

## DIABETES MELLITUS: HOSPITALIZATIONS OF ADULTS IN A PUBLIC HOSPITAL IN THE INTERIOR OF THE NORTHERN REGION OF BRAZIL

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*Lorena Brunela Cordeiro Marafon*

*Diogo de Souza Oliveira*

Centro Universitário São Lucas Ji-Paraná/RO  
<http://lattes.cnpq.br/6002769397228977>

*Fabiana Rosa de Oliveira Nink*

Centro Universitário São Lucas Ji-Paraná/RO  
<https://lattes.cnpq.br/9250829575191984>

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**Objective:** To analyze hospitalizations for diabetes in adults in the northern region of Brazil, specifically in Ji-Paraná, from 2018 to 2022. **Method:** Data collection from the Hospital Information System of the Dr. Claudionor Couto Roriz Municipal Hospital. Descriptive data analysis. **Results:** There have been variations in hospitalizations over the years. In 2019, there was a significant increase compared to the previous year, followed by a decrease in 2020.

In 2021, the number increased again, but decreased again in 2022. **Conclusion:** The study analyzed the number of hospitalizations for diabetes mellitus in a public hospital in the interior of the Amazon region of Brazil, from 2018 to 2022. The results revealed significant trends and variations, highlighting the importance of epidemiological analysis to understand the demand for health services. health and diabetes-related hospitalization trends. This information is essential for health managers and professionals involved in making decisions related to public health in the region. Based on these results, more targeted prevention and control strategies can be developed, promoting healthy lifestyles, improving access to health services and optimizing the management of available resources.

**Keywords:** Hospitalization, Diabetes mellitus, Chronic non-communicable diseases.

## INTRODUCTION

Diabetes mellitus (DM) is a chronic and serious disease that poses a significant challenge to public health on a global scale. It is estimated that approximately 3% of the world's population is currently affected by DM, and projections indicate an increase in this prevalence by the year 2030. This growing prevalence of DM highlights the importance of preventive measures and effective control of the disease to reduce its impact. on people's

health and health systems around the world (MUZY; Jéssica et al,2021)

According to the International Diabetes Federation (2023), there has been an alarming 16% increase in the incidence of diabetes mellitus in the world population in the last two years (2019-2021). In Brazil, this disease is among the main causes of death, having recorded 214 thousand deaths this year alone, affecting people between 20 and 79 years old. In order to raise awareness and warn about this health condition. It is essential to promote the prevention and effective control of this disease in order to mitigate its impact on people's health and health systems around the world.

The Brazilian Diabetes Society (2023) classifies DM according to its etiopathogenesis, comprising type 1 diabetes (DM1), type 2 diabetes (DM2), gestational diabetes (GDM) and other types of diabetes. Other classifications have been proposed, including some subtypes of DM, according to clinical characteristics. Type 1 diabetes mellitus (DM1) is more common in children and adolescents, characterized by a severe insulin deficiency due to the destruction of  $\beta$  cells, associated with autoimmunity. Its clinical presentation is abrupt, with a propensity for ketosis and ketoacidosis, which demands the need for full insulin therapy from diagnosis or after a short period. Type 2 diabetes (T2DM) is the most common type of diabetes and is often associated with obesity and aging. It manifests insidiously and is characterized by insulin resistance and partial deficiency in insulin secretion by pancreatic  $\beta$  cells, together with changes in incretin secretion. Furthermore, it often presents clinical characteristics related to insulin resistance, such as acanthosis nigricans and hypertriglyceridemia (MINISTÉRIO DA SAÚDE, 2023).

DM treatment aims to maintain glycemic and metabolic control, with patient

loyalty being essential to avoid associated complications. The patient with DM needs to be instructed to follow both medication prescriptions and lifestyle changes, which include a specific diet and physical activity. In the case of using medications, there are two treatment options: oral antidiabetics and insulin therapy, depending on the classification of DM and clinical manifestations (MARQUES et al., 2021).

In this context, health professionals, especially nursing, aim to prevent DM, through health promotion actions focusing on healthy lifestyle habits, developed mainly in Primary Health Care. And, in another context, nursing also works directly with the patient in helping, focusing on controlling and maintaining treatment, as well as preventing injuries and also in emergency situations related to DM. (MARQUES et al., 2021).

It is worth highlighting the importance of the assistance provided by nurses in primary care, considering that basic health units are the gateway for people with diabetes. The practice of continuous guidance provided by nurses, with an emphasis on self-care, is low cost to the single health system and is effective in primary care, minimizing the risk of DM complications. diabetes mellitus encompasses the efforts of the entire multidisciplinary team, with the nurse being a fundamental player due to his proximity to the individual, in addition to using evidence-based tools, such as the systematization of nursing care in all areas in which the patient with DM finds himself (COSTA; DEHOUL, 2022).

