relevant stakeholders must work together with a definite agenda and concerted efforts to combat this challenge. This paper examines the roles of stakeholders, including global and national governments, industry, and consumers, and advocates a holistic and genuine commitment to measures that will fast-track the implementation of various recommendations such as WHO SHAKE and use of Front of Pack Labelling.*

### Keywords

Commitment; Front of Pack Labelling; Non-communicable diseases; Sustainable Development Goals; Perspectives.

### Introduction

Non-communicable diseases (NCDs) are defined as chronic diseases of long duration with a generally slow progression, which arise from both modifiable and non-modifiable risk factors which may be genetic, physiological, environmental, or behavioural, including diets, harmful use of alcohol and hard drugs, physical activity, emotional disturbance. Usually, these diseases are not resolved immediately, and complete cure is almost impossible [1,2]. The manifestation of these conditions ranges from cardiovascular diseases (high blood pressure, heart attacks, arthritis, and stroke), cancers, chronic respiratory diseases (chronic obstructive pulmonary disease and asthma) and diabetes, amongst others.

NCDs have since been declared a global concern, contributing to

74% of all deaths globally with a higher contribution from low- and middle-income countries (LMIC) at about 77% of the deaths. Also, 86% of the global premature deaths occurring in low- and middle-income countries have been associated with NCDs. Deaths associated with cardiovascular diseases rank highest with 17.9 million people annually with cancers, chronic respiratory diseases and diabetes in the ranking order [3]. The impact of NCDs, especially CVDs, is devastating as it affects all age groups irrespective of race inclination, or socio-demographic distribution. This, on the other hand, further impacts negatively on economic growth and productivity of the population. An understanding of this impact on the global economy and livelihood was recognized early, hence the incorporation of a target to reduce NCDs by one third (mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease) in the UN SDGs 2030.

Locally, the prevalence of NCDs, has been aided largely by rapid unplanned urbanization, which promotes the consumption of

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unhealthy diets, poor food consumption patterns, changes in food preferences, globalization of unhealthy lifestyles, (alcohol and drug use, poor physical activity) and the increasing aging population. These associated risk factors were also highlighted by Olawuyi and Adeoye [4], who found that the diet (low consumption of fruits and vegetables) contributed significantly to the pre-disposing factor of NCDs, particularly CVDs. Others have also identified excessive intake of calories obtained from meat, processed foods which are usually high in refined starch, sugar, salt, saturated and trans-fats, low intake of fruit and vegetables, and alcohol consumption, as increasingly pre-disposing factors [5]. It can therefore be concluded that food intake is a major contributory factor to CVDs and will also be an important factor in the prevention and management through the adoption of a healthy consumption and food pattern in the population. One of the promoted diets for healthy living as well as the prevention and management of cardiovascular diseases is the Mediterranean diet.

The Mediterranean diet is a traditional diet usually high in healthy fats and oils (mono-unsaturated and poly-unsaturated) such as olive oil, sunflower oil, canola, fish oil, soybean oil, seeds, and nuts, and low in saturated fats, but also high in complex carbohydrates from legumes. It is also high in fibre, mostly from vegetables and fruits. A 40% proportion of total fat in total energy intake is recommended while the mono-unsaturated fats should be twice the saturated fats. The high intake of vegetables, fresh fruits, cereals, and olive oil ensures that recommended daily amounts of nutrients including beta-carotene, vitamins C and E, polyphenols, and various important minerals is attained. The adequate consumption of these key nutrients has been suggested to be beneficial to human health and especially prevention of cardiovascular disease [6].

There has been a significant transition in consumer behaviour with nutrition trends towards a higher consumption of sweetened beverages in the last decade in Nigeria. This is due to increasing urbanization, globalization, and changes in consumer preference. In fact, the Nigerian food system is greatly evolving, with changes in production, processing, distribution, trade, and food environment. The increased consumption of sugar-sweetened drinks is part of the newly emerging consumer behaviour. These factors, therefore, determine the availability, affordability, and purchasing preferences of consumers. The impact of this transition is obvious in both urban and rural centres, as urban households tend to eat more out of home and consume processed foods more than rural households, with both having increased vulnerability to health risks related to the consumption of processed foods high in fats, sugar, and salts [7]. Similarly, urbanization and globalization have eased consumption, availability of imported foods, and reduced physical activity, which are all contributory factors to overweight and obesity.

