Research Article

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Evaluating the challenges and opportunities for diabetes care policy in Nigeria#

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Abstract: Diabetes mellitus is a metabolic, non-communicable disease characterized by elevated blood glucose levels resulting from defects in insulin function, secretion, or both. Nigeria has a National Guideline on the Prevention, Control, and Management of Diabetes Mellitus. The guideline was developed in 2021 for healthcare practitioners and facilities to enhance their standard of care for diabetic patients, thereby enhancing the management and control of diabetes in Nigeria. Diabetes accounts for 1.52% of the total deaths in Nigeria. Given the high prevalence of diabetes in the country, there is a need for a national policy on diabetes care. This study evaluates the challenges associated with the formulation and implementation of a diabetes care policy in Nigeria. Identified challenges include inadequate funding of the healthcare system, insufficient human resources, poor health infrastructure, corruption, and low socioeconomic status. This study highlights and alerts policymakers to the challenges associated with diabetes, including its economic burden, the specific obstacles in formulating and implementing diabetes healthcare policy in Nigeria, and how this policy could help ameliorate the rising cases of diabetes in Nigeria. The study recommends that the government prioritize increased healthcare funding, human resource development, and infrastructure improvement while addressing corruption and implementing targeted interventions to improve socioeconomic conditions.

Keywords: diabetes, policy, government, challenges, solutions

1 Introduction

The World Health Organization (WHO) defines diabetes as a chronic metabolic disease marked by elevated blood glucose (or blood sugar) levels, which, over time, can lead to serious damage to the heart, blood vessels, eyes, kidneys, and nerves [1]. As one of the leading non-communicable diseases (NCDs) [2], diabetes is significantly influenced by dietary intake and patterns, with unhealthy diets being a major contributing factor in its development [3]. In Nigeria, there is a gradual shift away from traditional foods such as pulses and whole cereals towards ultra-processed foods and options high in fats and sugars – a trend commonly observed in modern economies. This dietary transition poses heightened risks for obesity, overweight, and diabetes mellitus [4].

Globally, approximately two-thirds of recorded deaths are due to NCDs like diabetes, chronic lung diseases, and cardiovascular conditions [5]. Diabetes is associated with severe complications, including chronic renal failure, blindness, multiple organ damage, and diabetic gangrene. In Nigeria, diabetes accounts for 1.52% of total deaths, with a prevalence ranging from 0.65 to 11.0% among adults aged 20–69 [6]. Currently, over 5 million Africans live with diabetes, a number projected to increase to 15 million by 2025 [7].

To address these challenges, the Ministry of Health of Nigeria introduced the 2021 National Guideline on the Prevention, Control, and Management of Diabetes Mellitus [8]. Additionally, the Diabetes Association of Nigeria developed and published the Clinical Practice Guidelines for Diabetes Management [9]. However, despite the Ministry of Health's introduction of the National Policy and Strategic Plan of Action on the Prevention and Control of Non-Communicable Diseases, its effectiveness in improving diabetes care in Nigeria has been limited [10].

The National Multi-Sectoral Action Plan for the Prevention and Control of Non-Communicable Diseases (2019–2025) was developed to coordinate a national response to NCDs; however, diabetes care has received limited attention [11]. This oversight highlights the need for a dedicated national policy on diabetes care in Nigeria.

This research was conducted while the author was employed at the National Agency for Food and Drug Administration and Control (NAFDAC), Nigeria.

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This study aims to explore the barriers encountered in formulating and implementing an effective diabetes care policy (DCP) in Nigeria, with the goal of identifying and addressing the implementation gap.

2 Methodology

This study uses a qualitative, literature-based review design to examine the challenges and potential solutions for formulating and implementing DCPs in Nigeria. A systematic review of academic and grey literature was conducted to gather data on DCPs, healthcare access, and policy implementation challenges in Nigeria. The literature search included academic databases such as JSTOR, PubMed, Scopus, and Google Scholar to identify peer-reviewed articles on DCPs, health policy implementation, and healthcare challenges in Nigeria. Additionally, relevant reports were obtained from Nigerian government ministries, including the Federal Ministry of Health, the National Health Insurance Scheme (NHIS), the National Agency for the Control of NCDs, and the National Bureau of Statistics. Publications and reports from international organizations, such as the WHO, the International Diabetes Federation (IDF), and the World Bank, provided context on healthcare policy and diabetes management in low- and middle-income countries (LMICs). Reports, policy briefs, and working papers from local non-governmental organizations (NGOs), advocacy groups, and diabetes care organizations in Nigeria were also reviewed to ensure a comprehensive understanding of the policy landscape.

