

Pressure ulcer after hospital discharge and home care

Úlcera por pressão após a alta hospitalar e o cuidado em domicílio Úlcera por presión después del alta hospitalaria y su cuidado en domicilio

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ABSTRACT

Objectives: Identify the sociodemographic and health profile of patients who needed home care after hospital discharge, the level of risk for pressure ulcers using the Braden Scale, and the prevalence of ulcers in the context of home care. Methods: A cross-sectional study with a quantitative approach was conducted after being approved by the Research Ethics Committee of the Ribeirão Preto College of Nursing. Data were collected in the patients' homes by means of interviews and skin inspection. Results: Of the 23 participants, 13 were at risk for pressure ulcers and the prevalence was 21.7%. Nine patients received home visits. Not all of the patients at risk performed all preventive measures properly. Conclusions: It is necessary to improve the orientation given for home care during hospitalization and to create communication mechanisms among health services, so as to ensure adequate coordination and facilitate the continuity of care and patient safety.

Keywords: Pressure Ulcer; Prevalence; Home Care; Nursing Care.

RESUMO

Objetivos: Identificar o perfil sociodemográfico e de saúde de pacientes que necessitavam de cuidados domiciliares após a alta, o nível de risco para úlcera por pressão por meio da Escala de Braden, e a prevalência de úlcera e o contexto do cuidado domiciliar. Métodos: Estudo transversal, com abordagem quantitativa, aprovado pelo Comitê de Ética em Pesquisa da Escola de Enfermagem de Ribeirão Preto. A coleta de dados foi realizada nos domicílios por meio de entrevista e inspeção da pele. Resultados: Dos 23 participantes, 13 apresentavam risco para úlcera por pressão e a prevalência foi 21,7%. Nove pacientes recebiam visita domiciliar. Nem todos os pacientes em risco realizavam todas as medidas de prevenção corretamente. Conclusões: É necessário melhorar as orientações para o cuidado domiciliar durante a hospitalização e criar mecanismos de comunicação entre os serviços de saúde, garantindo a adequada articulação e facilitando a continuidade do cuidado e a segurança do paciente.

Palavras-chave: Úlcera por Pressão; Prevalência; Assistência Domiciliar; Cuidados de Enfermagem.

RESUMEN

Objetivos: Identificar perfil sociodemográfico y sanitario en pacientes que necesitaban cuidados domiciliarios luego del alta, nivel de riesgo de úlcera por presión mediante Escala de Braden, prevalencia de úlcera y contexto del cuidado domiciliario. Métodos: Estudio transversal con abordaje cuantitativo, aprobado por Comité de Ética en Investigación de Escuela de Enfermería de Ribeirão Preto. Datos recolectados en domicilios mediante entrevista y revisión de piel. Resultados: De los 23 participantes, 13 presentaban riesgo de úlcera por presión, con prevalencia de 21,7%. Nueve pacientes recibían visita domiciliaria. No todos los pacientes en riesgo aplicaban total y correctamente las medidas de prevención. Conclusiones: Es necesario mejorar la exactitud de las indicaciones para atención domiciliaria durante la hospitalización, y corresponde crear mecanismos de comunicación entre los servicios de salud, para garantizar una articulación adecuada que permita facilitar la continuidad del cuidado y la seguridad del paciente.

Palabras clave: Úlcera por Presión; Prevalencia; Atención Domiciliaria de Salud; Atención de Enfermería.

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INTRODUCTION AND LITERATURE REVIEW

Pressure ulcers (PU) are lesions in the skin and/or underlying tissue or structure, usually over a bony prominence, which result in isolated pressure or combined pressure with friction and/or shear¹. Patients with a higher risk for PU are those with: reduced mobility; changes in sensory perception and peripheral circulation; altered levels of consciousness; urinary and fecal incontinence; and/or poor nutrition, as well as patients who are immunocompromised.

International guidelines state that patients need to be evaluated for the risk of developing a PU with risk prediction tools such as the Braden Scale so that prevention can be started early².