Therefore, the present study is justified by addressing a highly relevant topic in public health, given that the number of people with diabetes mellitus has been increasing and worrying. There is a need for approaches that encourage the implementation of measures that effectively promote and prevent DM, in order to provide a better quality of life.

Therefore, the objective of this study was to describe the number of hospitalizations of adults with DM in a public hospital in the interior of the northern region of Brazil.

## METHOD

The cross-sectional study was conducted using secondary data obtained from the Health Information System (TABNET) - DATASUS - Ministry of Health, available at Informações de Saúde (TABNET) – DATASUS (saude.gov.br), in the item Health Care - Hospital Production SIH/SUS.

Data collection was carried out retrospectively, which means that historical records from the Information System were used; these hospital records contain information about the number of hospitalizations for a given cause.

After collection, the data were recorded and organized in a table, allowing the visualization of information from each year and the quantification of hospitalizations.

Subsequently, a descriptive analysis of the data was carried out. Descriptive analysis consists of summarizing and presenting data in a quantitative and qualitative way. In this type of analysis, descriptive statistics, such as mean, median, standard deviation, frequencies and proportions, are calculated to describe the characteristics of the data and provide an overview of the phenomenon studied.

## RESULTS AND DISCUSSION

Data analysis revealed significant variations in the number of visits to patients diagnosed with diabetes mellitus over the years 2018 to 2022. These variations are extremely important for understanding the demand for healthcare services related to diabetes and have significant implications for decision-making. decision-making in public health and planning preventive and corrective policies in

the region.

In 2018, the hospital registered a total of 168 people with diabetes treated. This number increased to 187 in 2019, indicating an increase in demand during this period. However, in 2020, there was a reduction in the number of consultations, with 154 people with diabetes registered. This reduction may be associated with several factors, such as seasonality, changes in the population's lifestyle habits and, mainly due to the impact of the COVID-19 pandemic, which may have led to reduced demand for health services or difficulties in accessing them.

In 2021, a slight increase was observed, with 158 people with diabetes treated, indicating a stabilization in demand. However, in 2022, there was a decrease in the number of consultations, with 126 people with diabetes registered. These variations over the years may reflect fluctuations in the prevalence of the disease in the region, as well as changes in patterns of seeking medical care.

These variations in hospitalizations for diabetes must be carefully considered when formulating appropriate health strategies for managing the disease in the region. It is essential to understand the causes behind these variations and evaluate the factors that may be influencing the demand for care. This will allow the development of more effective diabetes prevention, treatment and control policies, aiming to meet the specific needs of the local population.

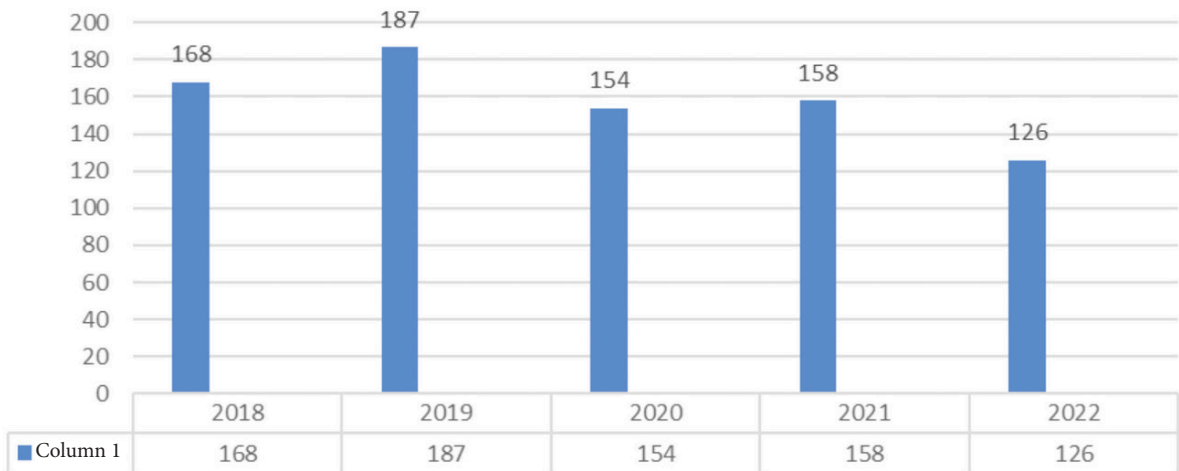
The analysis of this data, as illustrated in graph 1, offers a clear view of the trends and variations in the number of diabetes visits over the years, providing valuable information for health managers, professionals involved in decision-making and researchers. These results can be used to support the implementation of prevention programs, awareness campaigns and allocate adequate resources to combat diabetes in the community in question.

Comparing these results with a broader study on Chronic Noncommunicable Diseases (NCDs) in Brazil between 2008 and 2019, which also revealed increases in the prevalence of depression, cancer, diabetes, neuropsychiatric disorders, chronic lung problems and musculoskeletal problems. Furthermore, the study highlighted an increase in coverage of the Family Health Strategy among Brazilians with at least one NCD, indicating advances in the prevention and care of these diseases (SIMÕES, Taynãna et al, 2021).

