

ACCURACY OF NURSING INTERVENTIONS FOR PATIENTS WITH TYPE 2 *DIABETES MELLITUS* IN OUTPATIENT CONSULTATION^a

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ABSTRACT

The objective of this study was to identify the accuracy of nursing interventions from the nursing diagnoses (ND) of patients who consulted in the Program for Diabetes Education, in outpatient care of the university hospital, relating them with sociodemographic characteristics and comorbidities. It was a cross-sectional study of 136 patients with type 2 *diabetes mellitus* (DM2), with 77 (57%) women, with an average age of 66±9.38 years, and the presence of comorbidities in 97 (71%), and using medications. A significant association was found between the NDs and the most frequently prescribed interventions: “nutritional counseling” (n=99; 73%), “promotion of exercise” (n=64; 47%) and “teaching: feet care (n=48; 35%); however, not with the sociodemographic characteristics or comorbidities. The interventions most prescribed in nursing consultations showed ND accuracy for the domains of Promotion of Health and Nutrition, which are related to the principles of treatment for DM2: healthy eating, physical exercise and health education.

Descriptors: *Diabetes mellitus*. Nursing care. Nursing diagnoses.

RESUMO

O objetivo do trabalho foi identificar a acurácia das intervenções de enfermagem a partir dos diagnósticos de enfermagem (DE) de pacientes que consultaram no Programa de Educação em Diabetes, em ambulatório de hospital universitário, relacionando-os com as características sociodemográficas e as comorbidades. Trata-se de um estudo transversal de 136 pacientes com DM tipo 2 (DM2), sendo 77 (57%) mulheres, com média de idade de 66±9,38 anos, presença de comorbidades em 97 (71%) e em uso de medicações. Foi encontrada associação significativa entre os DE e as intervenções mais frequentemente prescritas: “Aconselhamento nutricional” (n = 99; 73%), “Promoção do exercício” (n = 64; 47%) e “Ensino: cuidados com os pés” (n = 48; 35%), porém, não com as características sociodemográficas ou comorbidades. As intervenções de maior ocorrência prescritas em consulta de enfermagem evidenciaram acurácia para os DE nos domínios Promoção da Saúde e Nutrição, que estão relacionados aos princípios do tratamento para DM2: alimentação saudável, exercício físico e educação para a saúde.

Descritores: *Diabetes mellitus*. Cuidados de enfermagem. Diagnósticos de enfermagem.

Título: Acurácia das intervenções de enfermagem para pacientes com diabetes mellitus tipo 2 em consulta ambulatorial.

RESUMEN

El objetivo de este estudio fue identificar la exactitud de intervenciones de enfermería a partir de los diagnósticos de enfermería (DE) de los pacientes que consultaron en el programa de educación para el cuidado de la diabetes en el Hospital General, correlacionándolos con las características demográficas y las comorbidades. Un estudio prospectivo, de corte transversal, con 136 pacientes con diabetes mellitus tipo 2 (DM2), de los cuales 77 (57%) eran mujeres, con 66±9,38 años de edad, presencia de comorbidades y uso de drogas. Fue encontrada asociación significativa entre los DE y las intervenciones prescritas con más frecuencia: “Orientación nutricional” (n=99; 73%), “Promoción del ejercicio” (n= 64; 47%) y “La Enseñanza: Cuidado de los pies” (n= 48; 35%) pero no con las características sociodemográficas o las comorbidades. Las intervenciones más comúnmente prescritas por los enfermeros han demostrado la exactitud con los DE en las áreas de Promoción de la Salud y la Nutrición, que se refieren a los principios de la DM2: alimentación saludable, ejercicio y educación para la salud.

Descriptores: *Diabetes mellitus*. Atención de enfermería. Diagnóstico de enfermería.

Título: Exactitud de las intervenciones de enfermería para pacientes con diabetes mellitus tipo 2 en Consulta Externa.

