

Human resources and materials for the prevention of pressure ulcers

Recursos humanos e materiais para a prevenção de lesão por pressão

Recursos humanos y materiales para la prevención de lesión de presión

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ABSTRACT

Objective: to reflect on the importance of human and material resources with a view to preventing pressure ulcers. **Content:** this reflection study was framed by the recent scientific literature and public policies on the subject. Despite the availability of user risk assessment scales, conditions in the setting where the risk arises are often not favorable to effective, individualized provision of care. Depending on the structural conditions, user risk may be heightened by the lack of human and material resources. **Conclusion:** human and material resources are essential to implementing interventions directed to preventing pressure lesions. Having an instrument available to evaluate such resources may contribute to characterizing the setting where the client is treated, and to assess whether the resources available permit safe, harm-free care.

Descriptors: Pressure ulcer; health manpower; health resources; nursing.

RESUMO

Objetivo: refletir acerca da importância dos recursos humanos e materiais na perspectiva da prevenção de lesão por pressão. **Conteúdo:** trata-se de um estudo de reflexão pautado na literatura científica e de políticas públicas recentes relacionadas ao tema. Apesar da disponibilidade de escalas de avaliação de risco do cliente, as condições do cenário em que o mesmo está inserido muitas vezes não são favoráveis para a realização dos cuidados de forma efetiva e individualizada. Dependendo das condições estruturais, o risco do cliente pode ser potencializado pela falta de recursos humanos e materiais. **Conclusão:** os recursos humanos e materiais são imprescindíveis na realização das intervenções direcionadas para a prevenção de lesão por pressão. A disponibilidade de um instrumento para avaliar tais recursos poderá contribuir para caracterizar o cenário onde o cliente está inserido, avaliando se os recursos disponíveis viabilizam uma assistência segura e livre de danos.

Descritores: Lesão por pressão; recursos humanos em saúde; recursos materiais em saúde; enfermagem.

RESUMEN

Objetivo: reflexionar sobre la importancia de los recursos humanos y materiales en la perspectiva de la prevención de lesión por presión. **Contenido:** se trata de un estudio de reflexión pautado en la literatura científica y de políticas públicas recientes relacionadas al tema. A pesar de la disponibilidad de escalas de evaluación de riesgo del cliente, las condiciones del escenario en que éste se inserta a menudo no son favorables para la realización de los cuidados de forma efectiva e individualizada. Dependiendo de las condiciones estructurales, el riesgo del cliente puede ser potenciado por la falta de recursos humanos y materiales. **Conclusión:** los recursos humanos y materiales son imprescindibles en la realización de las intervenciones dirigidas a la prevención de lesión por presión. La disponibilidad de un instrumento para evaluar dichos recursos puede contribuir a caracterizar el escenario donde el cliente está insertado, evaluando si los recursos disponibles permiten una asistencia segura y libre de daños.

Descriptores: Lesión por presión; recursos humanos en salud; recursos materiales en salud; enfermería.

INTRODUCTION

It is known that pressure ulcers (PU) are considered an adverse event, a serious problem of global public health, taking hold of hospitalized people in public and private institutions. In the United States, there is a prevalence of PU in hospitals of 15%¹. In Brazil, although there are few jobs on the incidence and prevalence of those ulcers, a study conducted in a general university hospital has shown an incidence of 39.81%². In that sense, researches have shown that, despite the efforts on the fight against the adverse events, numbers related to PU are still high in hospitals, varying between 23.1% and 59.5%^{2,3}.

According to the National Report on Health Assistance Incidents (*in Portuguese*, Relatório Nacional de Incidentes Relacionados à Assistência à Saúde), from January 2014 to July 2017, 23,722 out of the 134,501 notified incidents (17.6%) corresponded to notifications of PU, that being, during this period, the third kind of adverse event more frequently notified by health institutions. Nevertheless, according to the referred report, 3,771 *never events* (events that should never occur in health services) were notified, 2,739 of them being notifications resulting from PU stage 3 and 831 notifications of PU stage 4. As to the number of deaths, 34 resulted from adverse events occasioned by PU⁴.

