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ORIGINAL ARTICLE

PERFORMANCE OF THE NURSING TEAM IN THE PROCESSING OF HEALTH PRODUCTS IN PRIMARY CARE[1]

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ABSTRACT

Objective: to analyze the practice of nursing professionals on the processing of health products in primary care. **Method:** this is a descriptive and exploratory study, with a qualitative approach, carried out in January 2015, in three Basic Health Units, in a city in southern Brazil, with 19 nursing professionals. The data were collected through semi-structured interviews and analyzed through discursive textual analysis. The research was approved by the Research Ethics Committee. **Results:** the results emerged from the analysis that express the practice of the nursing team and the way they organize the work on the Processing of Health Products (PHP). **Final considerations:** there is the presence of mistaken practices in carrying out the cleaning and sterilization processes of health products, implying potential dangers to the health of patients. The study demonstrates the importance of standardizing work processes, aiming at practices in line with current regulations, harmonious between the team, permeating responsibility, knowledge and safety.

Keywords: Nursing team. Primary health care. Health services. Sterilization.

INTRODUCTION

Primary care is conceptualized as a compilation of individual and collective health actions, managed in a specific way and directed, in an organized way, to citizens, in previously determined areas, characterizing the articulation of a multidisciplinary praxis that involves the various aspects of the health care in primary care, including: promotion, prevention, diagnosis, treatment and rehabilitation(1).

Nevertheless, an integral part of these actions refer to practices involving the Processing of Health Products (PHP)(1), characterized as sequentially grouped tasks, involving product reception, mechanical removal of surface dirt, inspection and the organization of techniques for eliminating the microbial load, disinfection and sterilization, as well as storage and routing to the departments where they will be used(2). In this sense, it is highlighted that the proper operationalization of the processes inherent to the PHP in primary care is essential for the quality of care, ensuring effectiveness and preserving the patient from possible harm(3).

Thus, the phases that make up the PHP, as well as the professional performances in this context, must converge with the norms established in relevant protocols(2,4). However, for the PHP to be carried out assertively and effectively, it is essential that the professionals responsible for carrying out the processes are properly prepared so that their actions are compatible with good practices and, consequently, bring about timely results. It is added that, for the most part, these processes are carried out by professionals with nursing training(5).

Thus, it is relevant to look at primary care in relation to the prevention of infections related to health care (IRHC's)(6), as well as the role of nursing essential for the proper conduct of the

[1]Article extracted from Course Completion Paper (CCP), established as Knowledge of professionals from different Basic Health Units in a city in the extreme south of the country regarding cleaning, disinfection and sterilization of materials used in dressings.

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steps involving the PHP, permeating the responsibility and safety, undoubtedly, necessary for the quality of health care in the context of primary care.

However, a more comprehensive glimpse into how the practices and behaviors that make up the PHP are shaped in primary care[7] is urgent, as well as how nursing performances are configured in this context, enabling specific analyzes about the processes and their compliance with the current regulations in line with the necessary quality, promoting assertive interventions in favor of public and patient health, which justifies this study.

In the meantime, the relevance of this research is based on the conspicuous need to deepen the knowledge about the processing of health products in primary care, taking into account the knowledge gaps in this regard and the predominance of literature in the hospital context[8], fostering convergent movements the quality of care provided to patients in primary care, the optimization of processes and the consequent reduction of inherent risks. Thus, this study aims to analyze the practice of nursing professionals on the processing of health products in primary care.

METHODOLOGY

This is a descriptive and exploratory study with a qualitative approach. The municipality where the study was conducted has three 24-hour Health Units (24-hour UBS), 27 Basic Family Health Units (UBSF), seven Basic Health Units (UBS) and two Emergency Care Units (UPA). The research was conducted in three UBS in a city in southern Brazil, one UBSF, one 24-hour UBS and one (UBS), in January 2015. UBS and UBSF provide the service of performing dressings at times pre-established in the morning and afternoon shifts, from Monday to Friday. UBS 24 hours also performs the same service at pre-established times, in the morning, afternoon and evening, every day of the week, including Saturdays, Sundays and holidays.

The units were chosen because they are a practical internship field for nursing students from the Federal University in the city and the teams already have contact with them, understanding the needs of the students. The research had 19 professionals as participants, being eight Nursing Assistants, four Nursing Technicians and seven Nurses. Inclusion criteria were: being a professional in the nursing team with exclusive activity in the Basic Unit and being active in the institution for at least six months. A nursing professional with exclusive activity in the Basic Unit is understood to be one who performs their function, within the workload established by the institution, solely and exclusively within the physical structure of the unit. As for the exclusion criteria, it was considered to be on sick leave, interest leave and to be on vacation during the data collection period.

