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Knowledge and practice...



# **RESEARCH**

Conhecimento e prática de enfermeiros sobre cuidados aos pacientes com feridas

Knowledge and practice of nurses about care for patients with wounds

Conocimiento y práctica de enfermeros acerca del cuidado de los pacientes con heridas

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#### **ABSTRACT**

Objective: identifying the knowledge, practice and nurses information sources about the care of patients with wounds. Method: a cross-sectional, descriptive and exploratory study performed in a university hospital in July 2010. The data were collected through an adapted questionnaire. The study included 35 nurses assigned to different sectors of work. The data was submitted to descriptive and analytical statistical treatment. Results: considering the overall results, the nurses had an average of 69.4% of hits (sd = 13.5%). The nurses that have cited utilizing sometimes some sources of information had a higher percentage of hits. Conclusion: it was concluded that nurses had insufficient knowledge in some areas on the subject. There is need to update professionals' knowledge on advances of the current evidences that base wound care, in order to guide, with the context studied, the planning of strategies to implement the best evidences available. Descriptors: nursing care, evaluation, wound healing, cross-sectional studies, nursing based on evidences/education.

#### **RESUMO**

Objetivo: identificar o conhecimento, prática e fontes de informações de enfermeiros sobre o cuidado de pacientes com feridas. Método: estudo transversal, descritivo-exploratório, realizado em um hospital universitário em julho de 2010. Os dados foram coletados por meio de um questionário adaptado. Participaram deste estudo 35 enfermeiros distribuídos em diferentes setores de trabalho. Os dados sofreram tratamento estatístico descritivo e analítico. Resultados: considerando os resultados globais, os enfermeiros obtiveram, em média, 69,4% de acertos (dp= 13,5%). Os enfermeiros que citaram utilizar às vezes algumas fontes de informações tiveram maior porcentagem de acertos. Conclusão: conclui-se que os enfermeiros apresentaram conhecimento insuficiente em algumas áreas referentes ao tema. Destaca-se a necessidade da atualização dos profissionais quanto aos avanços das evidências atuais que embasam o cuidado de feridas, a fim de nortear, no contexto estudado, o planejamento de estratégias para a implementação das melhores evidências disponíveis. Descritores: cuidados de enfermagem, avaliação, cicatrização de feridas, estudos transversais, enfermagem baseada em evidências/educação.

#### **RESUMEN**

Objetivo: identificar el conocimiento, la práctica y las fuentes de información de los enfermeros, sobre el cuidado con las heridas. Método: estudio transversal, descriptivo y exploratorio realizado en un hospital universitario en julio de 2010. Los datos fueron recolectados a través de un cuestionario adaptado. Participaron en el estudio 35 enfermeros asignados a diferentes sectores de trabajo. Los datos se sometieron a tratamiento estadístico descriptivo y analítico. Resultados: teniendo en cuenta los resultados globales, los enfermeros obtuvieron, en promedio, el 69,4% de respuestas correctas (de = 13,5%). Los enfermeros que informaron el uso, a veces algunas fuentes de información tuvieron el mayor porcentaje de respuestas correctas. Conclusión: se concluye que los enfermeros tenían un conocimiento insuficiente en algunas áreas acerca del tema. Se destaca la necesidad de actualizar a los profesionales sobre los avances de las evidencias actuales que sustentan el cuidado de las heridas, con el fin de orientar, en el contexto estudiado, la planificación de estrategias para la implementación de las mejores evidencias disponibles. Descriptores: atención de enfermería, evaluación, cicatrización de heridas, estudios transversales, enfermería basada en la evidencia/educación.