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INTRODUCTION

Nursing interventions are defined as care based on clinical evaluation and scientific knowledge, performed by the nursing team in order to improve the results obtained by the patient⁽¹⁾. The *Nursing Interventions Classification* (NIC) is a system of nursing interventions classifications, and is related to the diagnosis classification of the *North American Nursing Diagnosis Association – International* (NANDA-I)⁽²⁾. In this way, the definition of the interventions occurs from the establishment of a nursing diagnosis (ND), in a way that classifies the care provided in a standardized language, in order to provide for systematization of the information and nursing assistance. As a consequence, the planning and implementation of the nursing care is individualized, effectively helping to improve the health situation. The interventions can be performed in different care environments, with various methodologies and tools, applied to patients with diverse health problems.

The nursing consultation is a methodology used in the practice of outpatient and community nursing, specifically of nurses,^(3,4) and aims to contribute to the resolution of patients' needs by providing a space for involvement with health and well-being, resulting in the construction of ties that facilitate behavior and/or lifestyle changes by the patients⁽⁵⁾. In this way, the nursing consultation can be a way to provide comprehensive care to patients with *Diabetes Mellitus* (DM)^(3,4).

DM is a complex metabolic syndrome characterized by persistent hyperglycemia, a result of defects in the secretion and/or action of insulin. The most frequent form of DM is type 2 (DM), encompassing approximately 90% of cases⁽⁶⁾. In the long term, the consequences of DM2 include dysfunction and failure of various organs, especially the kidneys, eyes, nerves, heart and blood vessels. The impact of DM2 is substantial, diminishing the physical, social and economic well-being of the patients.⁽⁷⁾

The prevalence of DM2 has been increasing in the past few decades among both men and women of all races and ethnic groups, though predominately among non-caucasians. The World Health Organization estimates that by 2025, 300 million people will have DM2, and the number of deaths per year attributed to the diseases is

approximately 4 million, accounting for 9% of the global total⁽⁸⁾. In Brazil, the prevalence of DM2 is 7.6 percent in the urban population between the ages of 30 and 69, equally distributed among men and women, being a frequent disease in all regions, independent of climate, ethnicities, food habits and socioeconomic level⁽⁹⁾. According to the Brazilian Ministry of Health, DM2 had a mortality rate of 4.67% in 2010, and represents more than 60% of hospitalizations for endocrine and metabolic diseases, resulting in more than R\$ 5 billion per year in hospital service costs⁽¹⁰⁾.

Uncontrolled metabolism in DM2 is multifactorial, since many events appear concomitantly in patients, and are usually associated with other illnesses such as: systemic arterial hypertension (SAH) and dyslipidemia. The estimated risk of DM2 caused by obesity is 75 percent.^(7,11) Thus, treating DM2 as a chronic disease that is generally associated with comorbidities that significantly compromise quality of life, makes special attention to health education necessary in regard to the disease, its symptoms and treatment. The education of diabetes is an essential tool in treating patients with this chronic pathology.⁽¹²⁾

Education for self-care for the patient with DM2 consists of a process of teaching about management of the disease and a focus on nursing consultation.⁽³⁻⁵⁾ The objectives of education on DM2 are: implement metabolic control, prevent acute and chronic complications, and provide quality of life with lower costs⁽¹³⁾.

This study sought to identify the accuracy of nursing interventions based on the nursing diagnoses (ND) of patients that consulted in the Program for Education on *Diabetes Mellitus* (DM) in outpatient care of the general hospital, and relate them to the socio-demographic characteristics and clinical comorbidities.

METHOD

This is a cross-sectional study connected to a project that identified the NDs in outpatient nursing consultation of a general hospital. The focus of this study is the nursing interventions defined from the NDs. The study was approved by the Research Ethics Committee of the Porto Alegre University Hospital – *Hospital de Clínicas de Porto Alegre* (HCPA, nº 08-305) and by the Research

Committee of the Nursing School at Universidade Federal do Rio Grande do Sul [Federal University of Rio Grande do Sul] (UFRGS). The authors signed the agreement for use of the data.

