Diabetes Advocacy and Care in Nigeria: A Review

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ABSTRACT

BACKGROUND
The political commitments necessary to tackle the growing burden of Diabetes Mellitus (DM) and related non-communicable diseases (NCDs) have increased in recent years in Nigeria. This has resulted in the development of national policy and strategic objectives by the Federal Ministry of Health for the prevention and control of NCDs in Nigeria. This review paper aims to highlight the increasing burden of Diabetes in Nigeria; the advocacy; policy and frame-work for integrating Diabetes care into the primary healthcare system in Nigeria.

METHODOLOGY
This is a review paper and sources of information were from International and local healthcare policies and plan of action including national advocacy activities.

RESULTS
The issues for diabetes advocacy in Nigeria are provision of integrated Diabetes care at the primary level, awareness about diabetes and related NCDs, mobilization for increased political will, strengthening of the health system (funding, infrastructure, capacity building etc.) and a national diabetes/NCDs survey including gestational diabetes using the new evidence-based World Health criteria. Advocacy, policy and care are essential components in the prevention and control of diabetes and a large evidence-base is available on cost-effective primary interventions. Implementing these interventions as part of the National Policy on NCDs and a plan of action has been adopted by the National Council on Health in 2013. Actualizing the delivery of care in such scenario will require ongoing policy advocacy which is a deliberate and structured process of informing and influencing decision-makers in support of evidence-based policy.

CONCLUSION
Diabetes and related NCDs are increasing in prevalence in Nigeria and their complications pose an immense public health burden. There is an urgent need for our health decision-makers at all levels to implement adopted policies and plans of action to halt the escalating trend and burden of Diabetes through effective primary care, especially in rural communities of Nigeria.

KEYWORDS
Diabetes; Non-communicable diseases; Advocacy; Primary care.

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INTRODUCTION
Nigeria, Africa's most populous country is experiencing a rapid epidemiological transition characterized by a simultaneous escalating burden of communicable and non-

communicable diseases among other health challenges.

Diabetes Mellitus is the commonest endocrine-metabolic disorder in Nigeria comparable to the experience in many other parts of the world[1], with over >90% having type 2 diabetes (T2DM)[2].

While T2DM predominantly affects older individuals in developed countries, in developing nations like Nigeria, it affects the younger population in the prime of their working lives and thus poses an even greater threat to the health of these individuals.

This epidemic of diabetes is paralleled by a corresponding increase in the prevalence of acute hyperglycemic emergencies, microvascular and macrovascular complications which accounts for much of the premature morbidity and mortality due to diabetes in Nigeria.[3]

Additionally, an increased prevalence of hyperglycaemia in pregnancy shows the far-reaching implications of the diabetes cycle with its attendant high maternal and perinatal morbidity and mortality[4,5].

Given the rapid escalation of the diabetes epidemic in Nigeria, all levels of prevention and care (primary, secondary and tertiary) are required to be put into action simultaneously as over 50% of people with diabetes especially T2DM, remain undiagnosed in the country[2].

In view of the above scenario, the screening of the population with the aim to diagnose and treat majority of diabetes should be a priority as we work towards scaling up secondary prevention of T2DM.

It is therefore imperative that in a populous country as Nigeria with over 170 million people, with diverse cultures and languages, the screening and diagnostic methods for diabetes especially in our rural communities should be simple, cost effective and less time consuming in addition to the consideration of the risk factors.

The attainment of this goal of population based screening for secondary prevention of diabetes will require enormous health advocacy for the formulation and implementation of policy and action in this regard.

Health Advocacy in Nigeria
Health Advocacy is a combination of individual and social actions designed to gain political and community support for a particular health goal or program. Action may be taken by, or on behalf of, individuals and groups to create living conditions which promote health and healthy lifestyles.[6]

Advocacy is a deliberate and structured process of informing and influencing decision-makers in support of evidence-based policy change[7].

The components of policy advocacy include the Advocacy issue and goal, decision-makers and influencers, decision makers' key interests, opposition and obstacles, assets and gaps, partners, tactics, messages and plan to measure success[8].

Consequently the issues for Diabetes advocacy in Nigeria are the: Provision of integrated Diabetes/NCDs Care at the primary level in Nigeria; Awareness about Diabetes; Strengthening of the health system (funding, infrastructure, capacity building etc.), Mobilization for increased political will and the National diabetes/NCDs survey.

