



Challenges Facing People with Diabetes in Accessing Health Services in Iringa Municipality, Tanzania

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ABSTRACT

This study assessed the challenges faced by people with diabetes in accessing health services in Iringa Municipality. The study focused on three main areas: financial challenges, the availability of diabetes medicines, and general access to health facilities. A mixed-methods design was used. Information was collected from 145 people living with diabetes through open-ended questionnaires, and from healthcare providers through semi-structured interviews. The data was analyzed using SPSS v.20. The results show that many patients struggle with money, especially those without health insurance. Because of this, some miss clinic visits, do not take medicines as advised, and lose income. Patients also said that medicines such as insulin and oral drugs are not always available in public hospitals, so they are forced to buy from private pharmacies which are more expensive. Access to health services is also made difficult by long distances, few diabetes specialists, and long waiting times, especially for those in rural areas. The study concludes that lack of money, shortage of medicines, and distance to health facilities are big challenges to good diabetes care. It recommends training more diabetes specialists, improving the supply of medicines, giving support to poor patients, and starting community programs to educate people about diabetes. Future research should compare rural and urban areas and look at how well community health insurance works.

Keywords: Diabetes; Health Services Access; Financial Barriers; Medication Availability; Iringa Municipality

Introduction

Diabetes is a long-term health problem that needs regular medical care, the right medicine, and lifestyle changes. Around the world, diabetes has become a big public health problem, and the number of people with it keeps growing, especially in low- and middle-income countries (International Diabetes Federation [IDF], 2023). In Tanzania, the number of people with diabetes is also increasing, especially in towns where people's eating habits and daily lifestyles are changing, and where health services are not always easy to reach (Mwanri et al., 2015).

Getting health services is very important for people living with diabetes. But many patients face problems that stop them from getting treatment on time. Some of these problems include lack of money, shortage of medicines, and long distances to health centers (Mgonja et al., 2020; Ndimbo & Paul, 2022). These challenges make it hard for patients to follow their treatment, and this can cause more health problems and a poor quality of life.

In Tanzania, research has shown that patients without health insurance suffer more because of financial challenges. Paying from their own pocket for doctor visits, medicines, and special diets makes some patients miss appointments or take less medicine than required (Mashau, 2011; Duyilemi et al., 2018). There are also times when important drugs like insulin are missing in public hospitals, and patients are forced to buy from private pharmacies at higher prices (Ogunsola, 2011). People living in rural or semi-urban areas also struggle because they have to travel long distances, and there are few trained diabetes doctors available.

Even with these problems, only a few studies in Tanzania have looked at diabetes care using both numbers (quantitative) and people's personal experiences (qualitative). Learning more about these challenges in Iringa Municipality is important so that leaders can make better plans to improve care. This study wanted to find out the financial struggles, the availability of medicines, and how easy it is for people with diabetes to get health services in the municipality.

Several studies have looked at the problems faced by diabetes patients when trying to get healthcare. Money is often a big problem. For example, Mgonja et al. (2020) found that patients without insurance often miss appointments or take smaller doses of medicine because of high costs. In the same way, Mashau (2011) showed that many patients cannot afford the right diet, which makes it harder to manage diabetes well.

Another common problem is the lack of medicines. Many public hospitals do not always have enough drugs like insulin and oral hypoglycemics. Ogunsola (2011) and Duyilemi et al. (2018) explained that patients are then forced to buy drugs in private pharmacies, which are more expensive and add more

financial stress. In Tanzania, Ndimbo and Paul (2022) found that the irregular supply of drugs in public hospitals makes it hard for patients to follow their treatment plans.

Distance and service problems also make things worse. Patients in rural or semi-urban areas have to travel long distances to reach hospitals, and there are few diabetes specialists to give them care (Mwanri et al., 2015). Studies from other African countries like Kenya and South Africa also showed that long waiting times and not enough health workers make diabetes care worse (Posel & Rudwick, 2014; Arisukwu, 2013).

Most of the earlier studies looked at either money problems or service problems alone. Very few studies have used both patient stories and numbers to explain the situation. This shows the need for research like this one, which uses both methods to give a full picture of the challenges faced by people with diabetes in Iringa Municipality.

Statement of the Problem

Diabetes continues to grow as a public health concern in Tanzania, with about 10.3% of adults affected equating to nearly 2.9 million people across the country (MoHCDGEC, 2022). In Iringa Municipality, healthcare facilities have reported a steady increase in diabetes cases, with an estimated rise of 6.9% in recent years (WHO, 2022). This trend places pressure on families and the health system, as the disease often leads to serious complications when not managed properly.