Sample

The population of the study included patients diagnosed with DM2 who were seen in nursing consultation from October to November of 2008. Patients with reduced tolerance to glucose were excluded. The nursing consultations were done by nurses in the program for education on DM2, in an office, lasting about 30 minutes and registered in a computerized medical records system. The patients were evaluated through anamnesis and a physical exam that includes: subjective aspects, statements by the patients and/or informal caretakers; and the objectives, collected through a physical exam and from the results of the laboratory exams. After the service was performed, the NDs were defined according to the NANDA-I⁽²⁾ taxonomy along with the nursing interventions from the NIC⁽¹⁾ classification⁽¹⁾.

The data was collected from the computerized record after the consultation. A protocol was developed to standardize the collection of the socio-demographic variables, clinical comorbidities, diagnoses and nursing interventions.

Data analysis

The descriptive characteristics are presented as average and standard deviation (SD) for the continuous variables, and as relative and absolute frequencies for the categorical variables. To verify the associations between the nursing interventions with the socio-demographic variables, clinical comorbidities and NDs, the chi-squared distribution and Student's t-tests were used. The significance level adopted was $p < 0.05$, and the program *Statistical Package for Social Sciences* (SPSS), version 16.0 was used.

RESULTS

One hundred and thirty-six patients with DM2 were included in the study, 77 (57%) of which were women, with an average (standard deviation) age of 66 (± 9.38) years, with education level being

7 (± 3.63) years of school (the minimum was 0 and the maximum 17). The following comorbidities predominated in the sample: systemic arterial hypertension in 97 (71%), obesity in 54 (40%) and dyslipidemia in 36 (26%). The majority regularly used at least one type of medication ($n=131$; 96%) including, among others: oral antidiabetics by 96 (71%) patients; insulin by 58 (43%) patients; hypolipidemic agents by 61 (45%) patients; and at least 85 (62%) used a type of anti-hypertension drug.

Eleven NDs were identified with a frequency higher than 3% (Table 1). The average was 1.5 (minimum 1 and maximum 3) NDs for each patient during the consultation.

The average number of nursing interventions was 2.3 (minimum of 1, maximum of 5) per patient in the consultation. In Table 2, the interventions prescribed from the most frequent NDs are described. The intervention most frequently prescribed, "nutritional counseling," was significantly associated to the NDs: "Inefficient therapeutic regime management ($p=0.011$); "Imbalanced nutrition: more than body requirements ($p=0.002$) and "Risk-prone health behavior" ($p=0.007$). The intervention "Promotion of exercise," was associated to the ND "Readiness for enhanced therapeutic regime management," ($p=0.030$).

Other interventions significantly associated with the NDs were: "Teaching: feet care" and "Imbalanced nutrition: more than body requirements," ($p=0.045$), "Hypoglycemia and hyperglycemia management," and "Ineffective therapeutic regime management" ($p=0.014$) (Table 2).

No significant association was found between the socio-demographic data and the clinical comorbidities with the five most frequently prescribed nursing interventions (Table 3).

DISCUSSION

According to some Brazilian studies, the socio-demographic data and comorbidities of the patients with DM2 from this research are similar in regard to average age, predominance of women, prevalence of comorbidities and use of at least one type of medication.^(3,4,12,14)

In the nursing consultations, the most frequent NDs were those of the "Health Promotion" domain, whose focus on care is the maintenance of metabolic control with emphasis on health education.

Table 1 – Frequency of domains and Nursing Diagnoses. Porto Alegre, RS, 2013.

Domain	Nursing Diagnosis	n(%)
Health Promotion		103(76)
	Inefficient therapeutic regimen management	62(46)
	Readiness for enhanced self-health management	16(12)
	Risk-prone health behavior	13(10)
	Effective therapeutic regimen management	12(9)
Nutrition		24(18)
	Imbalanced nutrition: more than body requirements	20(15)
	Risk for unstable blood glucose levels	4(3)
Perception/Cognition		13(10)
	Acute pain	8(6)
	Deficient knowledge	5(4)
Stress Tolerance		5(4)
	Anxiety	5(4)
Security/Protection		12(9)
	Impaired tissue integrity	8(6)
	Risk for infection	4(3)

Note: Nursing diagnoses with frequency less than 3 percent were not described.

