NURSING IN FRONT OF THE HOSPITALIZED SMOKING PATIENT: DIAGNOSIS AND INTERVENTIONS ESTABLISHED IN CLINICAL PRACTICE

A enfermagem frente ao paciente tabagista hospitalizado: diagnósticos e intervenções estabelecidos na prática clínica

Enfermería frente al paciente fumador hospitalizado: diagnóstico e intervenciones establecidas en la práctica clínica

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ABSTRACT

Objective: To identify nursing diagnoses and interventions established for hospitalized smoking patients. **Methods:** cross-sectional study carried out in a Brazilian university hospital between August and September/2017 by bedside interviews, consultations on medical records and queries extracted from the institution's computerized system. **Results:** 69 smoking patients participated and 41 different nursing diagnoses were identified, with a median of four (interquartile range: 3;6) per patient. The prescribed interventions totaled 237, with a median of 18.5 (interquartile range: 10.5;28.25) per prescription. Four patients' diagnosis had etiology related to substance abuse and 17 nursing interventions were prescribed for these. In 33(48%) anamneses it was reported that the patient was a smoker and, of these, nine(13%) had the smoking time and number of cigarettes consumed daily. **Conclusion:** the prevalence of hospitalized smokers is significant, however, anamneses, diagnoses and nursing interventions don't portray this reality, with the need to raise awareness and train the team.

Descriptors: Tobacco use disorder, Nursing care, Nursing records, Smoking cessation, Hospitalization.

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RESUMO

Objetivo: Identificar diagnósticos e intervenções de enfermagem estabelecidos para pacientes tabagistas hospitalizados. **Métodos:** estudo transversal realizado em hospital universitário brasileiro entre agosto e setembro/2017 com entrevistas à beira do leito, consultas ao prontuário e *query* extraída do sistema informatizado da instituição. **Resultados:** participaram 69 pacientes tabagistas, para os quais identificaram-se 41 diagnósticos de enfermagem distintos, com mediana de quatro (intervalo interquartil: 3;6) por paciente. As intervenções prescritas totalizaram 237, com mediana de 18,5 (intervalo interquartil: 10,5;28,25) por prescrição. Quatro pacientes possuíam diagnóstico com etiologia relacionada ao abuso de substância e para esses foram prescritas 17 intervenções de enfermagem. Em 33(48%) anamneses constava que o paciente era tabagista e, destes, nove(27%) havia o tempo de fumo e número de cigarros consumidos diariamente. **Conclusão:** a prevalência de tabagistas hospitalizados é expressiva, entretanto, as anamneses, os diagnósticos e intervenções de enfermagem não retratam esta realidade, havendo necessidade de sensibilizar e capacitar a equipe.

Descritores: Tabagismo, Assistência de enfermagem, Registros de enfermagem, Abandono do hábito de fumar, Hospitalização.

RESUMEN

Objetivo: Identificar diagnósticos e intervenciones de enfermería establecidos para los pacientes que fuman hospitalizados. **Métodos:** estudio transversal realizado em hospital universitario brasileño entre agosto y septiembre/2017 con entrevistas de cabecera e consultas en registros médicos del sistema computarizado de institución. **Resultados:** participaron 69 pacientes fumadores, para quienes se identificaron 41 diagnósticos de enfermería diferentes, con mediana de cuatro(rango intercuartil: 3;6) por paciente. Las intervenciones prescritas totalizaron 237, con mediana de 18.5(rango intercuartil: 10.5;28.25) por receta. Cuatro pacientes tuvieron diagnóstico con etiología relacionada con abuso de sustancias y se prescribieron 17 intervenciones de enfermería para estos. En 33(48%) anamnesis se informó que el paciente era fumador, de estos, nueve(13%) tenían el tiempo de fumar y cantidad de cigarrillos consumidos diariamente. **Conclusión:** la prevalencia de fumadores hospitalizados es significativa, sin embargo, las anamnesias, diagnósticos y intervenciones de enfermería no reflejan esta realidad, con la necesidad de crear conciencia y capacitar al equipo.

Descriptores: Tabaquismo, Atención de enfermería, Registros de enfermería, Cese del hábito de fumar, Hospitalización.

