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Characterization of Adult Patients who Used Disposable Diaper During the Hospital Stay in a Large Teaching Hospital

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Abstract

The use of disposable diapers for adults and elderly patients had inserted its use indiscriminately in the hospital, as a facilitator for the nursing care of patients with problems related to urinary and intestinal elimination. However, the insertion of this device has not been accompanied by studies that embase nursing actions. Today, with the increase in the number of hospitalizations of elderly and severely ill adults, it is necessary to know the profile of patients who use the disposable diaper in order to establish strategies of care in order to avoid possible damage caused by their use. The aim of this study was to characterize the profile of adult patients using disposable diapers during hospitalization in a highly complex teaching hospital located in Latin America. This is a prospective, observational study with a sample of 183 patients. There was a predominance of males (62.3%), married (30.1%), mean age 54 years, coming from their residence. The time of use of the disposable diaper, was 10.6 days. Main causes of hospitalization were traumatic disorders, cardiovascular and digestive system. This study stands out the need to improve the quality of care to the adult patient who makes use of disposable diaper.

Keywords: Nursing, Adult Diapers, Health Care, Hospital

1. Introduction

In urgent and emergency services of large hospitals, you can see the coexistence of two different patients with high demand profiles, the first characterized by those with Chronic Noncommunicable Diseases and trauma victims. Both present high rates of mortality, disability and dependence for basic care. In this scenario, the dependency status of patients triggers the need for care to be dispensed by professionals and imply the creation of new health resources that can adapt to the changed reality and to improve the care provided. However, little has been developed in relation to Technologies related to the basic human necessities. Among the minor changes identified in care, it can be seen, incorporated into clinical practice, the use of disposable diaper as a facilitating factor of nursing care in the urinary elimination. The use of disposable diaper in adult patients is a positive technological resources, as it replaces the use of waterproof sheet and reduces the number of exchange of bed linen, promoting greater patient comfort and improving the organization of nursing services. However, in Brazil in some services, the inclusion of this new practice has been made empirically and its use has given up indiscriminately, including even patients who might make use of other devices such as hospitalar chambre pot or restroom (Silva et al., 2013).

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In large hospitals, where a high number of patients dependent on nursing care for activities of daily life, often can be observed a small number of human resources. In these realities, the disposable diaper has been used to reduce the use of nursing assistance to the patient in disposal needs, given the high time to offer devices like chambre pot or even to drive the patient to the toilet. It is common also verify that the exchange of disposable diaper does not occur according to the elimination of the patient but with the availability of nursing staff to provide the care of hygiene and comfort, which often leads the patient to stay hours with a wet diaper in contact with skin. Therefore, it is possible to discern that may still be unknown the negative impact of using disposable diaper on the quality of patient care, both with regard to damage to the health of the individual and to increase the time of their stay in the institution, which still has a negative impact on spendings from the treatment. In this context, it is important to recognize that the use of disposable diaper for adults needs, especially the production of scientific evidence to substantiate its proper use, preventing damage from the patient caused by the lack of professional knowledge and the absence of institutional protocols.

2. Methods

This work is a part of the results obtained in the doctoral thesis defended at the School of Nursing of Sao Paulo University. It is a prospective, observational study of 183 patients. The patients were included at a university hospital, a reference to high-complexity procedures in Latin America, over 16 years, admitted by the Urgency and Emergency Service between February 10 and April 10, 2014, which used disposable diaper during hospitalization. They were excluded from the sample patients who were already using disposable diaper at home or were admitted to other institutions for longer than 24 hours before being admitted to the emergency department and emergency collecting institution. Every day the researcher checked the unit's hospital sector cases admitted in the past 24 hours, the active pursuit of these patients was performed. To facilitate data collection, daily was asked to the record industry, the list of hospitalized patients, to trace the full name of the patient, hospital record number, age, gender, medical specialty responsible for the hospitalization and the acronym referring to the place of hospitalization of the patient. The following was performed quick reading of the records, looking in the nursing record, the description of the diaper presence and degree of patient dependency and the historic arrival of the same service. Following was held a conversation with the nursing staff, explaining about the survey and confirming the use of the disposable diaper by the patient. If confirmed use of the device and the inclusion criteria, with the support of the collection instrument entitled Daily Sheet, were collected socio epidemiological and clinical data regarding the day of collection. This study was approved by the Research Ethics Committee of the Ribeirão Preto School of Nursing of the University of São Paulo (protocol number 509663/2014).

3. Results

During the data collection period were hospitalized 3,973 (100.0%) patients through the emergency room and emergency institution, in the medical clinic specialties: surgical clinic, obstetrics and gynecology, urology and ophthalmology. Of all the admissions period it was possible to identify and track 183 (4.6%) who contemplated the inclusion criteria. The predominant features obtained in the sample were male patients, being married, mean age 54.0 years, 17.0 years minimum and maximum age of 97.0 years. The median age presented by the subjects was 55.0 years, with standard deviation of 18.8. Tables 1 and 2 show the distribution of patients who used disposable diaper according to marital status and place of origin.