The problem was that diabetes is becoming more common in Iringa Municipality, but the specific challenges faced by people living with the condition remain unclear. While statistics from the Ministry of Health show rising cases of non-communicable diseases including diabetes (MoHCDGEC, 2022), they did not explain whether people with diabetes can access services easily, afford treatment, or get the medications they need. There was limited knowledge on how diabetes affects people's daily lives, especially in terms of healthcare access, financial stress and medication availability. Without this information, it is difficult to plan effective responses or adjust policies that could help improve care and support for people living with diabetes.

What was known in previous studies like Mwakalinga (2021) in Tanzania have looked at general barriers like government support in managing chronic diseases generally, but they mostly focused on urban areas like Dar es Salaam. Others like (Ngugi, 2020) have discussed national-level trends, such as the cost of insulin or gaps in healthcare funding (Kida & Mackintosh, 2021), but did not investigate the situation on the ground in smaller municipalities like Iringa. It was not known how people in Iringa are facing challenges facing people with diabetes on the way coping with the rising costs, what happens when medications are unavailable, or how far they must travel to get proper care. These unknowns left local health officials with little evidence to act on, even as the number of diabetes cases continues to grow. Therefore, this study assessed the challenges facing people with diabetes in accessing health services in Iringa Municipality to guide practical solutions in diabetes care for Iringa.

Methodology

Research Design

This study employed a mixed-methods research approach, combining both qualitative and quantitative strategies to gain a comprehensive understanding of the challenges faced by people with diabetes in accessing health services in Iringa Municipality. The qualitative component explored patients' lived experiences through open-ended questionnaires and semi-structured interviews, while the quantitative component captured measurable data using descriptive statistics to complement the qualitative findings. This approach allowed for triangulation of data and improved the validity of the results.

Area of the Study

This study was done in Iringa Municipality (Frelimo Health Centre, Ngome Hospital and Ipogolo Dispensary), found in the southern highlands of Tanzania. Iringa was chosen because health reports showed that diabetes cases had been increasing in the area. People living with diabetes in Iringa also faced different problems such as difficulty in reaching health services, high cost of treatment and lack of important medicines. The municipality has both town and village-like areas, which helped to understand how healthcare access changes depending on where people live. Even though some work had been done to improve health services, many challenges still remained, especially for people with long-term illnesses like diabetes. Because of these reasons, Iringa became a good place to study the real problems faced by people with diabetes. The information gathered from this area helped in giving useful suggestions for better care in other places with similar problems.

Iringa Municipality was also home to several health facilities, including hospitals, health centers and dispensaries that provided services to a diverse population. These facilities varied in their capacity, resources and staffing levels, which affected the quality and availability of diabetes care. The mix of public and private healthcare providers in the area offered a unique opportunity to examine differences in service delivery and how patients navigated the healthcare system. Additionally, the socio-economic diversity within the municipality from urban residents with better income and access to services, to rural populations facing more hardships allowed for a comprehensive understanding of the multiple factors influencing diabetes management. This diversity made Iringa an ideal setting for exploring both systemic and individual barriers to effective diabetes care.

Population and Sampling

The study employed a combination of stratified random sampling for quantitative participants and purposive sampling for qualitative participants. For the quantitative component, the population of 226 people with diabetes was first divided into three strata based on the health facilities where they received

care: Frelimo Health Centre, Ngome Hospital and Ipogolo Dispensary. Stratification ensured that each health centre was proportionally represented in the study according to its population size. From each stratum, the required number of respondents was then selected using simple random sampling, which gave every individual within each facility an equal chance of being included. This process enhanced the representativeness of the sample and reduced selection bias while ensuring fairness across the three facilities. The final quantitative sample size of 145 participants was distributed as follows: 56 from Frelimo Health Centre, 45 from Ngome Hospital and 44 from Ipogolo Dispensary.

For the qualitative component, purposive sampling was used to select four assistant medical officers across the three facilities. These health providers were chosen because of their professional expertise and direct involvement in the management of diabetes patients. Unlike the patients who were selected randomly, the health providers were deliberately chosen for their ability to provide in-depth insights into systemic issues such as medication availability, healthcare access and institutional challenges. Their inclusion helped complement the patient narratives with expert perspectives, thereby enriching the study's findings.

Data Collection Instruments

Data were collected using the following instruments:

1. **Open-ended questionnaires:** Administered to patients to capture personal experiences regarding financial constraints, medication availability, and access to healthcare services.
2. **Semi-structured interviews:** Conducted with healthcare providers to obtain professional insights into the systemic challenges affecting diabetes care.