This review which is aimed at highlighting the increasing burden of Diabetes in Nigeria; the advocacy; policy and frame-work for integrating Diabetes care into the primary healthcare system in Nigeria, will evaluate each of the above advocacy issues for DM in Nigeria.

Integrated Diabetes/NCDs Care at the Primary Level: A Call for Action Nigeria contributes significantly to the global burden

of non-communicable diseases (NCDs) with an estimated 792,600 NCDs related deaths in 2008 resulting in adverse social, economic, and health outcomes[9]. According to the International Diabetes Federation, about four million Nigerians are diabetic translating to a national prevalence of 4.5% to 5%[10]. A review study by Ogah et al[11] on hypertension in Nigeria over the past five decades found that the overall prevalence ranges from 8%-46.4% depending on the study target population, type of measurement and cut-off value used for defining hypertension. In addition; the annual new cases of cancer is 102,100 and the 5-year prevalence of cases is 232,000[12]. These data underscore the huge burden of NCDs in Nigeria and these are attributed to the high estimated prevalence of biomarkers and determinants of some of the key NCDs. The WHO 2010 Global Status Report on NCDs documented the prevalence of biomarkers of NCDs in Nigeria as follows: raised blood pressure (42.8%); raised blood glucose (8.5%); raised cholesterol (16.1%) overweight and obesity, 26.8% and 6.5% respectively[8]. The high mortality figures of Non-communicable diseases, their biomarkers and risk factors are issues of grave concern and unless addressed, the burden will continue to increase.

Several lifestyle risk factors and practices deeply rooted in globalization, urbanization and culture have been found to increase the burden of NCDs in Nigeria. These include unhealthy diets specifically the consumption of diets high in sodium, saturated fats and low in dietary fiber; physical inactivity, tobacco and alcohol use. The increasing burden of Non-communicable diseases and their risk factors and its intricate linkages to global socioeconomic development, poverty reduction and environmental sustainability culminated in the development of the 2008-2013 Global Strategy for the Prevention and Control of Non-communicable Diseases[13]. Nigeria is a signatory to this action plan and the 2nd objective highlights the need toestablish and strengthen national policies and plans for the prevention and control of non-communicable diseases. One of the specific actions for this objective is *"the reorientation and strengthening of health systems, enabling them to respond more effectively and equitably to the health-care needs of people with chronic diseases"* This underscores the importance of strengthening the primary health care considering its strategic role and importance to service delivery in Nigeria.

Primary Diabetes Care

The Primary Health Care (PHC) System is a strategic approach of the Government of Nigeria designed to improve health at the grassroots. The secondary and tertiary level health care is expected to complement the services provided at the PHC, provide more specialized care as well as serve as a referral point. However due to the weak capacities of the health workers and poor infrastructural facilities, the quality of services provided has been inadequate and poor[14] at the primary level.

The strengthening of the primary health system is crucial to NCD prevention, screening and treatment because these are chronic diseases which require long-term, patient-centered, community based and sustainable care. Such care can only be delivered equitably and sustainable through the primary health care (PHC).

Cost effective approaches, technologies and interventions to reduce the burden of NCDs in Nigeria and other low middle income countries are available but a persistent challenge is the weak health system resulting in substantial gaps in implementation particularly in Low Middle Income Countries[15].

Furthermore, most cases presenting at the tertiary facilities already have avoidable complications which would have been prevented through prevention, early diagnosis and treatment at the primary level[16]. It is thus imperative to bring NCD care, prevention and control close to where people live and work thus reducing the burden of the diseases on the populace (see Fig.1).

Essential Diabetes/NCDs interventions for Primary Care

The WHO Package of Essential Non-communicable (PEN) Disease Interventions for Primary Health Care *in Low-Resource Settings* identified priority conditions that should be addressed at the primary health level and include Diabetes, cardiovascular disease, chronic respiratory disease and cancer. The selection was based on the following criteria:

- They are major public health issues that contribute the most to the global NCD burden.
- Evidence-based interventions are available for addressing the condition.
- These conditions share behavioural risk factors: tobacco use, unhealthy diet physical inactivity and harmful use of alcohol.
- They are the focus of the Global NCD Action Plan.