In 2022, approximately 450,000 deaths in Nigeria were attributed to NCDs [8]. Although preventable, an estimated \$7 trillion could be lost in health expenditure in developing countries over the next 15 years if these countries do not effectively follow up on national commitments to implement NCD policies at the national level [9].

The burden of hypertension is high and steadily increasing in Africa. A survey carried out in 2003 under the auspices of the WHO by the Nigerian Heart Foundation (NHF) had earlier reported a prevalence of 28% [10]. Unfortunately, there have been no recent surveys to examine changes in the pattern over the years. However, a systematic landscape review of multiple studies between 1997 and 2012, however, reported a prevalence range of 13.2 - 51% [11]. Furthermore, estimates from a similar systematic review and meta-analysis have suggested that between 1995 and 2020, hypertension cases in Nigeria increased by over 540%, from four million to 28 million individuals [12]. Most of the NCDs result from four particular behavioural risk factors, namely, tobacco use, physical inactivity, unhealthy diets, and the harmful use of alcohol, that are known to lead to four key metabolic/physiological changes which are raised blood pressure, overweight/obesity, raised blood glucose and raised cholesterol [13].

Therefore, there is a dire need for a broader perspective on the present status of foods and drinks and approaches to prevent and control NCDs in Nigeria.

### **Global Approaches to Stop NCDs**

Concerted efforts have been pursued by relevant global bodies to prevent the further increase of NCDs in the global population as NCDs have continued to affect more populations and impact negatively on economies around the world, especially in productivity, national growth, and development. Several collaborations and partnerships were formed as continued efforts were targeted at reducing the prevalence of NCDs and achieving the UN SDG target goals by 2030. In 2019, a five-year (2020 – 2025) Strategic plan was developed and approved for adoption by the World Obesity Federation (WOF), the global body that drives efforts to reduce, prevent and treat obesity as well as advocate with governments, international and national health bodies, civil society organizations, and other key stakeholders around the world to change the narrative around obesity and achieve the political recognition which it deserves.

The consultative working groups recommended that WOF aligns its five-year plan around the WHO global targets, given that 2025 is the deadline for two of the four global targets and frameworks. The strategic goals of the World Obesity Foundation focus on leading global advocacy for obesity, convening obesity stakeholders globally, training and capacity building in obesity, and collecting and disseminating knowledge on obesity [14].

The SHAKE (Surveillance, Harness Industry, Adopt Standards for labelling and marketing, Knowledge, and Environment) intervention technical package further signifies more global effort and commitment to end CVDs as raised blood pressure due to high consumption of salt and sodium (over 2 grams per day, equivalent to 5 grams of salt per day) is the global leading risk factor for CVDs resulting in heart disease and stroke [15].

Similarly, the Global Strategy for Women's, Children's, and Adolescents' Health (2016 – 2030) is critical to achieving

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the highest attainable health and nutrition for children and adolescents [16]. Unfortunately, the triple burden of malnutrition (undernutrition, hidden hunger, and overweight) in many countries remains a significant global public health challenge threatening the survival, growth, and development of children, young people, economies, and nations. The 2018 global nutrition report revealed that 124 countries currently experience more than one form of malnutrition with 41 countries having high levels of the three forms of malnutrition. It is further alarming that 8.23 million U-5 children globally are both stunted and overweight [17]. Based on UNICEF/WHO/World Bank Group Joint Child Malnutrition Estimates in 2020, 38.9 million U-5 children were overweight while over 340 million children and adolescents aged 5–19 were overweight or obese in 2016 [18,19].