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Therefore, it is emphasized that this damage can bring an important impact on the quality of life of the person and the family, increasing considerably the rates of mortality and additional hospital costs. A study that measured the expenses with the treatment of each PU has shown values from 2,000 to 30,000 dollars, generating an annual cost of approximately 8.5 billion dollars⁵.

It is highlighted that, due to legal issues, the development of PU in health units can generate legal proceedings, both for the institutions and for the professionals involved in the care⁶. In the United States, 17,000 lawsuits caused by PU are annually judged, with compensation of US\$ 250,000 each case, and, in certain situations, it has reached the amount of US\$ 321 million⁷.

Faced with the suffering and the financial impact caused by the PUs, prevention is still the best option, once the expenses are lower if compared to the treatment⁸. A descriptive study conducted in the Paraíba Valley² has assessed the expenses with the treatment of 11 patients with PU, finding an annual total of R\$ 4,370.16. On the other hand, the investments on prevention represent a reduction from 25 to 50% on the risk of PU and a decrease of 45% on hospital expenses.

In that regard, it is worth emphasizing the importance of the assessment of the structure of the hospital units, in order to measure the resources available for adequate care delivery. About that, Avedis Donabedian, pioneer of the health sector to publish on the theme, has created a conceptual model to assess the health services. That model consists of three categories: structure, process and results. The structure comprises physical installation, materials, human resources, profile of the employees, preparation and experience. The process covers the steps involved during care delivery between the professional and the client. And, finally, the result, which assesses the quality of care provided and the effect of healthcare in a particular population⁹.

In that sense, it is emphasized that the managers of the health units are responsible for predicting and providing adequate conditions in the provision of safe and damage-free care. Among the various factors that may have an influence on the care quality, are the adequate number of human resources, the time of care delivered, the adequate auxiliary material resources for the prevention and identification of people at risk¹⁰. In spite of the importance of valuing such aspects, an integrative review has shown a precariousness of studies on the reality of the scenarios when it comes to human and material resources¹¹.

The issue involving the work overload and the potential risk of an adverse event is one of the causes of the high mortality rates in health units, and it is strongly related to the reduced number of nursing professionals, which propitiates the incidence of an adverse event such as pressure ulcers¹⁰.

In view of that, this work had the objective of reflecting on the importance of human and material resources in the perspective of pressure ulcers.

NURSING HUMAN RESOURCES: ESSENTIAL IN THE ASSESSMENT AND PREVENTION OF RISK FACTORS

The assessment of the client risk is the first step towards prevention. After assessing the risk, however, the nurse and the team must implement individual preventive measures, that is, according to the risk factors identified. In that context, it is highlighted the need to minimize or correct intrinsic and extrinsic risk factors. The intrinsic factors generally require multidisciplinary assessment, because they involve the correction of nutritional factors, infectious factors, use of medicines, mobility, consciousness level, among others¹². It is important, however, to mention that the extrinsic factors: pressure, friction, shear, and maceration are directly related to nursing care, showing the importance of their systematic implementation for the prevention to be successful^{6,12}.

Therefore, it is emphasized the change of decubitus as the main PU prevention measure, aiming to reduce the prolonged compression in regions on bony prominences, improving local circulation^{13,14}. During the change of decubitus, client handling must be appropriate, without dragging it on the bed, in order to avoid rupture due to friction or shear forces^{11,13,14}.

About friction and shear, it is highlighted the need of personnel for the prevention of those extrinsic factors, mainly in obese, fractured, intubated, elderly and/or flaccid clients. In that sense, it is emphasized the moments of changing bedding and personal clothes, and of repositioning the client on the bed, considering that he or she should not be dragged, but should be lifted^{11,13,14}.

Regarding maceration, it is necessary to sanitize the skin with water and neutral soap after each urinary and/or intestinal elimination, in order to reduce or avoid this risk factor caused by the contact of the urine or feces with the skin, besides dermatitis associated with the incontinence. About that, it is important to mention that the frequency of

diaper change is unexpected, not having a way of establishing sectoral routines, but the common sense of the professionals who are responsible for this conduct^{11,13,14}.