Source: Scain, SF et al. Acurácia das intervenções de enfermagem para pacientes com *Diabetes Mellitus* em consulta ambulatorial. [Accuracy of nursing interventions for patients with type 2 *Diabetes Mellitus* in outpatient consultation]. Rev Gaúcha Enferm, 2013

Yet in patients hospitalized with the same pathology, the NDs were in the “Safety/Protection” domain⁽¹⁵⁾. The primordial objective of the ND treatment is metabolic stabilization, therefore, this difference can be explained, since the hospitalized patients are in the acute phase of imbalance, with an increased risk of aggravation of the disease, while in the stabilization phase, in which the risk is relative, the patients may be treated as outpatients, which justifies the predominance of the Health Promotion domain.

In the nursing consultation, the interventions prescribed were defined based on the needs of the patients, independent of demographic characteristics or clinical comorbidities. That is, the nursing interventions were determined according to the NDs and directed to the metabolic control of the DM, concurring with a previous study on the development of a protocol for the systematic monitoring of patients with DM in nursing consultation⁽¹⁶⁾.

However, the interventions for comorbidities common to DM2 are practically the same. The intervention “Nutritional Counseling” is significantly associated to the NDs: Ineffective therapeutic regimen management, Imbalanced nutrition: more than body requirements, and Risk-prone health behavior, demonstrating the difficulty of the majority of the patients in adhering to a proper, continuous diet to balance their health. Weight loss is an important therapeutic objective for people with DM2. Obesity is the principal risk factor for the appearance of DM2, as well as its effects on the uncontrolled metabolism over time, due to the effects of obesity, especially abdominal, on resistance to the action of the insulin.⁽¹⁷⁾

Furthermore, an association was verified between the ND “Readiness for enhanced therapeutic regimen management” with the intervention “Promotion of exercise.” Possibly, when the patient understands the importance of dietary control and physical exercise, s/he applies what s/he was

Table 2 – Association between nursing diagnoses and interventions in outpatient consultation. Porto Alegre, RS, 2013

Nursing Diagnosis	Total n(%)	Nursing Interventions				
		Nutritional Counseling	Exercise Promotion	Teaching: Feet care	Control of hypoglycemia & hyperglycemia	Teaching: Prescribed medicines
		99(73)	64(47)	48(35)	32(23)	24(18)
Ineffective therapeutic regimen management	62(46)	52(84)**	34(55)	22(35)	21(34)**	12(19)
Imbalanced nutrition: more than body requirements	20(15)	20(100)**	11(55)	3(15)**	3(15)	3(15)
Readiness for enhanced therapeutic regimen management	16(12)	15(94)	12(75)**	4(25)	3(19)	4(24)
Risk-prone health behavior	13(10)	5(38)**	5(38)	8(61)	4(31)	3(23)
Effective therapeutic regime management	12(9)	9(75)	6(50)	3(25)	---	3(25)

* Exact Fisher's Test (Chi-square)

** $p < 0.05$ Source: Scain, SF et al. Acurácia das intervenções de enfermagem para pacientes com *Diabetes Mellitus* em consulta ambulatorial. [Accuracy of nursing interventions for patients with type 2 *Diabetes Mellitus* in outpatient consultation]. Rev Gaúcha Enferm, 2013

encouraged to do, resulting in a positive response in control of his or her health⁽¹⁸⁾. The moderate loss of 5 to 9 Kg of the initial weight is associated with the loss of resistance to insulin, improvement of blood glucose levels, dyslipidemia and the reduction of blood pressure^(17,18).

Physical exercise is very important in the control blood glucose levels of individuals with DM2, whether they are treated with insulin or not, thereby reducing blood glucose levels and glycated hemoglobin. Regular physical exercises can also reduce the risk of intolerance to glucose from the surge of the DM2 by 50%, in addition to risks of coronary artery disease⁽¹⁷⁻¹⁹⁾. The emphasis on care of diet and physical exercise is supported in the principles of the treatment of the disease, avoiding the imbalance of blood glucose levels (hypo/hyperglycemia)⁽¹⁹⁾. In this study, the intervention "Control of hypoglycemia and hyperglycemia" is significantly associated to the ND "Ineffective therapeutic regimen management."