In order to better explain how complex processes and activities shape what we eat, and how this affects children, UNICEF in collaboration with international experts in 2018 developed the Innocenti Framework on Food Systems for Children and Adolescents. This UNICEF Innocenti Conceptual Framework has three main components: drivers, determinants, and interactions, which are designed to shape the diets of children and adolescents. The aim is to increase the supply of, and demand for more nutritious foods within the food system, thereby making food choices easier for all age groups, and reducing the consequences of undernutrition, overweight and non-communicable diseases.

### **National Implementation Plan to Stop NCDs**

National activities to control NCDs in Nigeria started with the NCD Control Programme in 1989, with the mandate to coordinate interventions aimed at preventing, diagnosing as well as controlling NCDs as well as formulate policies and guidelines for Nigeria. These activities have since been articulated into the NCD-National Multi-Sectoral Action Plan (NMSAP) 2019-2025.

The overarching goal of the NCD-National Multi-Sectoral Action Plan is to reduce salt intake to less than 5g (1 teaspoonful) per day and consume 3-5 portions of varieties of fruits and vegetables per day (400grams).

The NMSAPs strategic objectives are to strengthen governance, coordination, cooperation, and leadership, promote a healthy lifestyle and implement programs to reduce NCD modifiable risk factors, strengthen and orient health systems to address prevention and control of NCDs at all levels of care, and contribute to the improvement of universal health coverage. It will also monitor trends and determinants of NCDs and evaluate progress in their prevention and control, as well as promote and support national capacity for quality research and development to reduce the burden of NCDs.

The NCD control division, has specific national targets adapted from global NCD goals and SDGs, with a 30% target reduction in mean population intake of salt/sodium (g/day). The national strategic response to excess dietary salt consumption includes strengthening the three-tier national NCD multi-sectoral

coordination mechanism and framework, development and review of policy and guidelines, and multi-stakeholder engagement to implement the WHO Surveillance Harness Adopt Knowledge Environment (SHAKE) technical package for salt reduction.

The STEP-wise approach to surveillance (STEPS) was initiated by WHO in 2000 in recognition of a global need for data on key NCD risk factors. It provides an entry point for low- and middle-income countries to commence chronic disease surveillance activities. Moreover, it also helps countries to build and strengthen their capacity to conduct surveillance on NCDs by monitoring a few modifiable risk factors which reflect a large part of the future NCD burden which can indicate the potential success of interventions considered to be effective in reducing the leading NCDs.

Significant achievements have been made towards salt reduction. These include the development of the NCD Policy and National Multi-sectoral Action Plan (NMSAP 2019-2025), nutritional guidelines for the prevention, control, and management of NCDs, and the establishment of NCDs coordination mechanism which includes a Technical Working Group Sub-committee to deal with the various NCDs risk factors, including salt. Other notable achievements are the integration of the treatment and care of uncomplicated NCDs into the National Task Shifting and Task Sharing Policy (NTSTS) in the country, which will increase the awareness and education on NCDs and their risk factors at the Primary Health Centres; as well as the development of a sodium control policy by the NCD division in collaboration with the Department of Food and Drug Services of the Federal Ministry of Health.

Going forward, however, there is still an urgent need for the review of the 2014 National Nutritional Guidelines for the Prevention, Control, and Management of NCDs, which is long overdue. NCDs have now overtaken communicable diseases as the leading cause of death both globally and locally and are a major cause of poverty/inequality in Nigeria. Nevertheless, NCDs are preventable, and a concerted multi-sectoral approach has become a critical imperative for effective prevention.

Presently, national efforts have been geared towards the formulation of policies and strategic documents that will ensure that foods are produced with reduced contents of unhealthy oils or total elimination. These policies include the NAFDAC (National Agency for Food and Drug Administration and Control) Fats and Oils Regulations 2022, NAFDAC Pre-packaged Food, Water and Ice (Labelling) Regulations 2022, National Policy and Strategic Plan of Action on Prevention and Control of Non-Communicable Diseases (NCDs) 2021 currently being finalized by the Federal Ministry of Health, the National Policy on Food Safety and its implementation 2014, the NCD Multi-Sectoral Action Plan 2021-2025, and the National Nutritional Guidelines on Non-Communicable Disease Prevention, 2014.