A minimum set of interventions for the outlined health conditions was defined in the WHO Package of Essential NCD[16] (see table 2). These interventions are those that are feasible for implementation even in low-resource settings with a modest increase in investment and can be delivered by primary care physicians and non-physician health workers in primary care. If effectively integrated into primary care they significantly reduce, the morbidity and mortality associated with the major NCDs.

Milestones in NCDs Prevention and Control

Significant progress has been made in the past four years in the global response to Diabetes and other NCDs. The landmarks in this process are the 2011 Global UN Summit on NCDs, the development of a Global NCD Action Plan and Global NCDs Monitoring Framework, the 2014 UN Review of progress and most recently the inclusion of Diabetes/NCDs in the sustainable Development Goals.

In spite of these attainments, continued advocacy will be crucial especially in LMICs like Nigeria in order to ensure that progress is monitored and targets realised.

Furthermore, while global advocacy is essential, sustainable progress will only be achieved through action at the country level via local change agents and strong civil society coalitions such as the Diabetes Association of Nigeria, Nigerian NCDs Alliance and Medical Women Association of Nigeria among others.

Multisectoral partnership approaches to diabetes and other NCDs prevention and control need to be the cornerstone of the Nigerian response.

Table 1:

• Global Diabetes Landscape						
Year	1994	2000	2007	2011	2013	2035
Global DM Burden (millions)	100	171	250	366	382	592

• Nigerian Diabetes Landscape					
Year	1960s Lagos	1988 Lagos	1997 FMOH	2003 PortHarcourt	2012 Uyo
DM Prevalence (%)	<1.0	1.8	2.2	6.8	10.5

Current estimates of DM prevalence are 1-2% in rural adults and 6-10% in urban dwelling adults in Nigeria. This translates to at least 4-5 million people living with DM, a large proportion of which are undiagnosed.

Table 2: Essential NCD interventions for primary care

Essential Interventions for primary care (category of evidence)*
Type 1 Diabetes & Gestational Diabetes • Daily insulin injections (level 1)
Type 2 Diabetes: • Oral combination hypoglycemic agents for type 2 diabetes, in addition to modification of diet, maintenance of a healthy body weight and regular physical activity (level 1) • Metformin as initial drug in overweight patients (level 1) and non overweight (level 4) • Other classes of antihyperglycemic agents, added to metformin (level 3) • Reduction of cardiovascular risk for those with diabetes and 10 year cardiovascular risk >20% with aspirin, ACEIs, ARBs and statins (Level 1)
Prevention of foot complications through examination and monitoring (Level 3) • Regular (3-6 months) visual inspection and examination of patients' feet by trained personnel for the detection of risk factors for ulceration (assessment of foot sensation, palpation of foot pulses, inspection for any foot deformity, inspection of footwear) and referral as appropriate
Prevention of onset and delay in progression of chronic kidney disease: • Optimal glycemic control in people with type 1 or 2 diabetes (Level 1) • ACEIs or ARBs for persistent albuminuria (Level 1)

Prevention of onset and delay of progression of diabetic retinopathy: • Referral for screening and evaluation for laser treatment for diabetic retinopathy (Level 1) • Optimal glycemic control (Level 1) and blood pressure control (Level 1)
Prevention of onset and progression of neuropathy: • Optimal glycemic control (level 1)
Primary prevention of heart attacks and strokes • Tobacco cessation (level 1), Regular Physical activity 30 minutes a day (level 1), Reduced intake of Salt <5g per day (level 1), Fruits and vegetable at least 400g per day (Level 2) • Aspirin, statins and antihypertensive for people with 10 year cardiovascular risk >30% (Level 1) • Antihypertensives for people with blood pressure ≥140/90 • Antihypertensives for people with persistent blood pressure ≥140/90 and 10 year cardiovascular risk>20% and unable to lower blood pressure through lifestyle measures (Level 1)
Acute myocardial infarction: • Aspirin (Level 1)
Secondary prevention (post myocardial infarction): • Tobacco cessation (Level 1), healthy diet and regular physical activity (Level 2) • Aspirin, antihypertensive (low dose thiazide, ACEI, ARB), and statin (Level 1)
Secondary Prevention (post stroke): • Tobacco cessation, healthy diet and regular physical activity (Level 2) • Aspirin, antihypertensive (low dose thiazide, ACEI, ARB) and statin (level 1)
Secondary Prevention (Rheumatic heart disease): • Regular administration of antibiotics to prevent streptococcal pharyngitis and recurrent acute rheumatic fever (level 1)
Bronchial asthma: • Relief of symptoms: Oral or inhaled short-acting β2 agonists (Level 1) • Inhaled steroids for moderate / severe asthma to improve lung function, reduce asthma mortality and frequency and severity of exacerbations (Level 1)
Prevent exacerbation of COPD and disease progression: • Smoking cessation in COPD patients (Level 1) Relief of breathlessness and improvement in exercise tolerance • Short -acting bronchodilators (Level 2) Improvement of lung function • Inhaled corticosteroids when FEV1<50% predicted (Level 2) Long-acting bronchodilator for patients who remain symptomatic despite treatment with short-acting bronchodilators (Level 1)
Cancer: • Identify presenting features of cancer and refer to next level for confirmation of diagnosis (Level 3)
Category of evidence: Level 1= meta -analysis or systematic reviews of randomized controlled trials , Level 2= Case control studies or cohort studies or systematic reviews of such studies, Level 3= Case reports and case series, Level 4 = Expert Opinion