During the transition from the hospital to home after discharge, it is important that care be continued and that the health teams have good communication, but most of the time this still does not happen as expected. Studies in Ribeirão Preto/SP point to the need for integration between health services when the patient is at risk for or already has a PU and needs home care after hospital discharge^{3,4}.

Home care emerged as an alternative to hospital care for patients who are unable to reach the health services to receive care, thus making it possible for the home to become a space for providing care, enabling new technological arrangements in health care⁵.

The Ordinance of the Ministry of Health No. 963 of May 27, 2013 defines home care as a new form of health care that is substitutive or complementary to existing ones, which is characterized by a set of actions for health promotion, prevention, and treatment of diseases, along with rehabilitation, provided at home with a guarantee of continuity of care that is integrated into the health care networks⁶.

The principles of home care are as follows: a comprehensive approach to the family; family consent; user participation; the existence of a caregiver (a person with or without family ties who is able to assist the patient in his/her needs and activities of daily living with the guidance of the health team); and interdisciplinary teamwork, that encourages solidarity networks⁶.

We have found few studies either in Brazil or in other countries that address the topic of PU in individuals treated at home. A descriptive cross-sectional study conducted with 47 patients given care at home in a health district in the city of Ribeirão Preto found that 76.7% were over 60 years old and 91.5% were dependent on caregivers. Of the 33 (70.2%) that were at risk for a PU, nine (19.1%) had PU, with a mean of 1.8 lesions. This study's author emphasized that health services cannot transfer the responsibility for the care of bedridden patients or those with mobility restrictions to families. She also emphasized that many times the domestic situation is complex and the caregivers are not prepared to take on this task, requiring education for proper care³.

Other studies have highlighted that, among bedridden individuals, most that were at risk for PU were elderly, and the home visit was a strategy for preventing and reducing complications resulting from these injuries^{7,8}.

The study aims to identify among the patients who were discharged with a risk for PU the sociodemographic characteristics, health status, and risk levels for PU according to the Braden Scale; the prevalence of PU; and the context of the home care provided.

METHODS

This is a cross-sectional descriptive study with a quantitative approach performed in households with adult and elderly patients who had been hospitalized and were discharged from the emergency unit (EU) of the Hospital das Clínicas of the Medical School of Ribeirão Preto, University of São Paulo.

The identification of the participants was made from a previous survey conducted in September 2014 to identify the specific prevalence of PU in hospitalized patients in the institution⁹. The criteria for inclusion in the study were as follows: patients who were a risk for PU and who were discharged up until the period of data collection, and who were either from Ribeirão Preto or from towns up to 100 kilometers away.

The research project was approved by the Research Ethics Committee of the Ribeirão Preto School of Nursing, University of São Paulo on September 29, 2014 under process No. 33580014.2.0000.5393. Participation was subject to the prior consent of those patients who signed the Written Consent Form with the necessary guidance and clarification about the research. In cases where the patient was unable to provide consent, this was provided by the person responsible for the patient (relative or caregiver who was closest to the patient since their discharge and who was providing the main care).

The survey instrument was adapted from Chayamiti³, who conducted a study with bedridden patients at their homes in 2008 in the city of Ribeirão Preto/SP. The instrument consists of four parts. In Part I the questions refer to the sociodemographic and clinical characteristics of the survey's subjects. In Part II the questions refer to information about the patient's health and the risk of developing PU using the Braden Scale. In Part III the questions refer to information on the lifestyle of the patients. Part IV evaluates the PU when one is present and the PU prevention measures and treatment used in the home.

The instrument used to assess the risk of PU was the Braden Scale, developed by Barbara Braden and Nancy Bergstrom in 1987 and validated by Paranhos and Santos in 1999¹⁰. The scale consists of six areas: sensory perception; moisture; activity; mobility; nutrition; and friction and shear. The sum of the scores of these areas can vary from 6 to 23. It is recommended that the risk for developing ulcers according to the Braden Scale be categorized into five levels: very high risk-patients with a score of 9 or lower; high risk-patients with a score between 10 and 12; moderate risk-patients with a score of 13 or 14; low risk-patients with scores between 15 and 18; and no risk-patients with a score of 19 or higher.

