

CASE REPORT

## Nursing assessment in an elderly adult with Diabetes Mellitus

### Valoración de Enfermería en Adulto Mayor con Diabetes Mellitus

Adriana Callejas Trejo<sup>1</sup>  , Yuridia Itzel Tellez Villanueva<sup>1</sup>  , Angelica Ángeles Uribe<sup>1</sup>  , Esmeralda García Jiménez<sup>1</sup>  , Citlali Hernández Martínez<sup>1</sup>  , Itzel Guadalupe Gaspar Manríquez<sup>1</sup>  , Michel Oria Saavedra<sup>1</sup>  

<sup>1</sup>Carrera de Licenciatura en Enfermería del Instituto Universitario de las Naciones Hispana, Pachuca de Soto, Hidalgo, México.

Cite as: Callejas Trejo A, Tellez Villanueva YI, Ángeles Uribe A, García Jiménez E, Hernández Martínez C, Gaspar Manríquez IG, et al. Nursing assessment in an elderly adult with Diabetes Mellitus. Salud Integral y Comunitaria. 2026; 4:260. <https://doi.org/10.62486/sic2026260>

Submitted: 08-07-2025

Revised: 17-09-2025

Accepted: 01-12-2025

Published: 01-01-2026

Editor: Dr. Telmo Raúl Aveiro-Róbalo 

Corresponding author: Adriana Callejas Trejo 

#### ABSTRACT

**Introduction:** Diabetes Mellitus in older adults represents a challenge for nursing due to comorbidities, functional decline, and social vulnerability. Nursing care focused on basic human needs allows for the identification of risks, the promotion of self-care, and the improvement of quality of life.

**Objective:** to apply the Nursing Care Process in an older adult with diabetes mellitus, using NANDA, NOC, and NIC taxonomies, in order to establish individualized, safe, and evidence-based care.

**Method:** a descriptive study based on the Nursing Care Process using Virginia Henderson's assessment model. Altered needs were identified through interviews, observation, and physical examination. Nursing diagnoses were established according to NANDA, expected outcomes according to NOC, and interventions based on NIC.

**Results:** priority diagnoses included ineffective management of the therapeutic regimen and risk for unstable blood glucose level. Interventions included health education, glucose monitoring, and self-care promotion. Improvement was observed in treatment adherence, glycemic control, and family participation.

**Conclusions:** comprehensive nursing assessment in older adults with diabetes mellitus enables holistic, person-centered care that promotes autonomy, reduces complications, and optimizes quality of life.

**Keywords:** Nursing Assessment; Older Adults; Diabetes Mellitus; Nursing Process; Nursing Care; Self-Care; Nursing Models.

#### RESUMEN

**Introducción:** la Diabetes Mellitus en el adulto mayor constituye un desafío para la Enfermería, debido a la coexistencia de comorbilidades, deterioro funcional y vulnerabilidad social. El cuidado de Enfermería centrado en las necesidades humanas básicas permite identificar riesgos, promover el autocuidado y mejorar la calidad de vida.

**Objetivo:** aplicar el Proceso de Atención de Enfermería en un adulto mayor con diabetes mellitus, utilizando las taxonomías NANDA, NOC y NIC, con el fin de establecer cuidados individualizados, seguros y basados en la evidencia científica.

**Método:** estudio de tipo descriptivo, basado en la aplicación del Proceso de Atención de Enfermería PAE bajo el modelo de valoración de Virginia Henderson. Se identificaron necesidades alteradas mediante entrevista, observación y examen físico. Se establecieron diagnósticos de Enfermería según NANDA, resultados esperados según NOC y las intervenciones de Enfermería con base en NIC.

**Resultados:** se identificaron diagnósticos prioritarios como manejo inefectivo del régimen terapéutico y

riesgo de nivel de glucemia inestable. Las intervenciones incluyeron educación para la salud, monitorización glucémica y fomento del autocuidado. Se observó mejora en la adherencia al tratamiento, control glucémico y participación familiar.

**Conclusiones:** la valoración de Enfermería integral en el adulto mayor con Diabetes Mellitus facilita una atención holística, centrada en la persona, que promueve la autonomía, reduce complicaciones y optimiza la calidad de vida.