Diabetes Clinic: Primary Care Model

Figure 1:

RECOMMENDATIONS

Diabetes and other non-communicable diseases prevention and control services at the primary level are important for the early detection and management of the diseases and consequently the reduction of the morbidity and mortality rates. Critical to this is the strengthening of the health system in Nigeria. Policy makers at all tiers of government must therefore ensure leadership support, prioritize NCD interventions and ensure adequate budgetary allocation and release to support this initiative. In addition, the ministries of health must work with all stakeholders to develop and implement a framework for the overall strengthening of the primary health care with particular emphasis on essential medical products and technologies, health information system, human resources for health, service delivery, health financing and involvement of the communities.

Operational guidelines and protocols which define prerequisites for integrating a core set of essential NCD interventions into primary care must be developed and disseminated to the primary level of care to aid service delivery. This will ensure better quality of diagnosis, case management and follow-up. Furthermore, it will aid the standardization of care and treatment services and enhance the use of evidence-based approaches.

CONCLUSION

This paper highlights the burden of diabetes and related NCDs and risk factors in Nigeria as well as the importance of integrating NCD prevention and control into the primary care level. The negative effects of Non communicable diseases on health and socioeconomic development are increasingly understood and require a strong response from all stakeholders. These require strengthening health systems and improving the social determinants of health. Strong political leadership is required to catalyze and sustain the prioritization of NCDs care at the primary level and Nigeria cannot afford to remain complacent in the face of the growing burden of non-communicable diseases. Stakeholders
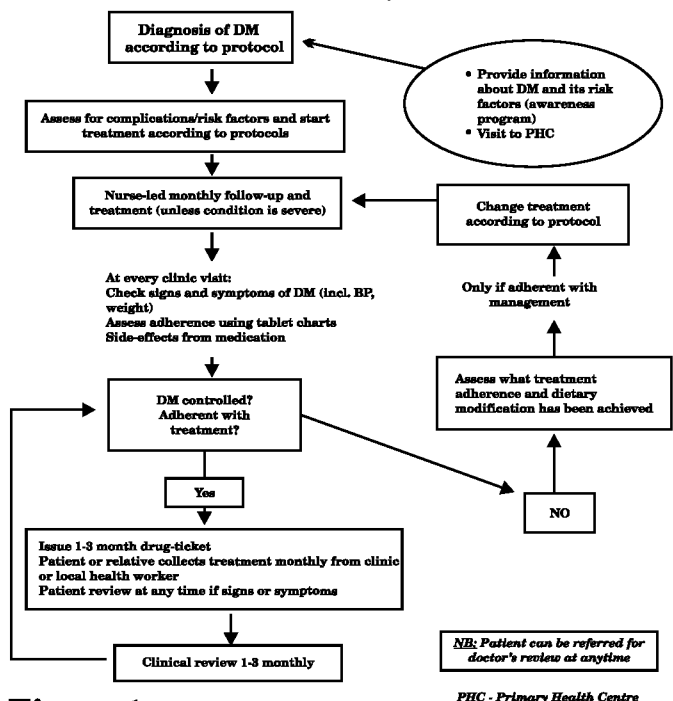
must improve on prevention and primary care for Non- communicable diseases in Nigeria to address the inequalities in access and promote the principles of Universal Health Coverage.

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