Table 1-Distribution of Patients According to Marital Status. Brazil, 2014

Marital Status	n	%
Marriend	55	30,1
Single	49	26,8
No information	37	20,2
Widower	17	9,3
Apart	15	8,2
Stable union	8	4,4
Separated	1	0,5
Divorced	1	0,5
Total	183	100,0

Most hospitalized patients using the disposable diaper were married, 55 (30.1%), single 49 (26.8%). The variable no information refers to lack of data in the patient records, present in 37 (20.2%) cases of the study.

Tabela 2-Distribuição Dos Pacientes, Segundo O Local De Procedência. Brasil, 2014

Place of origin	n	%
Residence	82	44,8
Street	35	19,1
Other hospital	20	10,9
No information	17	9,3
Other health unit	11	6,0
Other building from the same institution	9	4,9
Clinic of the same hospital	8	4,4
Work	1	0,5
Total	183	100,0

Most of the patients came from the own residence 82 (44.8%), followed by cases in which the individual became ill on the street and was taken to the emergency room and emergency by family members, colleagues or pre-hospital care teams 35 (19.1%). Table 2 shows the distribution of patients according to hospital location on the hospital unit. Table 3 shows the distribution of patients according to the location on the hospital unit in which patients were at admission.

Table 3 - Distribution of Patients, According to Place of Internment in Urgent And Emergency Sector. São Paulo, 2014

Local	n	%
Clinical emergency room	68	37,2
Surgical emergency room	61	33,3
Corridors of the emergency unit	22	12,0
Intensive Care Unit	21	11,5
Infirmary AB	10	5,5
No information	1	0,5
Total	183	100,0

There was a predominance of hospitalizations in emergency rooms, 68 (37.2%) in clinical emergency room and 61 (33.3%) in the surgical emergency room. Due to high demand of patients in the unit corridors the patients that at admission do not have bed set available for hospitalization, are accommodated on stretchers. Table 4 shows the primary distribution of medical diagnosis, according to the ICD-10 chapters.

Tabela 4 -Distribution of Primary Medical Diagnosis, According to the Chapters of ICD-10 São Paulo, 2014

Group Disease	n	%
Chapter XIX - Injury, poisoning and certain other consequences of external causes (S00- T998)	44	24,0
Chapter IX Diseases of the circulatory system (I00-I99)	31	17,0
Chapter XI - Diseases of the digestive system (K00-K93)	21	11,5
Chapter XVIII Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	18	9,8
Chapter VI - Nervous system disorders (G00-G99)	16	8,7
Chapter X - Respiratory diseases (J00- J99)	12	6,6
Chapter XX- external causes of mortality and morbidity (V01- Y98)	12	6,6
Chapter I - Certain infectious and parasitic diseases	08	4,4
Chapter II - neoplasms [tumors] (C00-D48)	06	3,3
Chapter V Mental and behavioral disorders (F00-F99)	05	2,7
Chapter IV - Endocrine, nutritional and metabolic diseases (E00-E90)	04	2,2
Chapter XIV - Diseases of the genitourinary (N00- N99)	04	2,2
Chapter III - Blood and the hematopoietic organs and certain immune disorders (D50-D89)	02	1,1
Chapter XIII - Diseases of the musculoskeletal system and connective tissue (M00-M99)	01	0,5
Total	183	100,0

The International Classification of Diseases (ICD-10) is subdivided into twenty chapters, as the cause and the affected system. In our sample, there was a predominance of three groups of diseases, 43 (23.5%) Chapter XIX - Injury, poisoning and certain other consequences of external causes, 30 (16.39%) Chapter IX Diseases of the circulatory system and 21 (11.5%) Chapter XI Diseases of the digestive tract.

4. Discussion and Implications

In the sample studied during the observation period, we observed that among hospitalized patients by the urgent and emergency service, 183 made use of disposable diaper, for an average of 10.6 days. The minimum number of device use was a day and a maximum of 58 days. Among the disposable diaper users most of the observed patients were male, married (30.1%) and single (26.8%) coming from the residence, with a mean age of 54.0 years, age minimum of 17 and maximum age of 97 years. Among the younger, some reported discomfort when using disposable diaper. The findings of socialepidemiological characteristics of the sample corroborate with other studies that deal with the characterization of the profile of patients who use emergency rooms and Emergency in Brazil. In a study conducted in a large teaching hospital that characterized the profile of clinical care in an emergency care service, it identified predominance of the male gender, age group 18-59 years and prevalence of cardiovascular diseases such as causes more frequent and responsible for clinical care (Rabbit; Goulart, &Keys, 2013). The findings of this study data related to patient age can be considered an item that needs more detailed criteria for evaluation, since there were divergent boundaries between the maximum and minimum age found. This fact is due to a very diverse population, caused by the emergency features and emergency service, which meets from young patients, trauma victims with temporary or permanent impairment of some functions, even elderly patients with limitations caused by the aging process . Both populations during the hospitalization period, made use of disposable diaper due to more or less limiting factors of the disease process. According to the Table 4 and 5, with regard to admission locals and diagnoses was identified balance between patients in the clinical emergency room (34.0%) surgical and emergency room (30.5%).