INTRODUCTION

Smoking is a chronic disease characterized by nicotine addiction and inhalation of smoke derived from tobacco combustion. About one-third of the world's adult population is smokers and their consumption is directly related to more than 50 types of pathologies, being considered the leading cause of avoidable death in the world.[1]

In Brazil, more than R$ 23.37 billion is spent annually on tobacco-related diseases, including medical expenses and indirect costs related to the payment of benefits for incapacitation of workers.[2] About 10% of the Brazilian population uses tobacco, with Porto Alegre being the capital with the highest prevalence rate (14.4%), followed by São Paulo (12.5%) and Curitiba (11.4%).[3-4]

A recent study identified that smoking is directly related to increased risk of hospital admissions for chronic diseases in the elderly, such as diabetes, chronic obstructive pulmonary disease and heart failure. It also points out that stopping smoking, even in old age, reduces the risk of hospitalizations.[5]

In this perspective, the health team, especially nursing, has an essential role to promote changes in patient behavior in relation to tobacco consumption and to obtain success in treatment. There are also educational tools and validated therapeutic guidelines that point out actions that should be carried out by health professionals with hospitalized smoking patients. Among them, the identification and registration of the tobacco load, the degree of dependence on nicotine, the motivational internship and the provision of hospitality and counseling on smoking cessation, as well as its association with the patient's current health status can be mentioned.[6]

In clinical practice, nurses perform anamnesis and physical examinations to later diagnose, plan, implement interventions, and evaluate results, stages of the Processo de Enfermagem (PE).[7] To do this, nurses can rely on standardized language systems that guide, organize, and classify the elements of their practice, contributing to the care and promotion of patient health. In this scenario, the NANDA International (NANDA-I) Diagnostic Nursing Interventions Classification (NIC), with its developments in activities and the results of the Nursing Outcomes Classification (NOC) stand out.[8-10]

Addressing smoking during hospitalization and associating it with the reason for admission may mobilize patients to reflect on cessation, which reinforces the importance of the care team to guide on this important public health problem.[11] Additionally, there are specific diagnoses and nursing interventions for the care of these patients, however, there is still a gap in knowledge regarding what nurses are effectively establishing in clinical practice.[8-9] Thus, this research aims to answer the following question: "What are the diagnoses and nursing care implemented in clinical practice for smokers admitted to a university hospital?

In view of the above, the objective of this study was to identify diagnoses and nursing interventions established for hospitalized smoking patients. Its accomplishment is justified due to the specificity of the care required by smokers patients during hospitalization as well as in the process of smoking cessation. In this sense, it is believed that knowing the profile and prevalence of nursing diagnoses is relevant to the clinical practice of nursing and necessary for the production of scientific evidence, as well as for the advancement of proper knowledge of the area, since it allows a better understanding of this problem in order to intervene effectively.

METHODS

Type of study

This is a quantitative, cross-sectional, and descriptive study conducted from August to September 2017 in a Brazilian university hospital with large multiple care, which mainly serves patients referred by the Unified Health System (SUS). In this institution, the records referring to the stages of the PE are made in computerized records. The DE available in the system of the institution are similar to those presented by the taxonomy of NANDA-I and the interventions of nursing are based on the activities proposed by the NIC, being responsible to the clinical judgment of the nurse to carry out a prescription according to the needs identified in its patients.[8-9]

Population and sample

The population was composed of adult patients admitted to the institution's hospitalization units. Patients aged 18 years or older, admitted to clinical, surgical or intensive care units, active smokers or those in abstinence for a period of less than six months were included in the sample. The exclusion criteria were inability to answer the researchers' questions and absence in bed until the second attempt of collection.

The sample calculation to evaluate the prevalence of hospitalized smokers considered studies performed in other hospitals, in which the prevalence of hospitalized smokers was 20%.[12-13] Therefore, a sample of 77 smokers was estimated.

Data Collection

Data collection began with the daily printing of the list of patients admitted to the study units, since the aim was to identify all patients who were smokers. The list also aimed at identifying new hospitalizations and discarding readmissions of patients who already belonged to the sample. Patients who had used tobacco until the moment of hospitalization or were without smoking for less than six months were considered smokers and invited to participate in the study.

The instrument for data collection was prepared by the researchers and contained sociodemographic aspects (gender, ethnicity, age, marital status, income, occupation) and clinical aspects (reason and length of stay, comorbidities and smoking load) of these patients. The data were collected at the bedside and by consulting the electronic record. The anamneses were also evaluated, since the ECs are listed from this data. The information regarding the diagnoses and nursing interventions prescribed for the patients were extracted through a query obtained from the institution's computerized system, which has the necessary tools for the compilation and organization of this data.