Intensive control of DM2 is capable of reducing and delaying the chronic complications from the disease⁽¹⁹⁾. Therefore, the actions that lead to achieving an effective control of DM2 and associated

diseases are not limited to one factor. Thus, when the imbalance of blood glucose levels is associated with an inadequate diet, during the consultation the nurse assists the patient to relate this imbalance (of blood glucose levels) to the consequences to his or her health that, over time, aggravate the complications from DM2, as for example changes to the feet^(12,19).

Previous studies have shown that work by nurses on treating patients with DM2 by focusing on health education was significantly associated to blood glucose management^(3,12). The first study demonstrated that the patients seen individually in outpatient consultation showed significant improvement of glycated hemoglobin compared to the patients that were not referred to consultation with a nurse educator⁽³⁾. The other study, a randomized clinical trial done with a group of patients in outpatient care with DM2 who were not using insulin, showed that a structured educational program contributed significantly to blood glucose management⁽¹²⁾.

The nursing interventions to patients with DM2 are extensive and justified due to the complexity of the disease. Orientations are initiated

Table 3 – Association between nursing interventions and socio-demographic characteristics and clinical comorbidities. Porto Alegre, RS 2013.

Variables	Total	Nursing Interventions				
		Nutritional Counseling	Promotion of exercise	Teaching: Feet care	Control of hypoglycemia/hyperglycemia	Teaching: prescribed medicines
		99(73)	64(47)	48(35)	32(23)	24(18)
Socio-demographics						
Gender*						
Male	59(43)	41(30)	0(22)	25(18)	15(11)	2(9)
Female	77(57)	58(43)	34(25)	23(17)	17(13)	12(9)
Age**	66±9.38	65.2±9.2	64.3±9.3	66. ±7,0	64.5±8,8	64.9±8.5
Education Level**	7±3.63	7.2±3.5	7.1±3.4	6.4±3.8	6,3±3.6	6.9±3.5
Clinical comorbidities						
SAH*	97(71)	73(75)	45(46)	35(36)	22(23)	17(18)
Obesity*	54(40)	44(82)	27(50)	16(30)	14(26)	9(17)
Dyslipidemia*	36(26)	27(75)	17(47)	10(28)	5(14)	8(22)

* Categorical variables presented as absolute and relative frequency (%) and analyzed with the Fisher's Exact Test.

** Continuous variables presented as average and standard deviation and analyzed with the Student's t Test. **p<0.05**

Source: Scain, SF et al. Acurácia das intervenções de enfermagem para pacientes com *Diabetes Mellitus* em consulta ambulatorial. [*Accuracy of nursing interventions for patients with type 2 Diabetes Mellitus in outpatient consultation*]. Rev Gaúcha Enferm, 2013

based on the needs of the patients. For example, in the first consultation, they can be oriented regarding the principles of the treatment of DM2 and critical care about insulin therapy and hypoglycemia, hyperglycemia or about the significant of the insensitivity of lower members, among other issues. The importance of changes to lifestyle is essential for the patient's glycemic and metabolic control, and may result in a reduction of hospitalizations and morbidities^(19,20).

CONCLUSIONS

The interventions most commonly prescribed in consultation by the nurses that take care of patients with DM2 at the outpatient level showed accuracy for the NDs in the "Health Promotion" and "Nutrition domains." These domains are related to principles essential for the treatment of DM2: healthy diet, physical exercise, correct use of medication and health education.

The implementation of care, based on the priority NDs, can be a tool to assist the metabolic control of patients in the maintenance phase of DM2 in outpatient care. However, further studies

to verify the results of the nursing interventions in consultation are necessary.