Data were collected during the months of October and November 2014. Of the 41 patients who met the criteria for inclusion in the study, nine died after discharge, four were hospitalized again, four had moved to another address and could not be reached, and one refused to participate. Therefore, 23 patients were included in the survey's sample.

OUTCOMES AND DISCUSSION

As for the demographic characteristics, of the 23 patients that participated in the study, the average age was 50.07, with a standard deviation of 20.97. The adult rate (52.2%) was higher in relation to the elderly (47.8%), probably due to the nature of the survey, which involved following up with patients who had survived an episode of hospitalization in an emergency hospital.

Female patients (52.2%) predominated, and 65.2% were white. This result was similar to another study that investigated the socio-demographic profile of adults or elderly individuals in home care in Ribeirão Preto³.

Regarding city of origin, 73.9% were from Ribeirão Preto/SP. This result was expected, considering that the hospital where they were admitted is a reference primarily for tertiary care levels for patients in the city.

Most (47.8%) of the subjects had a low level of education, and among those who had studied the average period of study was 5.65 years. These data are different from the population of the state of São Paulo where, in 2010, the average length of study of people 25 years and older was 8.2 years¹¹.

In terms of occupation, there was a predominance (39.1%) of service providers and salespeople, probably due to the characteristics of the municipalities of Ribeirão Preto and others nearby, which offer more jobs in these categories. There was also the predominance (43.5%) of married individuals, with a monthly income between one and two minimum wages (60.9%), and 39.1% lived with their spouse and children. Among those who needed some home care, the main caregivers were spouses (45%).

The most common health problem was skull trauma (five patients) followed by stroke (four patients). These data can be compared with Brazilian morbidity and mortality indicators, which indicate that, among young people and adults, the highest mortality rates are due to external causes and that, among the elderly, they are due to diseases of the circulatory system¹². Eight (34.8%) patients were bedridden.

Of the 23 patients, 12 were at risk for PU. As for the risk category, one (4.3%) had a very high risk, one (4.3%) a high risk, and one (4.3%) a moderate risk. The other nine (39%) were at no risk. The average score on the Braden Scale for at-risk patients was 15.46 and for those who had no risk it was 22.

Of the 11 patients over 60 years old, eight (61.5%) had a risk for PU and, of the 12 under the age of 60, five (38.5%) had a risk. Considering that in the previous study conducted during hospitalization all of these patients had a risk for PU, we observed an improvement in their condition after hospital discharge.

The risk for PU may vary according to a change in the patient's general state of health. Because these changes can increase the risk and vulnerability of the individual to the occurrence of PU, monitoring should be frequent².

The prevalence of PU in the study was 21.7%. For the five patients with PU, the minimum score on the Braden Scale was 9, the maximum score 19, and the average 14 (SD 3.74). For the 18 patients without PU, the minimum score was 14, the maximum 23, and the average 19.5 (SD 3.16). These results confirm the validity of the instrument to identify patients at risk and to guide the use of preventive measures and control PU².

The five patients had one or two lesions, totaling eight PU.
Table 1 shows the distribution of the ulcers in relation to the location of the body region and the classification into categories.

It is observed that the PU occurred more frequently in the sacral region (50%) followed by the calcaneus (37.5%). These regions are the most frequent sites of occurrence in patients who remain in the supine position for long periods. The sacral region was the most frequent (79.1%) in a study of bedridden patients at home held in the state of Piauí¹³. On the other hand, in the study by Chayamiti³, the location of maximum frequency of PU was the region of the femoral trochanter followed by the calcaneal region.

The classification of the PU into categories is the impairment of tissues considering the anatomical planes. Of the eight PU identified, three (37.5%) were classified in category II and three (37.5%) in category III, unlike in Chayamiti's study³ in which the highest frequencies were in category I and category IV, and in Bezerra's study11 where the majority were classified in category IV.

Nutritional status is an important variable to be evaluated in patients at risk for or with PU because the variables that indicate potential malnutrition (low body weight and poor oral intake) are independent risk factors for the occurrence of PU. Of the patients with PU, 80% had recently lost weight. The recommendations of NPUAP/EPUAP/PPPIA² highlight the need for specific interventions for nutritional assessment by specialists and to manage the situation by offering supplements that meet the needs of each patient.