Data analysis and processing

The information collected was typed and coded in Microsoft Excel® database, and later analyzed through descriptive statistics by Statistical Package for the Social Sciences (SPSS) version 23.0. For categorical variables absolute frequencies and percentages were used, and for continuous variables mean and standard deviation (SD) or medians and interquartile range (IIQ).

Aspectos éticos

The project was approved by the institution's Research Ethics Committee under CAAE 64475916700005327 on March 10, 2017 and followed the ethical recommendations of the National Health Council, according to resolution 466/12.[14] All participants signed the Free and Informed Consent Term and researchers signed the Commitment Term for the Use of Institutional Data.

RESULTS

For data collection, 414 patients in the study units were approached, of which 69 (16.7%) reported to be smokers and constituted the sample of this study. In its majority were male 38 (55%), white 51 (74%), married 36 (52%), with average age of 53.9 (+12.3) years, with complete or incomplete elementary school 36 (52%), with monthly gain below two minimum wages 23 (33%) and only 31 (45%) were professionally active. In relation to the tobaccoism, the average smoking time was 39 (+12,8) years, with an average consumption of 20 (15 - 30) cigarettes per day and a high degree of dependence to the nicotine 20 (29%). The most frequent clinical comorbidities were hypertension 25 (36%) patients, followed by diabetes mellitus 13 (19%) patients and chronic obstructive pulmonary disease 11 (16%) of the subjects.

The hospitalizations of these patients were recurrent for neoplasms in 17 (25%), acute myocardial infarction in nine (13%), chronic obstructive pulmonary disease exacerbated in three (4%), stroke in three (4%) and decompensated heart failure in two (3%) patients. The median length of stay was 12 (8-23.5) days.

In relation to the nursing records of the anamnesis, in only 33 (48%) there was the information of the smoking status of the patient and, considering these records, in nine (27%) there was the smoking time and the number of cigarettes consumed per day. Twenty-eight (39%) patients were smokers, but did not have the record in their anamneses, three (4%) had denied at the time of admission that they were smokers and five (7%) reported to be smokers in abstinence, but had stopped smoking less than six months ago.

We analyzed the implemented DEs and their respective risk factors for the patients included. A total of 41 different DEs were identified, which were listed 324 times, and the number of DEs per patient had a median of four (3-6). The DEs that prevailed and risk related factors are presented in **Table 1**.

Table 1 - Nursing diagnoses established for hospitalized smoking patients. *Porto Alegre*, RS, Brazil, 2017

Diagnóstico de Enfermagem	N (%)	Fator relacionado/de risco	N (%)
Risco de infecção	52 (75)	- Procedimento invasivo	47 (90)
		- Exposição ambiental a patógenos aumentada	3 (6)
		- Imunossupressão	1 (2)
		- Ruptura das barreiras naturais	1 (2)
Dor aguda	35 (51)	- Trauma	19 (54)
		- Evolução da doença	9 (26)
		- Alteração vascular	4 (11)
		- Agentes lesivos: biológicos, químicos, físicos e psicológicos	3 (9)
Integridade tissular prejudicada	34 (49)	- Trauma mecânico	33 (97)
		- Processo infeccioso	1 (3)
Risco de quedas	32 (46)	- Mobilidade prejudicada	15 (47)
		- Condições ambientais	8 (25)
		- Alterações neurológicas	5 (15)
		- Alterações fisiológicas	4 (13)
Risco de lesão pelo posicionamento perioperatório	24 (35)	- Vulnerabilidade situacional	24 (100)
Conforto prejudicado	10 (14)	- Sintomas da doença	9 (90)
		- Pós-operatório	1 (10)
Déficit no autocuidado: banho e/ou higiene	10 (14)	- Terapias restritivas	7 (70)
		- Evolução da doença	2 (20)
		- Prejuízo neuromuscular/ musculoesquelético	1 (10)
Risco de integridade da pele prejudicada	9 (13)	- Fatores mecânicos	9 (100)
Perfusão tissular ineficaz: cardiopulmonar	8 (12)	- Comprometimento do fluxo sanguíneo	8 (100)
Risco de resposta alérgica	7 (10)	- Alérgeno	5 (72)
		- História de alergia e/ou múltiplos procedimentos	2 (28)
Risco de sangramento	7 (10)	- Trauma mecânico	3 (43)
		- Efeitos adversos da terapia	2 (29)
		- Distúrbios hematológicos	1 (14)
		- Alteração vascular	1 (14)
Padrão respiratório ineficaz	7 (10)	- Prejuízo neuromuscular/ musculoesquelético	2 (29)
		- Processo infeccioso de vias aéreas	2 (29)
		- Fadiga	1 (14)
		- Dor	1 (14)
		- Trauma	1 (14)