A total of 21 professionals was expected, but it was not possible to interview the 14 Nursing Technicians/Nursing Assistants, as at the time of data collection the UBSF team was in need of a Nursing Technician/Nursing Assistant and at the 24-hour UBS, a nursing assistant professional refused to participate in the study. For the preservation of the participants, the initials of their respective positions were used in abbreviated form. Nursing assistants were identified by the acronym AE, Nursing Technicians by the acronym TE and Nurses by the acronym ENF. Each position followed the Arabic numerals (AE1 to AE8, TE1 to TE4 and ENF1 to ENF7). Explanations were provided to professionals about the content and objectives of the research, at which time, they were asked about the availability of participation and asked to sign the Informed Consent Form (TCLE).

The data collection was carried out through semi-structured interviews, at which time the professionals answered the questions listed. The interviews were carried out at the health unit, where the health professional worked, during his work shift, in a reserved room, with an average duration of one hour. The interviews were recorded using an audio device and later transcribed. The questions covered the cleaning, disinfection, storage and sterilization of the instruments used to carry out procedures in the Units.

The collected data were analyzed through discursive textual analysis, valuing the participants in their moments of expression of the phenomena and seeking collective networks

of subjective construction of meanings in movements of constant production and reconstruction of realities. It consists of a self-organized process of construction and understanding, through a sequence of three steps: unitarization, categorization and communication[9].

In unitarization, the texts generated by the transcription of the interviews were unveiled and examined in detail, fragmenting them until reaching units of meaning, which are constituted by statements referring to the phenomenon studied. After performing the unitarization, the second stage comprised the articulation of similar meanings and constitutes the categorization of the units previously obtained. Categorization, in turn, is a constructive movement of a different order from the original, which requires constant comparison between the initial units of meaning established in the first stage of the analysis, leading them to groupings of close meaning elements. Communication constituted the third stage of the analysis process, characterized by obtaining the meta-text, which allowed the creation, from emerging voices in the analyzed texts, to produce new understandings about the phenomenon[9].

Regarding the ethical aspects involved in research, full respect is declared for Resolution 466/12 of the National Health Council, which integrates the guidelines for research with human beings[10]. The research was submitted to the Research Ethics Committee in the Health Area, CEPAS-FURG, approved with Opinion 01/2015.

RESULTS

The main findings are related to the practice of the nursing team and the way they organize their work with regard to the processing of health articles, based on the work demand presented in primary care.

Regarding the cleaning process of the material used, professionals report the use of different products, such as hypochlorite, alcohol, liquid soap and pine, without demonstrating standardization in the cleaning of products, as shown in the lines below:

> I usually wash the material and throw it in the hypochlorite; I leave it there for half an hour; then I brush and pack it, and when I put all the materials in the autoclave […] **(AE3)**.

> Hypochlorite, right? We also have... there is alcohol, soap and... and pine too [...] **(ENF2)**.

> That's every day. At the moment, when we are washing, we soak it in alcohol and at the end of the morning we dry […] **(AE5)**.

> Yes... generally, we use alcohol or liquid soap [...] **(NT1)**.

> We soak in the vats with hypochlorite, water and, sometimes, people add a little detergent, that liquid soap that comes too […] **(NT4)**.

> Here, we have soap and sometimes there is hypochlorite, but it is not always **(NT1)**.

> […] Even we have no other product, except chlorine and soap **(ENF1)**.

> […] I alwayswashwithwater, soap, add a littlehypochlorite, dryandaddalcohol, butalcoholis no longeravailable in theunit **(ENF7)**.

At another time, professionals bring diverse information regarding the conduct adopted after the dressings are performed, as well as the understanding that disinfection is part of the cleaning of the material itself.

> After it was used, do you understand? […]. I already pick it up and wash it and assemble the package again […] **(ENF1)**.

> […] If you have a little time, you wash it and leave it running and then put it on for sterilization […] **(NT2)**.

> Disinfection is already part of cleaning the material. In my opinion […] **(AE7)**.

According to the statements, the processes were operationalized according to the demand/need of each professional, without a common standardization, linked to the work demand of the Health Unit, as shown in the statements below:

> […] When there's time, we go, let it soak and in a little while we go and brush […] when there's no time, we start putting everything in there and when the whole day is over, before the noon we brush everything[…] **(AE4)**

> By the time we finish the dressing, we put it in a basin with soap […] We put everything in a basin and at the end of the morning, we clean it for later in the afternoon **(AE5)**.

Regarding the sterilization process used and the ideal methods according to their knowledge, the answers converged in relation to the effectiveness of the autoclave. The professionalsapproachedansweredthequestions as follows:

> Other methods? No, I don't know. I don't know, I think […] I don't think so? I think it has to be an autoclave, right? **(AE2)**.
>
> What, that it can sterilize? There we put the time, put everything… Sometimes the gases even burn, but to what extent? I think anything is better than this greenhouse **(NT2)**.
>
> Now, not with the autoclave, but when I used the stove I knew there was an autoclave, which was better **(ENF6)**.