At the time of hospital discharge, 21 patients were referred for continuing care in other health services. Of these, 78.3% continued the treatment, the majority (88.9%) being in outpatient care at the Hospital das Clínicas of the Medical School of Ribeirão Preto, University of São Paulo. Two (11.1%) were being followed by the primary health care unit. Thus, it can be noticed that most patients were accompanied only by a medical appointment with specialists and had not returned to primary care, where they should also have been followed together with outpatient care.

Of the participants in the survey, 16 (69.5%) reported having received guidance on the use of measures to prevent PU during hospitalization. The guidelines were focused on changing positions and skin hydration information, as well as on the use of an egg crate, air, or water mattress. Therefore, we observe that the orientations were focused on traditional measures and did not incorporate other important actions such as using pillows or cushions to protect the bony prominences, elevating the heels, and using equipment to assist in repositioning and movement. These measures are widely publicized in clinical practice guidelines and in the PU prevention protocol of the National

Table 1. Distribution of the classification of the pressure ulcers according to body region

Categories						
Location	1	II	III	Total		
	n (%)	n (%)	n (%)	n (%)		
Sacral	1 (12.5%)	2 (25.0%)	1 (12.5%)	4 (50%)		
Calcaneus	-	1 (12.5%)	2 (25.0%)	3 (37.5%)		
Ischium	1 (12.5%)	-	-	1 (12.5%)		
Total	2 (25%)	3 (37.5%)	3 (37.5%)	8 (100%)		

Patient Safety Program¹⁴, and should be part of the care and orientation provided by professionals during hospitalization and at discharge. This finding demonstrates a failure in the care provided during hospitalization, because most patients (52.4%) had a risk for developing a PU and needed information on actions to deal with the problems that would put them at risk. What can be seen is a need to improve the orientations given for preventive care before hospital discharge.

This care model proves to be inadequate for the new situation of Brazilian health care, because a change in the current hegemonic model is needed, centered on the disease in hospital care, and in compliance with spontaneous demand, which is the case in acute exacerbation of chronic diseases. The care of patients with these diseases should be comprehensive, which is only possible when the care is provided by an organized network, because basic care is the gateway into a system with a multidisciplinary team that aims to coordinate the care and meet the health needs of the population in an integrated way¹⁵. In Ordinance 1600 of July 7, 2011, the Health Ministry reformulated the National Policy for Emergency Care and set up in the Emergency Care Network in the Unified Health System (SUS) the Home Care component that is understood as: the set of integrated and coordinated actions of health promotion, prevention, and treatment of diseases and rehabilitation taking place at home, which is a new kind of health care occurring in the territory and reorganizes the work process of the teams who provide home care as primary, outpatient, and inpatient care¹⁶.

In this study, nine (39.1%) patients were receiving home visits from health services, and of these, six were at risk for PU and four had the injury. Eight patients were residents of Ribeirão Preto, a city that has home care services such as Family Health Strategy and the Home Care Service. The number of home visits received by the patients (an average of 2.4) was few, which can be explained by the short time between the hospital discharge and the date of the interview to collect the survey's data.

Table 2 shows the distribution of patients according to risk of PU and the use of prevention measures by the caregivers.

All patients identified as at risk for PU were repositioned by the caregivers through decubitus change, which is different from the study done by Chayamiti in which this measure was performed in less than 60% of the patients³. Most patients (61.5%) did not use a mattress or pillow for the redistribution of pressure, which is an action recommended for the prevention

and treatment of PU2. It was also identified that the majority of patients at risk for PU remained in a sitting position for long periods, during which pressure relief was done with eight patients (61.5%).

Of the 10 patients at risk who remained sitting for some period of the day, only four (30.8%) used pillows to sit so as to reduce the ischial pressure.

Regarding the use of cushions to relieve pressure on the heels, seven (53.8%) patients at risk for PU used them, which is a result similar to that found in another study with bedridden patients³. Only three (23.1%) patients used a removable sheet for moving in bed.