Other EFs were also established on a smaller scale: Risk of ineffective tissue perfusion, impaired gas exchange, unbalanced nutrition: less than body needs, self-care deficit syndrome, decreased cardiac output, ineffective tissue perfusion: peripheral, chronic pain, impaired spontaneous ventilation, risk of vascular dysfunction, impaired swallowing, risk of pressure damage, impaired physical mobility, impaired urinary elimination, and ineffective protection. These DEs were related to cardiovascular, respiratory, metabolic conditions and specific health situations.

Some ECs were listed with the related factor "substance abuse", which suggests a relationship with smoking, since there was no record of use of other illicit substances. In the sample studied, four patients who had DEs with this related factor were identified (**Table 2**).

Table 2 - Nursing diagnosis with factor related to substance abuse implemented for smoking patients. *Porto Alegre*, RS, Brazil, 2017

Diagnósticos de Enfermagem	Fator relacionado	N (%)
Comportamento de Saúde Propenso a Risco	Abuso de substâncias	2 (3)
Ansiedade	Abuso de substâncias	1 (1)
Manutenção Ineficaz da Saúde	Abuso de substâncias	1 (1)

In relation to nursing prescription, 237 distinct interventions were identified, totaling 1,488 records, with median of 18.5 (10.5-28.25) interventions per prescription.

Of this total, 17 nursing care was considered specific for smoking patients because they were related to substance abuse. The most prevalent were: Evaluate motivation for change with the patient and Discuss with the patient the role played by the substance in his life as presented in **Chart 1**.

Chart 1 - Nursing interventions for DE related to substance abuse prescribed for smoking patients. Porto Alegre, RS, Brazil, 2017

Intervenções de enfermagem
– Avaliar motivação para mudança junto ao paciente
– Discutir com paciente o papel desempenhado pela substância em sua vida
– Orientar paciente/família quanto aos sintomas comuns de abstinência
– Auxiliar paciente a identificar metas realistas e atingíveis
– Avaliar comportamento indicador de ansiedade
– Colocar limites dando dados da realidade
– Comunicar sinais de abstinência
– Encorajar paciente a avaliar o próprio comportamento
– Encorajar verbalização de sentimentos, percepções e medos
– Fixar limites que beneficiem o paciente e demonstrem atenção
– Incentivar adesão ao tratamento
– Manter atitudes calmas e firmes

DISCUSSION

The results of the present study point out fragilities in the filling of nursing anamneses with respect to the smoking status. Of the 69 anamneses analyzed, only in 27.2% there was the record of smoking time in years and the amount of cigarettes smoked per day. A study carried out in a general hospital analyzed 491 medical records and, of these, only 14.5% had some information regarding the individual's smoking status, which reinforces the findings of this study that point to the need to value the record on smoking in patients' records.[15] It is essential that the nurse know the clinical condition and smoking status of the patient, since the collection of data from the anamnesis corresponds to the first stage of PE. This information will serve as a subsidy for the establishment of accurate EDs and, consequently, a nursing care plan that meets the needs of the patient during hospitalization.

In this perspective, it is up to the nurse to investigate if the patient is a smoker, to plan, implement and permanently execute educational actions in health directed to changes in the risk behaviors of hospitalized patients.[16] For this, practices that encourage adherence to treatment and the understanding of the individual in relation to the guidance provided by the health professional become essential. Thus, it is reiterated that the performance of educational actions in health has a strong impact on hospitalized smokers, since they are usually more sensitive to their clinical condition, which is in line with studies that point out the importance of approaching patients in relation to smoking behavior during hospitalization.[17-19]

In the sample studied, a median of four DEs per patient was listed, with only four patients presenting DEs with smoking related etiologies. This finding may be related to the fact that other clinical and psychosocial comorbidities

were probably considered a priority at the time of patient evaluation. However, these results are of concern and point to the need for training the team to effectively and systematically intervene with smoking patients. It should be noted that the computerized system of the institution under study did not include in the data collection period the risk factor related to "smoking" but rather "substance abuse". This may also have compromised the specific identification of DE and its association with smoking, interfering in the analysis of nursing records.