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# **INTRODUCTION**

esearch on prevention and treatment of wounds gives a great prominence in nursing publications, demonstrating the important role and responsibility of the nurse, which must evaluate the patient and its injury, prescribe the most appropriate care, in addition to direct and supervise the nursing staff in making bandages. Therefore, it is necessary that professional realizes that these skills are intrinsic to their daily lives. 1-2

With the scientific advances in patient care with wounds, nurses began to organize themselves into associations. Due to this fact, the practice of care for these patients has become a specialty of Brazilian nursing, implemented by the Brazilian Association of Dermatology Nursing (SOBEND), Brazilian Association of Stoma-therapy (SOBEST) and Brazilian Society of Nursing Wounds and Aesthetics (SOBENFeF). However, it remains a challenge that requires specific knowledge, skills and approaches that go beyond the biological sphere.

The knowledge of nurses and practice based on scientific evidence are initiated during their formal training in graduate courses and are key factors in the timely of implementation of conducts covering prevention and treatment of patients with wounds. Thus, it becomes your responsibility to apply such measures, along with other health professionals.<sup>3-4</sup>

The need for scientific knowledge in this area is highlighted by several authors towards the pursuit of quality of care, because it is an area in which the practice is often based on myths, traditions and common knowledge.<sup>3-4</sup>

It is worth considering that, both nationally and internationally, we highlight some researchers have investigated the level of knowledge and status of clinical practice of nursing related, such as, with pressure ulcers, with regard to the prevention and treatment.<sup>4-6</sup>

Thus, this study is relevant for the opportunity to review the practice, knowledge and sources of information with regard to the provision of nursing care to patients with wounds in a hospital that has a Group of Care for Patients with wounds, as well as its results may be important for the nurse to glimpse the landscape of their qualification and, thus, to rethink their practice, considering that a study like this can be the update source, the possibility to envision changes in conducting inadequate interventions, conducted in the context studied, towards the achievement of educational goals to allow the construction of professional skills.

That said this research aims to identify the knowledge, practice and sources of information nurses on the care of patients with wounds.

# **METHOD**

This is a cross-sectional study of a descriptive character, with a quantitative analysis of data, which were collected using a questionnaire in July 2010. The study population consisted of 42 nurses, with a sample of 35 nurses in a tertiary university hospital in São Paulo State. The sample was chosen for convenience and had the following inclusion criteria: the availability of professionals to respond to the questionnaire; nurses who were not away for vacation and sick leave, during data collection, which agreed to participate voluntarily in the study and were required to provide assistance direct patient and worked directly in the care of patients with wounds in various clinical (medical-surgical, gynecological and obstetrics, intensive care unit, in addition to the emergency service.

To meet the research objectives, we used a questionnaire to collect data<sup>7</sup>that was translated and adapted to Portuguese. After the initial translation, back-translation was performed for English, in order to verify that the items were similar to the original version, as previous methodology. <sup>3</sup>Subsequently, it was appreciated as the clarity and understanding of three experts in the field of nursing care to patients with wounds, two doctors and a master in nursing. Suggestions for amendments were accepted and the new version was applied with three nurses who did not subsequently participated in the study, they identified no difficulties in reading and understanding the items.

Finally, the version was composed of two parts. At first, the questions were related to socio-demographic data and update sources on the topic; on the second, general information about the knowledge and practice in patient care of with wounds, totaling 22 items. According to the item, the participant had the opportunity to select an answer to the questions of knowledge, or more than one, depending on the question that assessed their practice. The total score of the issues of knowledge was obtained by the sum of correct answers on the test. Wrong and that the participant was unaware errors were counted as responses. For convenience and lack of reference, it was considered with an adequate knowledge on the theme, which obtained scores equal to or above 80% of the items.

The project was approved by the Ethics Committee on Human Research of the Faculty of Medicine of São José do Rio Preto/São Paulo and received approval opinion paragraph n. 336/2008. Participation in the survey was voluntary, occurring after guidance, clarification, authorization and signing the Informed Consent.

The instrument was distributed during the morning, afternoon and night shifts. Subjects answered individually, during working hours, and returned immediately in an envelope with no identification, to ensure anonymity.