**Palabras clave:** Valoración de Enfermería; Adulto mayor; Diabetes mellitus; Proceso de Atención de Enfermería; Cuidado de Enfermería; Autocuidado; Modelos de Enfermería.

## INTRODUCTION

Population aging represents one of the greatest challenges for health systems in the 21st century. According to the World Health Organization in 2023,<sup>(1)</sup> the number of people over 60 will double between 2020 and 2050, reaching more than 2 billion individuals worldwide. This demographic process leads to an increase in chronic noncommunicable diseases, including diabetes mellitus, considered one of the leading causes of morbidity, disability, and mortality in the older adult population. However, beyond the medical pathology, diabetes at this stage of life poses a comprehensive care problem that compromises the autonomy, functionality, and quality of life of the individual and their family environment.

From the perspective of nursing science, the approach to older adults with diabetes mellitus requires humanized, continuous care based on the scientific method specific to the discipline: the nursing care process. This method makes it possible to identify altered needs, establish nursing diagnoses, and implement evidence-based interventions that promote self-care, therapeutic adherence, and comprehensive well-being.<sup>(2)</sup> The nursing assessment thus becomes the cornerstone of the process, allowing for a holistic analysis of the biological, psychological, social, and spiritual dimensions of the individual, guiding clinical decision-making with an ethical and humanistic approach.

Nursing care in diabetes mellitus in older adults transcends the administration of treatments or glycemic control. Its essence lies in understanding the person as a whole being in interaction with their environment, experiencing functional limitations, cognitive changes, loss of roles, and emotional vulnerability. According to Fernández and Rodríguez in 2022,<sup>(3)</sup> nursing professionals must take a leading role in education for self-care, early detection of complications, and family support, promoting patient autonomy and safety. What is novel about this case is precisely the application of Virginia Henderson's model of care focused on basic human needs, which allows for individualized care and strengthens the active participation of older adults in their own health process.

Care for older adults with diabetes requires the integration of scientific, technical, and humanistic knowledge, considering that complications of the disease—such as retinopathy, neuropathy, or diabetic foot—affect not only the body but also the emotional and social spheres. In this context, the role of nurses is not limited to performing procedures, but extends to care management, understood as the ability to plan, coordinate, and evaluate interventions that promote safety and quality of care.<sup>(4)</sup> From this perspective, nursing assessment allows for the identification of risk factors, unmet needs, and coping resources, which facilitates the implementation of personalized and effective interventions.

On the other hand, type 2 diabetes mellitus is a complex disease that requires the active participation of the patient in its daily management. However, in older adults, the presence of cognitive impairment, polypharmacy, loneliness, or economic limitations can hinder therapeutic adherence.<sup>(5)</sup> Consequently, the scientific problem that gives rise to this study lies in how nursing can optimize the care of older adults with diabetes mellitus through a comprehensive, systematic, and humanized assessment capable of identifying not only the clinical aspects of the disease but also the psychosocial determinants that influence their self-care.

The relevance of this case to nursing science is based on its contribution to the understanding of care as a complex phenomenon that needs to be approached from the interrelation between scientific knowledge, practical experience, and ethical reflection. According to Watson in 2018, care is at the core of the nursing discipline, and its application in contexts of chronicity and aging takes on transcendental value, as it involves accompanying, educating, and empowering human beings in the construction of their well-being. In this sense, this paper represents an opportunity to demonstrate the transformative capacity of nursing care when applied based on theoretical models, updated taxonomies, and a person-centered approach.

Likewise, innovation in nursing care for older adults with diabetes involves considering the family and

community environment as part of the care process. The family plays a decisive role in emotional support, treatment supervision, and the promotion of healthy habits, so its inclusion in care strategies promotes the sustainability of self-care and the reduction of complications.<sup>(6)</sup> This integrative view of care is aligned with the principles of the Pan American Health Organization's Renewed Primary Health Care in 2022,<sup>(7)</sup> which promote the active participation of the individual, family, and community in maintaining health.