APPROPRIATE HUMAN RESOURCES: A CHALLENGE FOR SAFE AND INDIVIDUAL ASSISTANCE

Among the components that are essential and necessary for safe and damage-free care delivery, the human resources are inserted in the structural context as indispensable and assertive. The number of personnel is mentioned as a component of the structure necessary to the care process⁹.

Thus, it is understood that, in order to perform individual cares, including all measures that are indispensable for the prevention of PUs, the adequacy of the human resources is required, since their lack makes it impossible to safely assist. Besides that, it is emphasized that the work overload, caused by a deficit of human resources, causes direct damages to nursing professionals, such as fatigue, tiredness and decreased attention span, resulting in adverse events, such as PU. Still, in that context, a study conducted with 12 European countries has proved that nurses who work in shifts of over 12 hours have shown work overload, evidenced by the bad care quality and the decrease of the client's safety¹⁰. In that sense, the work organization is responsible for the appropriate sizing of personnel, an essential strategy for the quality of the offered service, including the worker's health preservation¹⁵.

Besides the individual preventive care, it is also highlighted the indirect care to the client and the family, such as: daily planning of preventive measures, material request, orientation to the caretakers/relatives both in the hospital environment and houses, daily reevaluation of preventive measures and assessment of the results, which also emphasizes the importance of the human resources¹⁰.

The adequacy of the human resources for a safe assistance is important in all health segments. The supervision of clinical practices, the audit of the activities developed and the permanence of the care services quality is a competence of the nurse, who, with an adequate number of professionals, may manage those functions effectively¹².

About that, it is emphasized the COFEN (*in English*, Federal Nursing Council) Resolution No. 543/2017¹⁶, which sets forth the minimum parameters to calculate the number of professionals of the different categories of nursing. The referred parameters consist of the orientation to managers, administrators, and nurses of health services, in order to plan on the number of professionals needed, among them, the ones directed towards the prevention of pressure ulcers.

Therefore, it is highlighted the incessant search for strategies that may favor the nurse to take care of the human in their different dimensions, contributing to a positive change for the daily practice of nursing¹⁷.

MATERIAL RESOURCES: CARE AUXILIARIES IN THE PREVENTION OF PU

The auxiliary material resources are complementary in the prevention and enhance the actions on the preventive measures. In people identified with the risk of developing PU, it is recommended a pressure redistribution surface, such as a pneumatic mattress, foam mattress, pillows, cushions, polyurethane films, and moisturizers¹³.

The use of support surfaces, with air and foam pillows, is also mentioned as a strategy of redistributing the pressure in people with reduced mobility^{13,14}. Materials and equipment for pressure redistribution shall take into consideration factors such as the bed mobility, the comfort and the need of microclimate control and reduction of shear, the person's height and weight and the risk of developing new PUs^{13,14}.

In order to assist the maintenance of skin integrity, creams based on urea and essential fatty acids (EFAs) are highlighted. The application should preferably be done after the shower and the reapplications as the tissue needs¹³.

The appropriate use of those resources aims to increase the care about prevention. Two systematic reviews, published in 2013 and 2014, assessed the use of covers on bony prominences for the prevention of PU in immobilized clients hospitalized in intensive care units and concluded that the incidence of PU had significantly reduced.⁷

The material resources, inserted in the triad proposed by Donabedian, are essential in the care process, assuring quality, continuity and integrality⁹. In case there are no appropriate resources, preventive measures shall be jeopardized, damaging the process and, consequently, the result. In that sense, despite the importance of the availability of those devices, they do not substitute the nursing care, being considered auxiliary resources in the prevention.

CONCLUSION

The current public policies and scientific literature guide nursing interventions on the prevention of PU through the client's risk assessment using predictive scales. This assessment, however, should be articulated to the availability of human and material resources, to assure the implementation of individual preventive care.

Therefore, it is considered to be important to offer the nurses an instrument for the assessment of such resources, contributing to the characterization of the place where the client is inserted, that is, if the resources available facilitate a safe, damage-free assistance. Nevertheless, researches on this theme are still incipient, being presented as a challenging aspect for the specialists and health managers.

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