REFERENCES

- 1 McCloskey J, Bulechek GM. Classificação das intervenções de enfermagem (NIC). 4ª ed. Porto Alegre: Artmed; 2008.
- 2 North American Nursing Association. Diagnósticos de enfermagem da North American Nursing Association International (NANDA): definições e classificação 2011-2013. Porto Alegre: Artmed; 2011.
- 3 Scain SF, Santos BL, Friedman R, Gross JL. Type 2 diabetic patients attending a nurse educator have improved metabolic control. *Diabetes Res Clin Pract.* 2007;77:399-404.
- 4 Grillo MFF, Gorini MIPC. Caracterização de pessoas com Diabetes Mellitus tipo 2. *Rev Bras Enferm.* 2007;60(1):49-54.
- 5 Franzen E, Agnes MB, Bercini RR, Schneider SMB, Scain SF. Cuidando de pacientes portadores de diabetes. In: Tasca AM, Santos BRL, Paskulin LMG, Zachia

- SA. Cuidado Ambulatorial: consulta de enfermagem e grupos. Rio de Janeiro: EPU; 2006. p. 157-81.
- 6 American Diabetes Association (ADA). Report of the expert committee on the diagnosis and classification of diabetes mellitus. *Diabetes Care.* 2003;26(1):5-20.
 - 7 Ministério da Saúde (BR). Cuidado integral de doenças crônicas não transmissíveis da Política Nacional de Ação Integral à Hipertensão Arterial e Diabetes Mellitus. Brasília; 2007.
 - 8 Danaei G, Finucane MM, Lu Y, Singh GM, Cowan MJ, Paciorek CJ, et al. National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2-7 million participants. *Lancet* 2011;378(9785):31-40.
 - 9 Malerbi DA, Franco LJ. Multicenter study of the prevalence of diabetes mellitus and impaired glucose tolerance in the urban Brazilian population age 30-69 years. *Diabetes Care.* 1992;15(11):1509-16.
 - 10 Ministério da Saúde (BR), Secretaria de Vigilância em Saúde. Sistema de informações sobre mortalidade [Internet]. [2011] [atualizado 2011 Out 10, citado 2011 Out 10]. Disponível em: www.datasus.gov.br.
 - 11 Mayers-Davis EJ, Costacou T. Obesity and sedentary lifestyle: modifiable risk factors for prevention of type 2 diabetes. *Curr Diab Rep.* 2001;1(2):170-6.
 - 12 Scain SF, Friedman R, Gross JL. A structural educational program improves metabolic control in patients with type 2 diabetes. *Diabetes Educ.* 2009;35(4):603-11.
 - 13 Otero LM, Zanetti, ML, Ogrizio MD. Knowledge of diabetic patients about their disease before and after implementing a diabetes education program. *Rev Latinoam Enferm.* 2008;2(16):231-237.
 - 14 Guimarães, FPM, Takayanagui, AMM. Orientações recebidas do serviço de saúde por pacientes para o tratamento do portador de diabetes mellitus tipo 2. *Rev Nutr* 2002;15(1):37-44.
 - 15 Becker TAC, Teixeira CRS, Zanetti ML. Diagnósticos de enfermagem em pacientes diabéticos em uso de insulina. *Rev Bras Enferm.* 2008;61(6):847-852.
 - 16 Curcio R, Lima MHM, Torres HC. Protocolo para consulta de enfermagem: assistência a pacientes com diabetes mellitus tipo 2 em insulino terapia. *Rev Gaúcha Enferm.* 2009;30(3):552-7.
 - 17 American Diabetes Association (ADA). Standards of medical care in diabetes. *Diabetes Care.* 2010;33(Suppl 1):S11-S61.
 - 18 Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica (ABESO). Diretrizes Brasileiras de Obesidade da Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica. São Paulo: Mazza; 2009.
 - 19 Knowlton WC, Barrott-Connor E, Fowlor SE. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med.* 2002;346(6):393-403.
 - 20 Pace, AE, Foss, MC, Ochoa-Vigo K, Hayashida, M. O conhecimento sobre diabetes mellitus no processo do autocuidado. *Rev Latinoam Enferm.* 2006;14(5):2006.

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