The primary diagnoses grouped by chapters, according to the ICD-10, still showed as the first cause of hospitalization have entered diseases in Chapter XIX - Injury, poisoning and certain other consequences of external causes (23.5%), following, Chapter IX Diseases of the circulatory system (16.39%) and, as the third cause of hospitalization, Chapter XI Diseases of the digestive system (11.5%). The findings agree with the literature on the subject and demonstrate that the service can be considered representative of the population where it is located. In the same city where the study was conducted, the most populous in Brazil, in 2012, the hospitalization rate due to trauma was 53.8 (number of hospitalizations per 10,000 population) and those 77,4 were male admissions and 32,6 females (DATASUS, 2014). In the case of traumatic disorders, the most affected population was the youth and adults, victims of traffic accidents and violence and, in Brazil, in 2007, 72.0% of deaths were caused by chronic noncommunicable diseases, 10.0% from infectious and parasitic diseases and 5.0% for maternal and child health disorders. The author of the study data corroborates the evidence found also said that among the clinical reasons, cardiovascular diseases can be considered to be those that generate higher costs related to hospitalizations in the national health system. In 2007, 12.7% of hospitalizations were not related to pregnancies and 27.4% of hospitalizations of individuals aged 60 or more were caused by cardiovascular disease (Schmidt et al., 2011). The profile of hospitalizations may vary between socialepidemiological characteristics of the population and determining factor in the organization and training of the nursing staff, with regard to quality of care focused on the specific needs of a given population. Emergency treatment and emergency of this study gets high demand of patients, including many become disposable diaper users during hospitalization. In this sense, understand the main characteristics of the population assists healthcare professionals and especially the nurse in the distribution and organization of work, according to the patient's profile and the workload that will demand the nursing staff.

The study in urgent and emergency service aimed to monitor daily users of disposable diaper in order to characterize the user population of that device. However, for the analysis of this sample, it is noteworthy that there was difficulty of the researcher and the time invested in the location of patients. Emergency treatment and emergency institution where the study took place has high turnover and distinct characteristics that influence the characterization and the complexity of its organization, which may have influenced the results of this study. It is a teaching hospital, with high turnover of patients and professionals that are, in most cases, in the training process.

Located in a metropolis, can still be considered a reference for high complexity procedures, and provide assistance to spontaneous demand of the local population in cases of lesser complexity. All these factors contribute to the maintenance of a complex environment, which can be considered a challenge to nurses working in care and management of the service area. It is emphasized that the number of patients in the service is intense, moreover, are not always available hospital beds available, which leads to the allocation of patients on stretchers in the corridors of care for indefinite periods. In addition also to this problem which, when moved to examinations and other procedures, not always the patients return to place of origin. Due to all these factors during the study the dynamics presented for allocating the patient was a limiting factor of the sample identification. This dynamic was facilitated only when, the patient was transferred to a hospital bed, and a place was established in the Hospital Information Management System, which promoted its location. The criteria for use of disposable diapers in hospitalized adults have considered aspects such as limiting the patient's mobility to avoid the risk of falling, patient comfort, difficulty accessing the health, compromised state of consciousness, inability to control one's eliminations, etc. . It is important to consider that in the service where the study was conducted, the nursing team also has the consensus to use the disposable diaper also as a substitute for underwear to prevent the patient stay with exposed genitals. The data from this study, related to the characterization of the disposable diaper wearers are non-existent in the national and international literature, providing important information for understanding the process of using this device in hospitalized adult patients.

5. Conclusion

The use of the disposable diaper as a therapeutic resource is certainly a positive implementation for assistance in nursing and to the comfort of hospitalized patients, however, requires the active participation of nurses in the evaluation of each patient to determine the actual need for the device. It notes that this study characterized the use of disposable diaper in a hospitalized population had access to the institution of the door of urgency and emergency service, so diversified as to socialepidemiological features. Since it is common among hospitalized medical patients using disposable diaper and that is part of the context and of the nurse's work to quality care, although in this study have been identified important aspects for the expanded understanding of the disposable diaper use in process hospitalized patients, it is necessary to expand the scientific evidence on the matter to corroborate the data found and, above all, build a specific body of knowledge for the care of adult patients and elderly user disposable diaper.

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