The answers to each question were recorded and analyzed using descriptive statistics by calculating absolute and relative frequency. for verifying the existence of probable differences between the average percentage of correct answers of the knowledge test and the variables related to educational characteristics (having or not graduate) and sources

cited to update forms and in wounds was used the Student T test. The descriptive level of significance was  $\alpha = 0.05$ .

### **RESULTS AND DISCUSSION**

#### Characterization of research participants

Participated in the survey 35 (100%) nurses (22,2% of loss). Losses in data collection were due to: employees on vacation and refusal to participate. The data were collected from units of medical and surgical treatment of critically ill patients and gynecology unit. It is noteworthy that 94,3% of subjects were female. The predominant age range was 21-30 years old, with 57,1%, followed by composed of older than 30 years old accounted for 42,9%. Regarding time of nursing experience, 31,4% had less than a year and the remainder ranging from one to more than 20 years of experience. The majority, 23 (65,7%) had type specialization Lato Sensu in nursing; these, only 1 (2,9%) in dermatology and 12 (34,3%) were only graduates. However, only 8,5% considered themselves experts in wound care.

Considering the Postgraduate degree, it was found that the average percentage of hits on the test of nurses with specialization was higher, 73.2% than those without specialization, 70.3%, although the differences were not statistically significant (p = 0.082).

Identification by the nurses of the sources of information cited to update the care of wounds.

**Table 1** - Distribution of the number of nurses who cited sources update on wound care. São José do Rio Preto-São Paulo, July 2010 (n = 35).

Information Sources	Never		Sometimes		Always		Total		
	n	%	n	%	n	%	n	%	
Signature of periodical (Newspaper, magazine, Etc.)	7	20	28	80	0	0	35	100	
Independent reading of scientific articles related to wounds	0	0	28	80	7	20	35	100	
Regular query the database, electronic sites, etc.	2	5,7	24	68,6	9	25,7	35	100	
Use the library to search for information and/or publications on the subject	3	8,6	23	65,7	9	25,7	35	100	
Regular university extension course	3	8,6	22	62,9	10	28,5	35	100	
Study group	12	34,3	18	51,4	5	14,3	35	100	
Congresses, symposia, lecture and other	1	2,9	26	74,3	8	22,8	35	100	
Search for information with teachers	0	0	0	0	0	0	0	100	
Search for information with other nurses	0	0	6	17,1	29	82,9	35	100	
Search for information with physicians	5	14,3	19	54,3	11	31,4	35	100	

As can be seen from Table 1, most nurses use, sometimes, a source of update on wound care. Highlighting subscriptions to periodicals and independent reading of scientific articles related to wounds, 80% respectively.

Nurses who reported on the use sometimes signing periodic, regular consultation of the database: Sourcing sites, use of the library to search for information and/or publications on the subject; regular university extension course; study group; congress, symposia, lecture and others and finding information with physicians had the highest percentage of correct answers compared to nurses who reported never use these features (p = 0.038).

#### Identifying the knowledge and practice of nurses on care of patients with wounds

The assessment of knowledge and practice regarding care of patients with wounds was performed using 22 items that will be shown below. Initially the items related to professional practice, and then related knowledge will be presented. It is emphasized that the practice of nurses will be presented in form of questions and answers, due to different types of responses, which prevented their presentation in the table.

1. In their place of professional performance there are norms (Protocol, manual, etc.) about the care of patients with wounds?

The answers were: yes, 65,7%, not, 25,7%, and did not know of the existence of norm 8,6%.

2. I am able to identify the four stages of pressure ulcers (PU) in patients who I take care.

The majority (65,7%) is found able to identify the four stages; 25,7% sometimes are able and 8,6% reported not being competent.

3. In your place of professional practice, special mattresses are used to prevent pressure ulcers?

In this issue we obtained the following answers: yes, 65,7% and not, 34,3%.

4. In your place of professional practice, samples of cultures of wounds are most often obtained by what method?

Of the participants, 77,1% reported that the microbiological collection is made using the wound swab, 14,3% reported collection by aspiration and 8,6% by tissue biopsy.