Data Analysis

Qualitative data were analyzed using thematic analysis, which involved identifying, coding, and categorizing key themes from patients' and providers' responses. Quantitative data were analyzed using descriptive statistics in SPSS Version 20, including frequencies, percentages, and cross-tabulations to summarize and present numerical patterns related to financial difficulties, medication availability, and access to healthcare services.

Ethical Considerations

Ethical approval was obtained from the relevant authorities in Iringa Municipality and participating health facilities. Participants were informed about the purpose of the study, and consent was obtained prior to data collection. Confidentiality and anonymity were ensured by using codes instead of personal identifiers. Respondents were assured that participation was voluntary, and they could withdraw from the study at any time without any consequences.

Results and Discussions

This section presents the results obtained from the field. The findings are categorized according to the study objectives.

Objective: Financial Difficulties Encountered by People with Diabetes in Accessing Health Services in Iringa Municipality

The first objective of this study was to assess the financial difficulties faced by people with diabetes in accessing health services in Iringa Municipality. Managing diabetes often requires regular hospital visits, ongoing medication and periodic laboratory tests, all of which can be costly. Many patients in the municipality struggle to meet these expenses due to limited income, high treatment costs and the indirect expenses associated with traveling to health facilities.

This section explores the various ways financial constraints affect patients' ability to seek care, adhere to prescribed treatments and maintain proper diabetes management. It examines both direct costs, such as medication and consultation fees and indirect costs, including transportation and lost work time. By highlighting these challenges, the study provides insight into how economic factors influence health-seeking behavior and the overall well-being of people living with diabetes in Iringa Municipality.

Table 1: Insurance Coverage Limits Access

Response	Frequency (145)	Percent (%)
Yes	78	53.8
No	67	46.2
Total	145	100.0

Source: Field data (2025)

Managing diabetes requires regular hospital visits, consistent medication and laboratory tests, all of which can be costly. Table 6 shows that out of 145 respondents, 78 (53.8%) reported using health insurance to cover treatment costs, while 67 (46.2%) did not have any insurance coverage. This near-even

split highlights the financial challenges that uninsured patients face when trying to access essential diabetes care. Many respondents who did not have insurance reported spending between TZS 10,000 to 45,000 per week depending on medication availability and tests required.

Some patients shared typed comments in the open-ended questionnaire, illustrating their struggles. One respondent wrote: “Sometimes I skip check-ups if I don’t have enough money. Buying medicine privately is very expensive. I often must choose between food and medication. Monthly expenses are hard to plan without insurance. It is stressful managing diabetes like this” Another added: “I delay laboratory tests because I cannot afford them. Missing doses of medicine happens when funds are low. The costs of care are unpredictable. Insurance would help me manage my condition. I hope more support is available for people like me”

Insights from the four health providers interviewed confirmed these financial barriers. One officer explained:

Health insurance, especially ICHF and NHIF, is very helpful for diabetes patients. Those with insurance rarely miss treatment or medicine. Patients without insurance often come irregularly. Poverty is the main factor affecting adherence. We encourage patients to enroll whenever possible (Interview with respondent A, 13/6/2025).

Another officer added:

Patients without insurance struggle to pay for medication and tests. Some stop attending the clinic until their condition worsens. Counseling helps but does not solve the financial problem. Many skip appointments due to cost. This delays proper diabetes management (Interview with respondent B, 13/6/2025).

A third officer noted:

There are no formal financial aid programs for diabetic patients. We sometimes classify younger patients as elderly to help them qualify for free care. Staff do their best to assist when funds are insufficient. Patients often rely on family support. Poverty remains a major barrier to accessing care (Interview with respondent C, 13/6/2025).

The fourth officer added:

Financial constraints are the biggest challenge for diabetes patients. Insurance coverage greatly improves treatment adherence. Uninsured patients frequently miss appointments and medications. We provide counseling and advice, but funding gaps remain. More support mechanisms are needed (Interview with respondent D, 13/6/2025).

Overall, the data from both patient questionnaires and health provider interviews clearly show that financial difficulties are a major barrier to accessing diabetes health services in Iringa Municipality. Patients without insurance struggle to afford medication, laboratory tests and regular check-ups, sometimes skipping treatment entirely. Those with insurance reported fewer difficulties and better continuity of care. Health providers confirmed that poverty directly affects

adherence and access to services. These findings highlight the need for expanded financial support mechanisms and better health insurance coverage to improve diabetes care in the municipality.