To promote cardiovascular health, therefore, several food system actors, particularly civil societies, NGOs, and development

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partners, have also been involved in the implementation of relevant policies and regulations, while also leading advocacy initiatives at different fora towards ensuring consumption of foods that are healthy with reduced levels of saturated fatty acids. These actors are not limited to the Trans-Fats-Free Nigeria Coalition, NCD Alliance (NCDA), National Council on Food and Nutrition (NCFN), National Committee on Food and Nutrition, International Food and Beverages Alliance, Global Alliance for Improved Nutrition (GAIN), Scaling Up Nutrition Business Network (SBN), Global Health Advocacy Incubator (GHAI) and Resolve To Save Lives (RTSL).

More concerted efforts at the national level are required to ensure the significant reduction, if not elimination of products with unhealthy fats and oils, as their continued availability poses an increased risk to CVDs.

### **Role of Industry in Addressing NCDs in Nigeria**

Fats and Oils are essential parts of human diets as they provide energy and essential fatty acids needed for physiological and biochemical functions and metabolic activities in the body, apart from serving as sources and carriers for fat-soluble vitamins. Fats and oils also increase satiety and make foods more appetizing. Fatty acids from fats and oils are categorized into two, either as saturated or unsaturated fatty acids. Saturated fats are usually unhealthy as they are not easily broken down due to limited interaction with the chemical units in the body, while the unsaturated fatty acids are healthier and more desirable for various health functions, including liver, eye, and brain functions, amongst others, in the body.

Unhealthy diets which are usually high in saturated fatty acids and trans-fatty acids have formed the major constituents of many foods due to increased globalization, urbanization, industrialization, as well as changes in consumer preferences. Trans fats, or trans-fatty acids, are unsaturated fatty acids from either natural or industrial sources. Naturally occurring trans-fats come from ruminants (cows and sheep) while industrially produced trans-fats are formed in industrial processes that add hydrogen to vegetable oils, converting the liquid into a solid and resulting in “partially hydrogenated” oils (PHO).

Various sources of trans-fatty acids are commonly found in processed foods, stalls, homes, vended foods, and fast-food centers. Examples of foods laden with trans-fats include margarine, shortenings, cakes, pies and cookies (especially with frosting), candies (especially with creamy fillings), crackers, snack foods, microwave popcorn (buttered and flavored varieties), frozen pizzas, frozen biscuits, pastries, muffins, doughnuts (especially frosted or cream-filled), breaded and fried chicken and fish, and fried fast foods.

The intake of these food products in Nigeria has been strongly linked to increased levels of cardiovascular diseases in terms of fat deposits along the arteries (atherosclerosis), thereby predisposing consumers to increased blood pressure that leads to stroke, heart failure and/or attack, and peripheral heart disease amongst others.

Increased fat deposits also increase the risk of type 2 diabetes, cancer, gut bacteria, obesity, inflammation, arthritis, and others.

In addition, there is the increased use of “added sugars”, which are all sugars and syrups that are added to foods during processing and preparation, and “free sugars” which according to the WHO, comprise all mono- and disaccharides that are added to foods by the manufacturer, cooks, or the consumer at home, as well as sugars that are naturally present in honey, syrups, fruit juices, and fruit juice concentrates [20].

Common beverages in Nigeria (a common source of sugar) include products of bottling companies such as Coca-Cola, Schweppes, Mountain Dew, Pepsi, Coke, etc. A single can (33cl) of sugar-sweetened soda contains about 40 grams (around 10 teaspoons) of free sugars [21]. These dietary sugars have a negative impact on health. A higher intake of sweetened beverages is associated with greater energy intake, higher body weight, and lower intake of essential nutrients. It is interesting to note that large-scale manufacturers are already responding positively to the need to reduce the sugar levels of their products.