The caregivers did not use many of the items recommended for controlling excess pressure, probably due to the lack of material and human resources and the low education of the patient and caregivers to help them understand the preventive measures recommended by the professionals. In a study conducted in Belgium in 2008 that evaluated the participation of caregivers in preventing PU in their family members considering the measures recommended in a national protocol, a low use of preventive measures in home care patients was also noticed ¹⁷.

Another study conducted in the Azores with 99 nurses in home care in this region and 13 nurses responsible for health institutions aimed to analyze the factors that influence preventive home care in patients at risk for PU. Most of them considered such care as insufficient, and the main reasons were the lack of material resources (43.4%) and human resources (30.3%). The authors suggested a need for PU incidence studies to be able to monitor the evolution of the problem and to determine whether the care prescribed was actually being performed ¹⁸.

CONCLUSIONS AND IMPLICATIONS FOR THE PRACTICE

The majority (56.52%) of the patients studied were still at risk for PU after hospital discharge, and five (21.73%) had lesions.

Home care as part of the Family Health Strategy or of the Home Care Service can help reinforce the importance of these measures. Therefore, it is also necessary to analyze the regulatory scenario and the mechanisms of communication between health services so as to ensure adequate coordination and facilitate the continuity of care and the patient's safety.

Table 2. Distribution of patients according to risk for pressure ulcers and use of prevention measures used by the caregivers

	Risk for pressure ulcers		
Decubitus change	Yes	No	Total
	n (%)	n (%)	n
Yes	13 (100.0%)	3 (30.0%)	16
No	-	7 (70.0%)	7
Total	13 (100.0%)	10 (100.0%)	23
Mattress type used	Yes	No	Total
Only common mattress	8 (61.5%)	10 (100%)	18
Egg crate mattress	2 (15.4%)	-	2
Air mattress	3 (24.1%)	-	3
Total	13 (100%)	10 (100%)	23
Pressure relief when sitting	Yes	No	Total
Yes	8 (61.5%)	3 (30.0%)	11
No	2 (15.4%)	7 (70.0%)	9
Not applicable	3 (23.1%)	-	3
Total	13 (100.0%)	10 (100.0%)	23
Cushion used to sit	Yes	No	Total
Yes	4 (30.8%)	-	4
No	6 (46.1%)	10 (100.0%)	16
Not applicable	3 (23.1%)	-	3
Total	13 (100,0%)	10 (100.0%)	23
Pad used to relieve calcaneal pressure	Yes	No	Total
Yes	7 (53.8%)	1(10.0%)	8
No	6 (46.1%)	9 (90.0%)	15
Total	13 (100.0%)	10 (100.0%)	23
Removable sheet used to move in bed	Yes	No	Total
Yes	3 (23.1%)	-	3
No	10 (76.9%)	10 (100.0%)	20
Total	13 (100.0%)	10 (100.0%)	23

In home care, the nursing staff should endeavor to help the family develop an environment with favorable conditions for care and make provision for and preparation of materials or technologies that facilitate health practices. Specifically for the prevention of PU, it is worth noting that its development may be related to many factors, such as the difficulties and limitations in the structure of services, the work process, and the role of the caregivers. These issues go beyond the technical dimension of health care, and structure the organization and the operation of health services.

From this perspective, the nurse, though a health care professional involved in assisting the bedridden individual, should plan care practices that are able to promote health and treatment adherence, and encourage self-care. These practices must take into account the beliefs, values, and cultural aspects that interfere

directly with the patient's outcome regarding cognitive, affective, and behavioral components related to understanding, learning, and the decision to care for oneself.

The results discussed in this paper may intervene in the quality of health care, which can lead health care professionals to understand the need for preventive measures; a humanized comprehensive care; and analyzing and reflecting on the practice, the context, and the aspects of the care.

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Scientific Editor's Note: Note of the Scientific Editor: On April 13, 2016, a National Pressure Ulcer Advisory Panel (NPUAP) announced a change in terminology from pressure ulcer to pressure injury and updates the stages of pressure injury. For more information, the reader must go to http://www.npuap.org/national-pressure-ulcer-advisory-panel-npuap-announces-a-change-in-terminology-from-pressure-ulcer-to-pressure-injury-and-updates-the-stages-of-pressure-injury/