5. During your clinical practice, do you use sterile gloves to perform healing of chronic wounds?

Answered yes, 65,7%, not, 25,7% and 8,6% said sometimes.

6. I know how to apply a compression bandage.

The majority of respondents, 57,1% said knowing how to apply a compressive bandage, and 42,9% said they did not know.

7. The evaluation of the skin is part of the daily activities that are performed to all patients.

It was found that the majority, 71,4% said that evaluation run daily, 8,6% said they did not realize it, and 20% said they do it sometimes.

8. I received sufficient education on chronic wounds during my training of nursing degree.

The majority, 71,4% claimed not received enough content on chronic wounds during graduation, showing a deficit in teaching on a matter of utmost importance for nursing, and only 28,6% reported receiving enough content.

9. I feel confident in my team to make recommendations regarding coverage for wounds.

With this assertion, we obtained the following responses: sometimes, 51,4%, most often, 31,4%; all the time, 14,3% and never 2,9%.

10. In your workplace, what is your field of action (autonomy, authority and responsibility) in relation to prescribing (indication) of topical therapies and implementation of conducts for the treatment of wounds?

Of those surveyed, 51,4% said they depend on the permission of another nurse, 20% reported having full autonomy and, upon authorization of the physician or may not have autonomy 14,3%, respectively.

Table 2 - Percentage of items answered by the results of the research participants on the knowledge test, in care of patients with wounds. São José do Rio Preto-SP, July 2010 (n = 35).

ltems	Hits		Errors			Don't know		Total	
	n	%	n	%	n	%	n	%	
1. Wet therapy is the "gold standard" for treating chronic wounds (V)*	22	62,8	3	8,6	10	28.6	35	100	
2. The pain in the wound must be evaluated by the health care professional, not by the patient (F)†	27	77,2	6	17,1	2	5,7	35	100	
3. The assessment of the wound is a cumulative process that comprises observation, data collection and evolution (V)	35	100	0	0	0	0	35	100	
4. The Braden scale is an instrument used to assess the risk of a patient developing	16	45,7	8	22,9	11	31,4	35	100	
vascular ulcer (F)  5. The classic signs of infection (pain,									
heat, redness, swelling, pus) may not be present in patients with chronic wounds or those who are immunosuppressed (V)	19	54,3	12	34,3	4	11,4	35	100	
6. In chronic wounds the only good bacterium is one that is dead (F)	11	31,4	8	22,9	16	45,7	35	100	
7. The selection of the coverage of the wound should be based on characteristic									
of his deathbed (moisture, drainage or presence of devitalized tissue) (V)	34	97,1	1	2,9	0	0	35	100	
8. The first stage of pressure ulcer is easily identified in people of dark skin (F)	30	85,7	3	8,6	2	5,7	35	100	
9. Enzymes (papain, collagenase, etc.) are effective in the removal of devitalized	34	97,1	1	2,9	0	0	35	100	
tissue of chronic wounds (V)  10. PVPI is indicated to clear chronic wounds (F)	10	28,6	23	65,7	2	5,7	35	100	

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11. Wet gauze covers to dry are more								
indicated for treating chronic wounds	21	60	5	14,3	9	25,7	35	100
clean and with granulation tissue (F)								
12. The nurses, in Brazil, are authorized to								
use conservative debridement (superficial)	32	91,4	3	8,6	0	0	35	100
(V)								

\*True; †False

Acquiring basic knowledge on prevention and care of patients with wounds and keep up to date with recent developments and recommendations for evidence-based practice becomes a challenge for nurses providing direct patient care as well as for those who manage the care.

Wound care practices continue to evolve as we learn more about the healing process and, consequently, they develop better products and techniques to prevent injuries and aid in healing. Thus, it is assumed to remain updated about the progress in the area may result in dispensing to patients nursing care quality and safety.