In Brazil, care for diabetic patients presents problems with quality, examinations and access to health services, which results in a higher incidence of complications and an increase in hospitalizations and emergency visits (MUZY; Jéssica et al, 2021). Failure to comply with the actions recommended in the diabetic care protocol results in worse health conditions.

The total costs attributable to obesity, hypertension and diabetes in the Unified Health System (SUS) in Brazil in 2018 were 3.45 billion reais (R\$), with a 95% confidence interval between 3.15 to 3.75 billion reais. This is equivalent to more than 890 million dollars (US\$). Within these total costs, hypertension represented 59%, diabetes 30% and obesity 11%. This means that the majority of spending is related to the treatment of hypertension, followed by diabetes and, finally, obesity. Regarding the distribution of costs by age group, 72% of total expenses were attributed to individuals aged between 30 and 69 years. As for gender, 56% of costs are related to women. Furthermore, considering obesity as a risk factor for hypertension and diabetes, the costs attributable to this specific condition reached 1.42 billion reais (R\$), with a 95% confidence interval between 0.98 to 1.87 billion reais. These costs correspond to 41% of the total costs mentioned above (NILSON,

## Number of hospitalizations for Diabetes Mellitus



Graph 1. Number of hospitalizations for DM in a public hospital, Ji Paraná/RO, 2023.

Eduardo et al,2020).

Diabetes treatment in Brazil requires a comprehensive and multidisciplinary approach, involving different health professionals and care strategies. Regular follow-up with a healthcare professional is essential to monitor blood glucose levels, evaluate the effectiveness of treatment and adjust when necessary. Furthermore, diabetes education plays a fundamental role in self-care, providing guidance on healthy eating, physical exercise, blood sugar control and proper medication administration.

In cases of acute complications of diabetes, such as diabetic ketoacidosis or severe hyperglycemia, hospitalization for specialized treatment may be necessary. Surgeries can also be performed in certain situations, such as for revascularization, treatment of ulcers or prevention of amputations.

Multidisciplinary care is essential to ensure a comprehensive approach to diabetes. Nurses play an important role in guiding and supporting patients, while nutritionists help plan a balanced diet suited to individual needs. Psychologists can provide emotional support and help patients cope with the psychological impact of diabetes, while physiotherapists

can assist in developing a safe and effective exercise program.

Additionally, advanced technologies play an increasing role in diabetes treatment. Insulin pumps provide more precise insulin delivery, while continuous glucose monitors allow constant monitoring of blood glucose levels.

In the Brazilian context, it is important to mention that the Unified Health System (SUS) offers free treatment for patients with diabetes, including medical consultations, medications and laboratory tests. Government programs, such as the Popular Pharmacy Program, also make diabetes medications available at reduced prices.

Diabetes treatment in Brazil involves regular monitoring, education with new habits, possible hospitalizations and surgeries, multidisciplinary care, use of advanced technologies and access to medicines through the SUS and government programs. This comprehensive approach aims to control the disease, prevent complications and improve the quality of life of patients with diabetes. Data analysis and understanding variations in diabetes care are crucial to inform effective health policies. Investing in prevention,

education, access to quality services and adequate use of technological resources are essential measures to face the challenge of diabetes, improve patients' quality of life and reduce the impacts of the disease on the health system.

## CONCLUSION

The data analyzed on the number of hospitalizations for diabetes mellitus in a public hospital in the interior of the Amazon region of Brazil, from 2018 to 2022, revealed significant trends and variations. These results highlight the importance of epidemiological analysis to understand the demand for health services and hospitalization trends related to DM.

Several factors can influence variations in the number of visits, such as demographic changes, access to health services, public awareness and implementation of prevention policies. The high prevalence of diabetes mellitus and its complications highlights the need for investments in prevention, disease control and longitudinal care.

DM is a sensitive condition for primary care, being an illness that can be avoided and controlled through timely and effective actions by professionals and managers within the scope of primary care. To meet the growing demand, it is essential to offer sufficient and

adequate health services, aiming to avoid complications, hospitalizations, deaths and high health system costs.

It is important to highlight the need for new studies to obtain a more in-depth understanding of the profile of patients hospitalized for DM. The data presented only refers to the number of hospitalizations due to DM. The continuous analysis of epidemiological data plays a crucial role in planning public health actions and optimizing the management of resources available for health care.

The results obtained have significant implications at the local level, analyzing the number of hospitalizations for DM provides valuable information for health managers and professionals involved in decision-making related to public health in the region.

Understanding trends and variations in diabetes care allows us to identify the specific needs of the local population in relation to this disease. This assists in the appropriate allocation of resources, setting priorities and developing more targeted prevention and control strategies.

The results obtained can serve as a basis for the formulation of more effective and targeted public health policies, which address the main risk factors, promote healthy lifestyles and improve access to health services.

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