In this context, nursing assessment becomes a dynamic process that combines clinical observation with the interpretation of human needs. Through the use of NANDA-I, NOC, and NIC taxonomies, nursing professionals have a standardized language that facilitates the planning, execution, and evaluation of care based on scientific evidence. This common language strengthens interdisciplinary communication, improves the quality of records, and contributes to the construction of disciplinary knowledge.

This clinical case does not seek to focus on the medical diagnosis of diabetes mellitus, but rather on the novelty of nursing care applied to an older adult living with this chronic condition, where professional intervention is aimed at enhancing autonomy, preventing complications, and promoting a healthy lifestyle through educational strategies and continuous support.

Objective of the study: To apply the Nursing Care Process to an older adult with diabetes mellitus, using the NANDA-I, NOC, and NIC taxonomies under Virginia Henderson's conceptual model, with the aim of developing a comprehensive, humanized, and evidence-based care plan that promotes self-care and quality of life for the patient.

## **METHOD**

### **Type of study**

A descriptive clinical case study was conducted using a qualitative and quantitative approach based on the application of the Nursing Care Process. The design allows for the systematic documentation of the assessment, planning, implementation, and evaluation of care, facilitating the identification of altered needs and the effectiveness of interventions.

### **Location and period**

The study was conducted in the Internal Medicine ward of the ISSSTE Columba Rivera Osorio Hospital, Pachuca de Soto, Hidalgo, from June 30 to August 8, 2025.

### **Population and sample**

A 72-year-old adult patient previously diagnosed with type 2 diabetes mellitus and undergoing outpatient follow-up was selected. The patient voluntarily agreed to participate in the study and provided informed consent.

### **Assessment framework**

Virginia Henderson's model (14 basic needs) was used, allowing for a comprehensive assessment of the patient in physical, psychological, social, and spiritual dimensions. The assessment included a clinical interview, physical examination, review of medical records, and functionality and risk scales.

### **Recording system**

A systematized nursing record was used, with NANDA-I 2023-2026 coding for diagnoses, NOC (expected outcomes), and NIC (interventions) updated. Vital signs, capillary blood glucose levels, self-care habits, level of functional independence, and adherence to treatment were documented.

### **Information processing and analysis**

Qualitative data were analyzed using thematic analysis of altered needs and self-care patterns. Quantitative data (blood glucose levels, blood pressure, functional scores) were analyzed descriptively using mean, range, and frequency. Integration allowed us to identify risk patterns and prioritize nursing diagnoses.

## **DEVELOPMENT**

### **Nursing assessment**

The comprehensive assessment identified multiple altered needs according to Henderson: inadequate nutrition, limited mobility, risk of hypoglycemia, knowledge deficit about diabetes management, social isolation, and anxiety related to chronic disease. The assessment was systematic, using validated tools, direct observation, structured interviews, and review of clinical indicators.

**Table 1.** Outline of the five phases of the Nursing Care Process applied to the case

Phase	Content
Assessment	Identification of basic needs according to Henderson; vital signs; interview; physical examination.
Diagnosis	NANDA-I diagnoses identified; prioritization of needs.
Planning	Selection of expected outcomes (NOC); choice of interventions (NIC).
Implementation	Implementation of NIC activities; education; supervision and support for self-care.
Evaluation	Measurement of results; adjustment of the plan; feedback to the patient and family.

**Nursing Diagnoses (NANDA), domains and classes, outcomes (NOC), and interventions (NIC)****Table 2.** Nursing diagnoses (NANDA), domains and classes, outcomes (NOC), and interventions (NIC)

N A N D A code	Nursing Diagnosis	NANDA domain	NANDA Class	NOC Code	Expected Outcome (NOC)	NIC Code	Interventions (NIC)	Main activities
00078	Ineffective management of therapeutic regimen.	1: Health promotion.	1.2 Knowledge.	1607	Blood glucose control.	1120	Health education.	Teach signs and symptoms of hypoglycemia; review insulin technique; healthy habits.
00004	Risk of unstable blood glucose levels.	11: Safety/ security.	11.2 Risk of injury.	1607	Blood glucose monitoring.	4180	Medication management.	Monitor medication; record blood glucose levels; alert for adverse effects.
00136	Lack of knowledge about chronic disease.	1: Health promotion.	1.2 Knowledge.	1801	Knowledge: therapeutic regimen.	1120	Health education.	Training in diet, exercise, and self-management.
00054	Decreased activity/ exercise pattern.	4: Activity/ rest.	4.2 Physical mobility.	1302	Self-care: activities of daily living.	0200	Support for self-care.	Assist with hygiene, feeding, and mobility; encourage independence.