As for the nursing prescription, numerous cares can be prescribed by nurses to assist in smoking cessation during hospitalization, since actions directed at smoking cessation contribute to stimulate the initiation of this process. It is noted that, at the stage of prescription, the computerized system of the institution suggests that the nurse choose care linked to the DE listed for each patient. Thus, if the anamnesis does not address the smoking issue and the DEs that meet this condition are not chosen, probably no specific care will be offered for this intervention.

Although the institution in study has a computerized system, which can be an effective strategy to generate specific guidelines and improve clinical decision making and contribute to make the nursing prescription more accurate, it is still perceived in clinical practice little use of standardized language systems in relation to tobacco consumption which corroborates with the literature.[20-22] A systematic review sought to identify the role of the nurse in the planning and implementation of interventions related to smoking cessation and highlighted the importance of the nursing team's performance in this process, as well as in public policies for reducing comorbidities related to tobacco.[23]

The prevalence of smoking patients in this study was 16.7%, which shows similarity with findings in the national and international literature.[2,24-25] As for the sociodemographic profile, smoking was more prevalent in males and less educated individuals, being similar to the global profile of smokers.[2]

Hypertension and chronic obstructive pulmonary disease were the most prevalent comorbidities. It should be noted that cardiovascular problems are aggravated by the use of tobacco and may prolong the patients' stay in hospital.[27] A study conducted with individuals who have some cardiovascular pathology indicates that the period of hospitalization drives changes to a healthy lifestyle and makes the patient more receptive to the approaches made by the care team.[17]

It is known that the most prevalent causes of hospitalization in smoking patients are associated with worsening chronic diseases.[5] When analyzing the diagnoses and nursing care established by nurses, it is noted that the prescriptions emphasized the reason for hospitalization and the clinical comorbidities of each patient. However, it must be emphasized that these conditions are often related

to tobacco consumption, and that smoking cessation could contribute to the improvement of their health condition.

It is important to emphasize the importance of patients being guided regarding smoking cessation regardless of the reason for hospitalization, since there are studies showing that patients are more sensitive to acquiring healthy living habits when hospitalized.[11,17,27-28] It is also important to emphasize the need to expand the approach strategies for primary care after discharge, with referral to support groups and to a specialized service to follow up on the approaches, aiming at success in smoking cessation.[29-30]

The scarcity of nursing studies on the systematization of nursing care to the patient smoker brought limitation to the discussion of data and, at the same time, corroborated to evidence the need to expand investigations on the subject. Also, the fact of not having been evaluated the accuracy of the DE listed for the sample. However, it is believed that this study can contribute to the advancement of clinical practice, teaching and research, since it evidences the importance of performing PE with specific interventions to smokers, as well as the need to implement strategies aimed at qualifying and sensitizing professionals to a serious and important public health problem.

CONCLUSIONS

The prevalence of hospitalized smoking patients is expressive; however, anamneses do not portray this reality, seen by the scarcity of information found. Only four patients had DEs that suggest a relationship with smoking and/or complications, being them Risk prone health behavior, Anxiety and ineffective health maintenance. Seventeen interventions related to these diagnoses were identified, evidencing the fragility in the assistance to the smoker patient, which points to the need to train and stimulate the team to perform precise approaches directed to the real and/or potential needs of these patients.

In face of this scenario, aiming at greater accuracy of nursing records, the authors suggested to the committee responsible for the records of PE the inclusion of the related factor "Smoking" for the diagnosis "Health Behavior Prone to Risk" which has already been implemented in the institution. Moreover, based on these results the authors have also encouraged the nursing team professionals to participate in a course developed and offered by the institution in the distance format with face-to-face complement to qualify the approach to the smoking patient and the use of the computerized system with all its potentialities.

Thus, it is believed that these initiatives could facilitate care according to the needs of patients and give greater visibility to the nursing care provided, as well as to health education guidelines that should be systematically carried out with hospitalized smoking patients.

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