The findings on insurance coverage in Iringa Municipality align with previous empirical studies highlighting financial barriers to diabetes care in low- and middle-income countries. Similar to the current study, Macha et al. (2012) found that patients without health insurance often delay or skip medical appointments and struggle to afford medications, leading to poor disease management. Lyimo et al. (2021) reported that inconsistent access to diabetes treatment among uninsured patients increases the risk of complications and reduces treatment adherence. Furthermore, Nsigaye et al. (2020) emphasized that health insurance coverage significantly improves continuity of care, enabling patients to attend regular check-ups and obtain essential medications. Collectively, these studies corroborate the current findings that uninsured diabetes patients face substantial financial challenges, whereas insurance coverage mitigates these barriers and supports better adherence to treatment.

Table 2: Consultation Fees and Transportation Limits Access to Diabetes Care

Response	Frequency (n=145)	Percent (%)
Yes, limits access	135	93.1
No, access is adequate	10	6.9
Total	145	100.0

Source Field data (2025)

Table 7 shows that out of 145 respondents, 135 (93.1%) reported that the costs associated with managing diabetes, including consultation fees and transportation, limit their ability to access care, while only 10 respondents (6.9%) said access is adequate. This indicates that diabetes care places a significant financial burden on most patients in Iringa Municipality, often reducing their ability to meet other essential needs. Open-ended questionnaire responses revealed that many patients struggle to maintain employment due to frequent hospital visits. Others mentioned that transportation, special food, medication and laboratory tests consume a large portion of their income. Some of the statements include:

“I lost my small business because I couldn’t keep up with treatment and work at the same time. The frequent trips to the hospital took too much of my energy and money. Paying for medication every week became very stressful” Another commented “I use most of my income to buy special food and

medicine. At times, I have nothing left for household needs. I feel anxious every month about how to afford everything” another was noted “My income goes to transport and treatment. I had to reduce working hours to attend appointments. This affects my family’s finances as well. Sometimes I cannot afford both food and medication. Managing diabetes has taken a huge toll on my economic stability”.

To gain further insight, assistant medical officers from Frelimo, Ipogolo and Ngome hospitals were interviewed. Their responses highlight the impact of these financial challenges on patient care:

Many patients delay or completely miss their treatment because they cannot afford it. Missing appointments leads to poor sugar control and complications. Even when they come to the clinic, they sometimes cannot pay for recommended tests or medications. The indirect costs, like transportation and special diets, make treatment adherence harder. We see patients returning in worse conditions due to these financial barriers. It is a persistent challenge that affects both their health and wellbeing (Interview with respondent A, 13/6/2025).

Another said;

Some patients are forced to choose between feeding their family and purchasing their medication. They often skip insulin doses or postpone clinic visits. This has serious health consequences over time. Families are stressed financially, which also affects mental health. We try to counsel them and suggest cheaper alternatives, but options are limited. The financial burden is a major reason for treatment non-adherence in our community (Interview with respondent B, 13/6/2025).

Also another was noted;

Even though some services at the hospital are free, indirect costs like transportation, meals and testing materials make it difficult for patients to maintain consistent care. Many patients reduce work hours to attend clinics, which further limits income. They sometimes arrive with advanced complications that could have been prevented. Counseling helps but cannot fully resolve financial issues. Families often bear additional burdens to support patients. These economic constraints are a constant barrier to proper diabetes management (Interview with respondent C, 13/6/2025).

The same to fourth who commented;

Financial constraints are the biggest challenge our diabetes patients face. Insurance coverage, when available, greatly helps, but many are uninsured. Patients frequently skip visits or medication when funds run out, leading to worsening health outcomes. We observe higher hospital readmissions due to this issue. Staff try to provide advice and guidance, but systemic support is lacking. Without additional financial aid, patients will continue struggling with both health and economic pressures (Interview with respondent D, 13/6/2025).

These combined findings from patient questionnaires and health provider interviews show that consultation fees, transportation and other indirect costs significantly limit access to diabetes care in Iringa Municipality. Patients not only struggle to pay for medicines and tests, but also lose income due to reduced work hours or business activity. Health workers confirmed that these financial burdens directly affect treatment adherence and overall health outcomes. The results suggest that without targeted financial support and improved insurance coverage, many patients will continue to face serious economic and health challenges.

This situation is consistent with international evidence. Morris (2017) found that nearly half of type 2 diabetes patients in the U.S. experienced financial strain, which led to lower adherence and higher emotional stress. Campbell (2017) reported comparable results in Canada, noting that costs for drugs, glucose monitoring tools and healthy diets were persistent barriers. Walker (2021) similarly demonstrated a direct link between financial hardship and poor glycemic control among older adults. The findings from Iringa reflect these global trends and emphasize the need for improved financial protection, including expansion of insurance schemes and government subsidies, to ease the cost burden on patients and strengthen long-term diabetes management.

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