## DISCUSSION

The results coincide with recent studies by González et al. in 2022 and Siverio-Díaz et al.<sup>(9)</sup> in 2023 which highlight the importance of comprehensive assessment for the effective management of diabetes in older adults. The implementation of the PAE Nursing Care Process allowed for the identification of clinical and psychosocial risks that are not evident in conventional medical assessment. Comparatively, other studies indicate that care plans focused on education and self-care promote therapeutic adherence and reduce chronic complications. The use of NANDA, NOC, and NIC standardizes documentation and facilitates interdisciplinary communication, strengthening patient safety. Among the limitations is the fact that the study was conducted on a single patient and in a specific hospital setting, which reduces the generalizability of the results. However, the methodology is replicable in community and family contexts, reinforcing the relevance of systematic nursing care.

## CONCLUSIONS

The comprehensive nursing assessment allows for the design of an individualized care plan that responds to the physical, psychological, and social needs of older adults with diabetes mellitus. The application of the Nursing Care Process, using the NANDA, NOC, and NIC taxonomies, facilitates the identification of risks, education for self-care, and improved therapeutic adherence. The integration of the family and community into care strengthens patient autonomy and optimizes quality of life, constituting a replicable model for other older adults with chronic diseases. The results highlight the relevance of systematic, humanized, and evidence-based care, contributing practical and scientific knowledge to the discipline of nursing.

## REFERENCES

1. OMS. Informe mundial sobre el envejecimiento y la salud. Ginebra: Organización Mundial de la Salud; 2023.
2. Carpenito LJ. Manual de diagnósticos de enfermería. 16.<sup>a</sup> ed. Filadelfia: Wolters Kluwer; 2021.
3. Fernández M, Rodríguez L. Cuidado integral de enfermería en el adulto mayor con enfermedades crónicas. *Rev Iberoam Enferm Comunitaria*. 2022;15(2):54-63.
4. Marriner-Tomey A, Raile Alligood M. Modelos y teorías en enfermería. 9.<sup>a</sup> ed. Madrid: Elsevier; 2020.
5. Jiménez R, Pérez A, Morales F. Factores que influyen en la adherencia terapéutica en adultos mayores con diabetes mellitus tipo 2. *Enferm Glob*. 2021;20(2):178-190.
6. Torres G, López D, Hernández C. Rol de la familia en el manejo del adulto mayor con enfermedades crónicas. *Rev Cub Enferm*. 2023;39(1):112-124.
7. OPS. Estrategia de atención primaria de salud renovada. Washington D.C.: Organización Panamericana de la Salud; 2022.
8. Bulechek GM, Butcher HK, Dochterman JM, Wagner CM. Clasificación de intervenciones de enfermería (NIC). 8.<sup>a</sup> ed. Madrid: Elsevier; 2022.
9. Siverio-Díaz AR, Bellahmar-Lkadi S. Plan de cuidados de enfermería desarrollado con la teoría de rango medio de autocuidado de las enfermedades crónicas. *Ene*. 2023;17(2):2429. Disponible en: [http://scielo.isciii.es/scielo.php?script=sci\\_arttext&pid=S1988-348X2023000200008&lng=es](http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1988-348X2023000200008&lng=es)

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

## FUNDING

The authors did not receive funding for the development of this research.

## AUTHOR CONTRIBUTIONS

*Conceptualization:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Data curation:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Formal analysis:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda

García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Research:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Methodology:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Resources:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Software:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Supervision:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Validation:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Presentation:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Project administration:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Writing - original draft:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.

*Proofreading and editing:* Adriana Callejas Trejo, Yuridia Itzel Tellez Villanueva, Angelica Ángeles Uribe, Esmeralda García Jiménez, Citlali Hernández Martínez, Itzel Guadalupe Gaspar Manríquez, Michel Oria Saavedra.