The treatment of patients with wound is dynamic and must accompany the scientific and technological developments. The protocols help in addressing the user, indicating their type of treatment and evaluation during healing. The protocol in addition to equip professionals' actions and systematize the assistance to be provided to patients with wound, will provide grants for implementation and standardization of treatment of hedges used. The results make clear that the nurses, 34,3% unknown or do not know the existence of these guides in their fields of professional activity.

It is noteworthy that, in relation to question 2, respondents seem prepared to start treatment of pressure ulcers. Proper staging of ulcers is part of the evaluation and favors the development of preventive measures to avoid the appearance of these lesions. In 2007, the NationalPressureUlcerAdvisoryPanel (NPUAP) introduced a new definition of pressure ulcer staging and consists of six stages, according to the tissue involvement, because previous reports raised doubts among professionals and often led to misclassification due to perineal dermatitis and/or tissue deeper injury. It is noteworthy that this agency gives nurses the ability to staging pressure ulcers as one of its core competencies.

When available, special mattresses could be used to help maintain the integrity of the skin and prevent UPP in high-risk patients. So who needs to stay in bed for a long time and can use special mattresses for patients who already have UPP in different parts of the body, the use of air mattresses or special foams like viscoelastic can reduce pressure and provide relief, provided that adequate density. However, no national studies that have assessed their ability to reduce the interface and in reducing the incidence of pressure UPP. Note was found that the majority, 65,7% of nurses knew inform availability of mattresses to prevent pressure ulcers in the industries they serve.

The tissue biopsy is considered the "gold standard" for culture to sample to wounds since identifies the microorganism which infects the tissue. However, this method is not available in all health establishments. <sup>10</sup> culture by swab is used universally due to the fact of being non-invasive, costly and not easy to perform. However, the results may indicate only colonization of the wound, as samples are not always properly obtained. For more reliable

results, indicates the cleaning of the wound bed before passing the swab in order to remove the microorganisms from the surface and collect samples by rotating the swab in 360°, pressing it over an area of 1cm² for five seconds.<sup>10</sup>

The use of non-sterile gloves to change bandages of a chronic wound is acceptable conduct. Sterile gloves are required for surgical procedures and contact with sterile areas of the body. Aseptic principles, ie, the application of preventive measures against pollution are important for infection control, regardless of the use of sterile gloves or not. Whereas all wounds are colonized and procedure gloves have reduced bacterial density, they can be used to perform curative. <sup>11</sup>The majority of nurses reported using sterile gloves to change dressings for chronic wounds, which denotes deficit knowledge on this subject.

Graduated compression bandages the distal region of the foot to the knee are standard treatment for vascular ulcers in the absence of significant arterial disease. Nurses should receive training on vascular ulcers care, including patient assessment and applying compressive bandage. The majority of respondents, 57,1% said knowing how to apply such therapy.

The evaluation of the skin should be performed and documented daily for all patients. Regular skin assessment allows early detection and treatment of PU, cracks in the skin, and other problems. This is an important function of the nurse, so caution must be taken to delegate this activity to people who are not qualified to function <sup>7</sup>such as, for example, the crew of nursing.

Care of wounds and applying dressings have always been daily activities in nursing practice and currently treating wounds is recognized as a core competency of nurses. However, investigations have shown a wide variation in the amount of content on the books UPP nursing. Some textbooks include 45 lines or less text on care of these lesions.<sup>7</sup>

Generally, 51,4% said they sometimes feel confident in making recommendations to his team about the coverage for wounds. In part, this may reflect problems of interdisciplinary communication rather than a lack of confidence about their experience in treating wounds. It is expected that with age and experience increase confidence, as it is believed that the more we see and learn, the more we feel confident about our knowledge.