2.1 Global and national contexts for diabetes care

2.1.1 Global context for diabetes care

Diabetes stands as a prominent health and developmental challenge in the twenty-first century [12]. In 2011, approximately 366 million people worldwide were living with diabetes, with an additional 280 million at high risk. Projections suggest that without intervention, these numbers could rise to 552 million diagnosed with diabetes and an additional 398 million at high risk by 2030 [13]. Three out of four people living with diabetes reside in LMICs [14], and 90% of individuals diagnosed with diabetes have type 2 diabetes, and roughly 80% of this population lives in LMICs [15].

According to the WHO, the global prevalence of diabetes is approximately 422 million, with an annual mortality rate of 1.5 million directly attributed to the disease. Trends indicate a steady increase in both the mortality rate and the number of diabetes cases [1].

In Europe, more than 33 million people are living with diabetes. The IDF projects that the number of individuals with diabetes in the European Union (EU) will increase from approximately 33 million in 2010 to 38 million by 2030 [16].

Diabetes and its complications may subject people living with the disease and their families to catastrophic healthcare expenditures, which have a severe impact on the country's economy [17].

In 2023, Nigeria's poverty rate was estimated to be 38.9%, with approximately 87 million Nigerians living below the poverty line, making it the country with the world's second-largest population of people living in poverty after India [18]. According to the Labour Force Statistics Report by the Nigeria Bureau of Statistics, the unemployment rate in the second quarter (Q2) of 2023 was 4.2%, showing a slight increase from 4.1% in the first quarter (Q1). The unemployment rate differed by gender, with men at 3.5% and women at 5.9%. Urban areas saw a higher rate of unemployment at 5.9%, compared to 2.5% in rural areas. Young people aged 15–24 were particularly affected, with an unemployment rate of 7.2% [19].

Given the increasing socioeconomic burden that diabetes imposes on individuals and the healthcare system [18], it is essential to evaluate and strengthen public health policies aimed at diabetes prevention and care. Such policies could help to reduce or eliminate out-of-pocket payments, thereby easing financial strain on households and supporting broader poverty reduction efforts.

2.1.2 National context for diabetes care

The cases of diabetes mellitus in Nigeria are increasing exponentially. A recent meta-analysis reveals that approximately 5.8% (about 6 million people) of the adult Nigerian population is currently living with the disease [6]. In rural areas of Nigeria, the prevalence of diabetes ranges from 0 to 2% of the population, while in urban areas, the figures are higher, ranging from 5 to 10%. Although diabetes is rare among children in Nigeria, local anecdotal and clinical data suggest a gradual increase in the number of children and adolescents living with the disease [20]. Guidelines have been developed to prevent, control, and manage diabetes mellitus. In 2021, the National Guideline on the Prevention, Control, and Management of Diabetes Mellitus in Nigeria

was developed and established, but without a well-defined and structured policy that includes clear implementation plans and strategies, accountability mechanisms, and adequate resources or funding, existing guidelines may not translate into effective care and prevention. It is important to examine the challenges in the formulation and implementation of the DCP in Nigeria and offer possible solutions, as this may help policymakers in the policy development process. Nigeria has developed several national health policies, including the National Health Policy of 1988, the amended National Health Policy of 2004, the National Health Promotion Policy of 2006, and the National Health Policy of 2016, which was developed 2 years after the first National Health Act (2014). Nigeria was a signatory to the September 2011 political declaration at the UN General Assembly High-Level Meeting on NCDs and was one of the six countries that made interventions. The others included Bangladesh, Canada, Brazil, the USA, Uruguay, the Caribbean Community, and the EU [21]. Subsequently, in 2013, Nigeria developed the National Policy and Strategic Plan of Action on NCDs to address the broader challenges and burden of NCDs [22]; however, these efforts have not resulted in significant attention for diabetes care. The priority placed on diabetes care remains relatively low in terms of attention and resource allocation [23]. The prevalence of diabetes mellitus in Nigeria has been progressively rising, and this burden is expected to continue increasing. Due to the widespread prevalence of diabetes in Nigeria, there is an urgent need to develop and implement a DCP aimed at preventing and managing the condition. This proactive approach is crucial to prevent an intensified impact on both health and socio-economic development in Nigeria, which could potentially strain the country's already resource-constrained healthcare system [23].