A high intake of free sugars is associated with excess calorie intake, which if not compensated by energy expenditure, will lead to an increase in body fatness [22]. The higher the level of glucose in the blood, the higher the amount of insulin released. When insulin is chronically high in the bloodstream, it causes inflammation and damages the lining of blood vessels, leading to a host of cardiovascular concerns [23]. Other health consequences of excessive dietary sugar include non-alcoholic fatty liver disease, obesity, cancers, and dental caries.

However, the risks arising from dietary sugars can be controlled by raising awareness of the health benefits of fruits and vegetables consumption, discouraging consumption through tax levies, and/or adoption of policies aimed at reducing the intake of free sugars through education, improved labelling, restriction of advertising, and promotion of access to diagnosis and treatment [24].

The strategic priorities for industries remain how to provide healthy foods which are sustainable and are anchored on the principles of affordability, accessibility, and availability of nutrition to all, through the promotion of consumer education on the dietary needs and sources for obtaining healthy diets. These can be achieved through partnerships and collaborations between relevant organizations, all aimed at creating increased awareness and proffering practical solutions.

In providing healthy foods which are sustainable, industries must be aware and must understand the needs of the consumers through science-driven research and studies, market and evidence-based research, and initiated consumer feedback mechanisms. Industries must also be guided and encouraged to formulate products using recommended regulations and principles, such as CODEX Alimentarius, for healthy foods as there are age-group specifications and other requirements. Industries need to make a

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commitment and take responsibility through demonstrable, visible, and sustained efforts with dedicated commitment, to produce only safe, nutritious and healthy products. This can be made binding by ensuring inclusion in policies such as the National Policy on Food Safety and Quality, NAFDAC and SON Regulations and Guidelines, amongst others. Industries must also be dedicated to using robust and sustainable production systems that will ensure the production of only safe and healthy foods.

Foods produced must be properly tested with keeping samples from different batches available for reference purposes. This is where the development of local laboratory capacity is critical. Consequently, industries must be encouraged to develop in-house capacity with fully certified and well-equipped laboratories or ensure regular product monitoring through collaboration with public analysts providing private laboratory services across the country. Such capacity-building efforts will ensure that the quality of all processes and products are assured. Capacity development for the staff is also not negotiable, as only trained staff can contribute significantly to quality control processes in the factory. This is why, for example, the recent GAIN initiative of collaboration with the Institute of Public Analysts of Nigeria, IPAN, in the development of an e-learning platform for training analysts in micronutrient testing, should be applauded and patronized.

Industry governing laws confer the responsibility of safe product delivery to manufacturers; hence, advocacy for the use of standard-grade product packaging materials must be intensified while products must be monitored for proper distribution and maintenance of quality throughout the food supply chain till products are delivered to the final consumer. Industry therefore owes it as a responsibility to train their distributors and marketers at all levels on proper product handling and storage to ensure sale and distribution of only products that are safe in the food supply system.

### **Promoting Consumer Awareness on Prevention of NCDs**

The current food retail environment especially in the urban centres offers unprecedented access to a selection of heavily processed packaged foods that can undermine the choice of healthy diets. Hence, there is a need to address the growing burden of nutrition-related NCDs. It is therefore not surprising that multiple strategies have been advocated and introduced to improve the access to, and choice of diets by consumers in the population [25,26].

Consumer education on healthy food choices, selection, sourcing, and needs, can be promoted through label declarations and claims. Nutrition Facts labels are an ideal vehicle for conveying nutrition information and dietary guidelines to promote informed purchase decisions by consumers. Nutrition panels on labels allow consumers to understand the ingredient profiles such as the composition of calories, dietary fibre, fat, protein, sugar, sodium and other micronutrients of public health significance in different countries, including health claims and allergen information on the food product. Other information such as wholesomeness of food, storage, preparation or cooking guide, orderly arrangement

of product ingredients, and production details such as the batch number and shelf life, are also usually displayed on the label and are important in making informed purchase decisions. The nutrition facts label is a requirement by regulatory agencies such as NAFDAC on most packaged foods and beverages. There is increasing advocacy for the adoption of Front of Pack Labelling (FoPL) to guide consumers in the landscape many of whom are unable to read. Any such label format adopted must be able to provide immediate guidance to the consumer on food selection consistent with nutrition, safety, and dietary recommendations. Such nutrition information provided on the labels also need to be truthful and unexaggerated and must not mislead the consumer.