Regarding question 10, it is clear that having the right to select a dressing/coverage would be seen as an aspect of autonomy and/or freedom of action of the nurse. However, it works with other professionals in different health facilities in a spirit of cooperation and collaboration. Thus, when it comes to making decisions, especially in the treatment of wounds, conflicts are inevitable. What must be understood is that the professions are complementary and that professionals should respect each other in order to aim for a greater good, namely, the individual's recovery.<sup>12</sup>

Since the 1960s of the twentieth century, has been shown to maintain the moist wound is sinequanon condition for the acceleration of epithelialization, increasing this process in about 2 to 3 times when compared with the dry bed. <sup>13</sup>This concept revolutionized the practice treatment of chronic wounds. Thus, the goal of the health professional to treat a wound is to keep it in a controlled humid environment. It was found that respondents mostly know the principle. However, still stands out a deficit of knowledge on this topic, since 37,2% do not believe or ignore this principle.

Pain is a common and subjective experience faced by patients with wounds, especially chronic. Thus, the self-report of pain is the most reliable indicator of their presence in the wound. Therefore, this signal must be reported in its characteristics and intensity, by the patient, not the health professional. The measurement of pain is extremely important in the clinical setting, then what the patient describes is more trustworthy than anyone says or thinks. <sup>14</sup>The majority of respondents answered correctly, but there is still little knowledge in this area because to 22,8% of nurses this topic is not yet clear.

Wounds should be assessed by means of continuous and cumulative process; they are dynamic and change conforming heal. The holistic nature of the wound evaluation requires the observance of global conditions, as well as various characteristics of wounds. Therefore, a clinical view that lists some important points that influence this process, such as control of the underlying disease, nutritional, emotional, infectious, medication, immobility and education on this issue. Cover aspects required was unanimous understanding of the interviewees as this process continued.

The risk assessment tool Braden Scale was developed to identify those who are at risk of developing PU, non-vascular ulcer. This scale was adapted and validated in Brazil. <sup>15</sup>The scale has six subscales that reflect the critical determinants of pressure (mobility, activity and sensory perception) and factors that influence skin tolerance to pressure (skin moisture, nutritional status, friction and shear). It is clear to ignorance on the part of respondents about the purpose of the Braden Scale, since most, 54,3% did not recognize the true goal of this tool.

Most respondents believe that the classic signs and symptoms of infection - redness, heat, swelling, pain and purulent exudate may be suppressed in patients with chronic wounds or those who are immunosuppressed. In cases of chronic wound with a long course of treatment, it is believed that the mechanism of inflammation may be decreased due to the presence of biofilm inhibiting local immune response of the wound and thus not triggering the classic signs of infection. <sup>16</sup> However, 45,7% have doubts about it.

Every chronic wound owns bacteria onit, some of which may be beneficial, since it precludes other more virulent establish themselves in the wound. What will determine if a wound becomes infected depend mainly on the immunological resistance of the individual, beyond the microbial density and virulence. 16-7 It was found that 68,6% of respondents have a question or misconception that the wound chronic should have no bacteria, demonstrating that they do not understand the microbiological relationships established in this type of wound.

Regarding the selection of the coverage of the wounds, we should also consider that all are different from each other, and the choice of coverage should be directed to the particular characteristics of each wound, for example, not necrotic infected tissue versus viable tissue, versus infected, amount of exudate, pain, among others. You must also remember that the wounds heal change their characteristics, requiring new behaviors, including the choice of coverage or topical therapy.<sup>2</sup> This statement was answered correctly by 97,1% of respondents.

The literature contains little information on the identification of the first stage of the UPP in people with dark skin pigmentation or black. The failure of professionals identifying pressure ulcer of black skins, in stage I, is a possible explanation to show that these patients have more ulcers stage II than stage I. The black skin may not show visible whitening and its color may differ from the surrounding skin.<sup>7,9</sup> The nurses mostly agree with the statement, therefore, demonstrated adequate knowledge.

Regarding enzymes, they have been used to debride wounds for more than 40 years. This method essentially involves the topical application of proteolytic enzymes or exogenous on the local of the wound. These enzymes degrade the necrotic/devitalized tissue and can be combined effectively with healing in moist environment. <sup>17</sup>The majority of respondents recognize this treatment modality.