2.1.3 Challenges in formulating and implementing DCP in Nigeria

In many developing countries, including Nigeria, public health policy formulation and implementation face numerous challenges and setbacks that render the policy largely ineffective [24]. Understanding these challenges can help policymakers effectively prepare for them, facilitating successful policy formulation and implementation. Acknowledging and addressing these challenges is crucial for policymakers to enhance the effectiveness of public health policies and improve overall health outcomes. The challenges of formulating and implementing a DCP in Nigeria are highlighted below.

2.1.4 Inadequate funding of the healthcare system

In Nigeria, health financing is inadequate, with a troubling trend in federal budget allocations to the health sector [25]. The proportion of the budget allocated to health has declined from 6.08% in 2012 to just 4.51% in 2018. This downward trajectory complicates the achievement of the government's economic and development goals as outlined in the Economic Recovery Growth Plan and may hinder the effective formulation and implementation of the DCP in Nigeria. During a summit in Abuja, African Union member states committed to allocating at least 15% of their annual budgets to healthcare [26]. However, in 2023, only 5.75% of Nigeria's total budget was allocated for the health sector, and in 2024, the budgetary allocation was reduced to 5.03% [27]. Although this figure is an improvement over the 4.67% allocated in 2022 – the highest since 2001 [28] – it still falls short of the commitments made under the Abuja Declaration [29].

In Nigeria, access to health insurance remains a significant challenge, with only 5% of the population covered [30]. Currently, social health insurance is available exclusively to federal government employees, leaving most state civil servants without coverage [31]. Given the current state of health financing, formulating and implementing the DCP in Nigeria seems challenging, if not unattainable. Successful implementation of this policy will require a substantial increase in health budget allocations, which have consistently remained below 10% since 2001. A promising first step would be to follow the Abuja Declaration's recommendation and increase health funding to at least 15% of the national budget.

For comparison, in 2017, the United States allocated $3.5 trillion to health expenditures, accounting for 18% of its gross domestic product (GDP) – more than twice the average for developed countries [32]. In stark contrast, Nigeria's health spending constitutes only 7% of its GDP, illustrating the significant challenges the country faces in this critical sector. Strengthening and promoting advocacy and public awareness of diabetes is a strategic way to support diabetes care. Increased awareness can help individuals understand the risk factors, encourage early diagnosis, and promote lifestyle changes that may prevent or delay the onset of the disease [33].

Mobilizing public support and educating communities about the impact of diabetes mellitus on individuals and society can create a stronger demand for government action. Advocacy efforts like these can be instrumental in driving the development of a DCP aimed at reducing or even eliminating out-of-pocket expenses for patients [34].

An informed public, aware of the harmful effects of diabetes, is more likely to advocate for healthcare policy reforms, including the creation of a dedicated DCP in Nigeria. Engaging key stakeholders – such as healthcare professionals, patient advocacy groups, NGOs, and civil society – will also be essential in strengthening this push for policy change [35].

Seeking partnerships with NGOs, international health organizations, and private sector players is also vital. International organizations such as the WHO [36], the IDF [37], and the World Bank have existing frameworks to support diabetes care in low-income countries [38]. These bodies can provide not only financial support but also technical expertise and programmatic support that may otherwise be unavailable. A community-based intervention approach could effectively address diabetes care needs with limited funding by empowering primary healthcare centers to manage diabetes at the local level [39,40].

Providing adequate support to these centers to deliver basic diabetes education, conduct screenings, and offer initial care could help relieve pressure on tertiary hospitals and reduce overall out-of-pocket expenses for diabetes care. Community awareness programs that promote lifestyle changes [41], preventive care, and early diagnosis have the potential to reduce the number of undiagnosed cases and, by extension, healthcare expenditures [42].

Expanding health insurance coverage to include diabetes care is another strategic approach. Currently, only about 3% of the Nigerians have coverage through the NHIS [43], primarily limited to formal sector employees, especially federal civil servants [44]. Broadening the scope of the NHIS to cover a larger portion of the population and specifically address diabetes care needs would be transformative. The enactment of an Affordable Care Act (ACA) like the Patient Protection and ACA in the United States of America could increase access to diabetes care, especially for those at higher risk [45].