Labelling is the part of food product branding that gives the product its identity. It is usually printed on the pack (front or back) and provides detailed product information. The WHO Manual on Guiding Principles and Framework for Front of Pack Labelling (FoPL) defines FoPL as “nutrition labelling systems that are presented on the front of food packages (in the principal field of vision) and can be applied across the packaged retail food supply”, to present simple, often graphic information on the nutrient content or nutritional quality of products [27].

The adoption of Front-of-Pack Nutrition Label (FoPL) is already receiving significant attention from public authorities and is now being considered a key policy approach in tackling NCDs. Recently, the World Health Assembly (WHA) has proposed nutrition labelling as an important policy tool to improve nutrition and promote healthy diets. The FoPL in this environment will provide a quick guide to making healthier food choices for all consumers and will be useful in reformulation, innovation, health food procurement, regulation of healthy nutrition claims, and consumer education dietary guidance.

At least thirty countries have already adopted the FoPL initiative in various forms, including endorsement logos, summary indicator systems, nutrient-specific warning labels, and nutrient-specific interpretive labels such as the “Eye” Logo for fortified foods. In Nigeria, while it has not yet been formally adopted, a 2021 survey of the status of nutrition labelling of pre-packaged food products in markets of Lagos metropolis in Nigeria showed that only 4% of total products identified in the various markets had FoPL in different formats [28]. In fact, diet-related public health diseases of importance such as obesity, high blood pressure, diabetes, cancers, osteoporosis and other NCDs have been given more prominent attention through labelling information in many of these countries.

Endorsements confer more confidence and acceptance on products, and it is one of the types of Front-of-Pack labelling methods. Industries can secure endorsements from recognized health bodies such as the Nigerian Heart Foundation and consumer advocates such as CAFSANI. The NHF, with an already established and recognized logo of a ‘healthy heart’ is already taking the lead in this direction. Other endorsing institutions include the Nutrition Society of Nigeria (NSN), and the Medical Association of Nigeria (MAN). Advertorials from industries must be consumer-

driven rather than profit-oriented, with messages creating healthy consciousness in the consumers on the dangers of unhealthy food consumption, benefits of healthy food consumption, and generally healthy lifestyle. This will help consumers make healthy and informed choices, thereby promoting healthy consumption and reducing the risk of diet induced NCDs.

The FoPL has therefore emerged as one of the most important strategies for addressing diet related NCDs and should be nationally promoted and adopted without further delay. To continuously improve nutritional outcomes, policymakers must incorporate evidence on emerging trends and evidence-based policy recommendations into policymaking. However, as malnutrition issues are context-specific, contextual factors should also be considered when making such policy decisions.

### Conclusion

It is clear that in a diverse country such as Nigeria with a high population of the base of the pyramid (BoP), low-income and poorly educated consumers, combating the prevalence of NCDs urgently requires a holistic approach and a multi-sectoral policy support.

Nigeria as a country must strive to meet various global targets in the reduction of NCDs and CVDs through collaborative efforts in policy implementation, partnerships with industries, development of local solutions, and adaptive and preventive measures including reduction in the use and levels of fat, salt, and sugar in processed foods.

There must also be continuous engagement on what types of behavioural changes should be constantly advocated and publicly reinforced among all stakeholders, including food handlers and consumers. This will require a change in diet (food and drink) selection, food preparation, changes to lifestyle approaches, and food messaging. In addition, all stakeholders, especially regulators must now fast-track the adoption of a suitable FoPL model for the country, as more processed food centres proliferate in our communities.

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