Cover wet and dry can be used as a type of mechanical debridement in wounds with necrotic tissue, but should avoid it in clean wounds with granulation tissue. Besides not maintain a moist wound environment, this type of cover adheres to the wound bed as evaporation occurs, so to remove it, injures up the granulation tissue. Some nurses may have confused 'wet to dry' to 'wet to humid', explaining the lack of consensus on this issue. Covers, wet to humid, are hedges of gauze moistened with saline solution should not dry out between changes. Because the cover is always wet, it provides an ideal medium for healing. In contrast, a wet to dry cover adhered to the wound, and when removing it, causes a mechanical wound debridement. 1,7 It should be noted that this nomenclature to define these types of coverage is poorly disseminated in Brazil.

Debride is the act of removing the dead tissue from the wound and/or foreign material from the body. The debridement is essential for wound healing, for tissue repair to exist; the necrotic/devitalized tissue should be removed prior.<sup>17</sup>

In the opinion of SOBEST, the nurse is competent to perform the instrumental too conservative debridement (the subcutaneous level), using tweezers, scissors or scalpel, provided you have knowledge and skills to such an act, obtained through training courses, update or specialization, whose situation requiring surgical intervention is uncharacteristic.

For centuries iodine was the most antiseptic used to clean and treat wounds, although povilivinilpirrolidone-iodine has been used extensively to clean wounds, if not currently recommended cytotoxic products. Povilivinilpirrolidone-iodine topical antiseptics and other vital cells and hinder insignificantly reduce the bacteria from the wound bed. Although iodophor (iodine charger) show some positive results in wound healing and prevention of infection<sup>18</sup>, its use for cleaning wounds is not indicated.<sup>7,18</sup> Most of the nurses, 91,4%, recognizes that the product is inappropriate for cleaning chronic wounds, however, 8,6% believe the product should be used for this purpose.

Regarding sources of information for updating the subject of nurses who reported that sometimes subscribed journals and perform independent reading of scientific articles related to wounds, 80% respectively, only 28,6% were overall hit rate of over 75%.

As for the items related to professional practice, it was found that the majority reported performing or recognizing important topics of care for patients with wounds. Moreover, in six issues (85,7%) this practice was less than expected.

From the 12 questions about knowledge of care for patients with wounds, only 6 (50%) had hit above 70% and 3 (25%) above 90% and, of these issues, only one was answered correctly by all nurses. However, only 5 (41,6%) had greater success than 80% (Table 2).

Considering the overall results, the nurses had, on average, 69,4% correct (SD = 13,5%), demonstrating insufficient knowledge on the subject, highlighting the need to update about the progress of current evidence supporting the care of patients with wounds.

It is noteworthy that one of the prerogatives of nurses in Brazil is to oversee and guide the actions of the technical level nurses (aides and technicians) staff. Thus, the deficiency of knowledge in the care of patients with wounds can reflect on their practice and influence of the other members of the nursing team.<sup>3</sup>

Finally, the results obtained in this study may guide in the context studied, planning strategies for the dissemination and adoption of preventive measures taken as innovations<sup>7</sup>, since several studies support the crucial role of the nurse in the prevention and treatment of chronic wounds.

This study has some limitations: generalization of the results to the general population of nurses of the institution may have been affected by the use of convenience sampling and, finally, for not being an observational study relied on self-reported knowledge and practices that may not represent full clinical reality. The study needs to be replicated with a representative sample at various institutions both public and private sphere in order to have an overview of how the subject is being studied and assimilated by nurses.

### **CONCLUSION**

The results of this study indicate that, in our sample, the mean score on knowledge items was low; nurses who cited use sometimes update sources had the highest percentage of correct answers, as to items related to professional practice much needs to be invested in this area of expertise, as a permanent training of professionals involved in the clinical management of patients with wounds and availability by managers of health resources to carry it out, with the aim of establishing links between the practical and the scientific evidence.

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