Subsidizing essential diabetes medications, glucose-monitoring tools, and other necessary resources could make diabetes management affordable for people without health insurance, significantly improving adherence to recommended treatments [46]. Demonstrating the rising cases of diabetes and its implications for both public health and economic burden and growth [47] could strengthen the argument for a dedicated policy. The justification for increased budgetary allocation for health should be provided. Cost-effectiveness studies showing the importance and benefits of investing in diabetes care over time can further support the case for increased budget allocations. Such data-driven advocacy initiatives can be persuasive for policymakers, particularly when framed as a means of achieving cost savings and improved public health outcomes [48].

Given the current healthcare funding landscape, advocating for incremental budget increases targeted at diabetes care could be a realistic strategy. Rather than seeking a full 15% budget allocation for healthcare, as agreed in the Abuja Declaration, a more feasible approach may be to advocate for smaller but dedicated funds specifically allocated to diabetes prevention and treatment.

2.1.5 Inadequate human resources

As of January 2022, only 37 medical schools have been fully accredited. This represents about a 27% increase compared to 2012, despite there being 44 government-approved medical schools in Nigeria [49]. According to the Medical and Dental Council of Nigeria, these schools have a carrying capacity of only 3,530 students annually. Nigeria's health workforce density is reported at 1.95 per 1,000 population [50]. The National Human Resources Profile 2013 shows that there are a total of 65,759 medical doctors, with a population ratio of 38.9 per 100,000. It is higher when compared to pharmacists and medical laboratory scientists, whose ratios are 10 and 11.3 per 100,000, respectively [51].

In Nigeria, poor management of human health resources, including low retention rate, inadequate remuneration, limited opportunity for career advancement and growth, lack of access to continued education, poor working conditions, professional rivalry among health workers [52], and migration to greener pastures – commonly referred to as the "Japa syndrome" – have been identified as major challenges facing health human resources in Nigeria [53]. To mitigate these issues, the government must develop a strategy to increase healthcare professionals' retention rates by raising their remuneration, providing opportunities for career advancement and continuing education, promoting capacity building, improving working conditions [54], and reducing professional rivalry among healthcare workers [55]. The National Health Act of 2014 could be reformed to include a provision that mandates competitive wages for health workers, improved benefits and severance packages, and regular salary adjustments to make employment as health workers in Nigeria more attractive. Provisions for transportation, housing, and other benefits could also be included to ease the financial burden on health workers.

2.1.6 Poor health infrastructure

Nigeria is the fastest-growing country in Africa, with an estimated population of 220,291,275 as of 1 January 2023.

The population is projected to reach 440 million by 2050. However, the country lacks modern medical infrastructure and facilities [56]. Nigeria has some of the worst healthcare indicators in Africa [57]. As of 2011, Nigeria's healthcare infrastructure consisted of 20,278 primary health centers, 33,303 general hospitals, and 59 federal medical centers and teaching hospitals. Despite these numbers, they still fall short of what could be considered sufficiently effective for the Nigerian population [58].

The effective formulation and implementation of DCPs cannot occur without modern health facilities and adequate healthcare infrastructure. Budget allocations for health should be increased to support capital projects that expand infrastructure to better serve Nigeria's growing population [59,60].

2.1.7 Corruption

Corruption is a major issue in Nigeria, affecting all sectors, including healthcare. In the 2022 Corruption Perception Index by Transparency International, Nigeria scored 24 out of 100 points, indicating a high level of perceived corruption [61]. While there have been some improvements in the country's corruption outlook, Transparency International's report suggests that Nigeria is still widely perceived as corrupt [62].

The public sector is particularly affected, with 30.2% of the Nigerians reporting that they paid a bribe and 63% having at least one contact with a public official in the past 12 months [63]. According to the United Nations Office on Drugs and Crime's 2019 survey, bribery involving healthcare professionals, particularly private medical doctors and nurses, was reported at 4.4 and 3.1%, respectively. The survey notes a statistically significant decline in the prevalence of bribery in Nigeria since 2016, when it stood at 32.3%, although it remains relatively high [64].

Bribes are often paid to expedite or formalize administrative procedures and are usually in cash (93%). Men residing in urban areas exhibit the highest rate of bribery, while women in rural areas have the lowest case. Refusing to pay bribes is associated with negative consequences. In 2019, Nigerians paid a staggering sum of 675 billion in bribes to public officials, constituting 0.52% of the GDP and 6% of the average annual income [65]. Corruption could affect the effective formulation and implementation of DCPs in Nigeria. Health facilities intended to support diabetes care may not be accessible to low-income Nigerians living with diabetes if they cannot afford to bribe health officials.

Adequate support must be provided to anti-corruption agencies to recover stolen funds and assets and prosecute those found guilty of misappropriating public funds. Additionally, civil society organizations, citizens, the National Assembly, and the media should be empowered to hold the Nigerian government accountable for the use of public funds and resources [66].

2.1.8 Low socioeconomic status

Nigeria's economy, driven by its non-oil sectors, is the largest in Africa [67]. However, this economic growth has not significantly reduced poverty levels or improved the standard of living [68]. Currently, 63% of the population – about 133 million people – are considered multidimensionally poor [69], facing multiple deprivations in areas essential for a decent quality of life, including health, education, food, housing, and access to clean water. Of this group, 65% live in the North and 35% in the South, with regional disparities ranging from 27% multidimensional poverty in Ondo to 91% in Sokoto [70].

Although Nigeria's monetary poverty rate stands at 40.1%, the National Multidimensional Poverty Index reveals a higher rate of 63%, with multidimensional poverty more severe in rural areas (72%) compared to urban areas (42%) [71]. This highlights the limited access to essential health services, such as diabetes care, for those living in or below the poverty line. Consequently, the effective formulation and implementation of DCPs in Nigeria may be challenging or even unattainable under these conditions. To address this, Nigeria must prioritize rapid and equitable economic growth, implement population control measures, combat corruption, reduce reliance on foreign loans, and manage its economy efficiently [72].

2.1.9 Policy entrepreneur

The absence of committed actors interested in engaging and leading collaborative efforts within and around the government [73] to promote the formulation and implementation of DCPs may lead to setbacks. Given the prevalence of diabetes in Nigeria, there is a greater need for such actors to step forward and catalyze change processes towards achieving policy formulation and implementation for diabetes care. In Nigeria, NCDs have intermittently appeared in the government health policy spotlight over the years [74]; however, diabetes has been facing challenges in gaining consistent attention and sustained action. Despite various health policies, recommendations, and reports, there is currently no dedicated government-led national strategy document for the management of diabetes, as seen for some NCDs and communicable diseases,

such as HIV/AIDS. The late Nigerian Minister of Health, Prof. Olikoye Ransome-Kuti, was one such policy entrepreneur during the HIV epidemic in Nigeria [75]. The successful formulation and implementation of a DCP in Nigeria require individuals or groups with qualities such as power, support system, formal authority, and political backing. The absence of these attributes could pose serious challenges to the formulation and implementation of the policy.

2.1.10 Political will

The lack of sustained political will and commitment to prioritize diabetes care in Nigeria may affect the allocation of resources and the effective enforcement of policies. The involvement of government leaders in corrupt practices, coupled with a deficiency in public accountability and ineffective consequence management within the public sector, collectively indicates a lack of political will [76].

The demonstrated lack of commitment by political leaders to support diabetes care and treatment has a profound impact on resource allocation for implementing DCPs. Few government-led initiatives exist to promote strategic collaborations between researchers and policymakers. Although researchers provide data to inform policy decisions on diabetes, these findings rarely capture the attention of politicians, including lawmakers [77]. One clear example of this lack of commitment is the inadequate funding allocated to the Federal Ministry of Health, limiting its capacity to provide strong leadership and effective coordination in the fight against diabetes [78].

3 Conclusion

This article highlights the challenges associated with diabetes, its economic burden, and the specific difficulties in formulating and implementing diabetes healthcare policies in Nigeria. It also discusses how effective policy could help address the rising prevalence of diabetes in the country.

It is recommended that the government prioritize increased healthcare funding, human resource development, and infrastructure improvements while simultaneously combating corruption and implementing targeted interventions to improve the socioeconomic conditions of citizens.

For the successful implementation of the DCP, public awareness campaigns should educate individuals on the risk factors, symptoms, and preventive measures related to diabetes. These efforts should be carried out through various media channels, public campaigns, and health workshops. Healthcare professionals, including doctors, pharmacists, nurses, and community health workers, should receive targeted training to improve their ability to detect the disease early, identify its symptoms, and equip them with the necessary skills to educate and counsel patients.

Diabetes care should be integrated into the existing primary healthcare system to ensure broader accessibility, especially in rural areas. The government must also ensure the availability of diagnostic tools, such as blood glucose meters, to facilitate testing and monitoring of diabetes. Additionally, expanding access to specialists, including endocrinologists and pathologists, is crucial. The government should allocate sufficient resources and funding for public health programs that prioritize diabetes care to ensure the effective treatment and management of the disease.

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