Another important aspect refers to the awareness of adequate practices that diverge from the actual practices carried out.

> […] then you can't use Bombril (steel sponge), you can't use a brush, but we end up using it because… at least to clean it up **(AE5)**.
>
> The greatest importance that we have is, mainly, the conservation of the material, eliminating any possibility that this material starts to have an inappropriate destination, right? Although I know that mechanical withdrawal is the most important **(ENF4)**.
>
> […] it has to be clean, preferably with the right material, right? I believe this partis important **(ENF6)**.

Again, in relation to the sterilization process, professionals report that it is automated and, therefore, they do not control the cycles. There is also hesitation and uncertainties due to questions about the sterilization method, times and temperatures used.

> I think it depends on the amount of material, because there are days when we sterilize between an hour and a little while he does the whole cycle […] we don't mark, we put the material there and we don't mark **(NA1)**.
>
> It stays there for 1 hour and 15 minutes, more or less in the autoclave **(AE3)**.
>
> Look […] here I… I don't control it, I put the material there, I turn on the autoclave and it automatically does the job […] **(AE2)**.
>
> One hundred twenty-seven degrees, isn't it? I do not remember!! **(TE1)**.
>
> […] in the autoclave, how long does it take, I never booked, because its process is automatic, right?...I don't know how long it takes **(ENF6)**.
>
> What temperature here? I don't know, she does everything by herself (…) we know that the autoclave, it even reaches… more **(ENF2)**.

DISCUSSION

Cleaning is part of the first stage of PHP and can be characterized as a process that aims to remove surface residues, whether biological or not, with the aid of water and scavenger, through manual friction or automated equipment. In addition, the cleaning step is fundamental, as the residual load interferes with subsequent processes, such as disinfection and sterilization[11].

Thus, the cleaning phases of health care products involve several actions that, interdependently, contribute to the efficiency and effectiveness of the process, including: removal of abundant organic matter followed by immersion of the health care product in a detergent solution, concomitantly, the mechanical friction in a delicate way, observing the particularities of the material and the biosafety conditions, ending the step with an exhaustive rinse[4]. In addition, the products used in the cleaning process need to meet specific criteria in accordance with the material manufacturer's guidelines such as compatibility, effectiveness for removing organic material, absence of abrasive potential, easier rinsing, among others[12].

Thus, from the results, issues related to inadequate conduct in the product cleaning process stand out, highlighting, a priori, the mistaken use of incompatible chemicals and in complete disagreement with the practices determined in current protocols, in addition to a possible confusion in understanding the distinctions that characterize the cleaning and disinfection processes. The chemicals mentioned include alcohol, sodium hypochlorite, and home disinfectant, pine.

Because, although there is evidence about satisfactory results of 70% alcohol in the process of disinfection of health products[13], which is configured as a stage of the PHP in which the destruction of microorganisms, with the

exception of spores, occurs, using if, recurrently, liquid media for this purpose[11], in the presence of organic matter, its use becomes potentially harmful, considerably impairing the cleaning process, and is not recommended under these conditions[14].

Regarding sodium hypochlorite, despite being used in disinfection processes[11], this chemical can be significantly harmful when there is incompatibility with the product to be immersed, such as metals, in addition to inefficiency in the presence of waste such as blood and external elements like light and heat. Anotherdifficultfactorreferstothelackofalternativ estoassesstheeffectiveness in systematic uses[15].

In this sense, it is noteworthy that the guidance for practices in a CME, in the cleaning process, regulates the use of neutral detergents, which may or may not have enzymatic characteristics, emphasizing the mandatory registration of the National Health Surveillance Agency (ANVISA)[4]. Therefore, it is pointed out that the Brazilian legislation regulates the use of enzymatic detergents[16], and its use proves to be considerably satisfactory for the removal of organic waste and the success in the effectiveness of the cleaning process[17], however it highlights the need for knowledge, guiding the professional performance in an assertive and pertinent way, related to the choices that involve the type of waste, the nature of the product, the particularities in the use and the properties of water[18].

In this context, it is emphasized that all phases that comprise the cleaning process must be carefully obeyed, including the use of appropriate substances; since the incipient removal of microbial load implies health risks and makes the sterilization processes unfeasible [19]. Thus, it is added that wrong and inappropriate practices during the cleaning of health products can result in damage to the material used[20], but, above all, in harm to the health and safety of the patient, it is highlighted that some factors such as incipient management support and lack of material resources may be linked to this scenario in the context of primary care[3], permeating a paradox between awareness of what should be done and the practices performed, as seen in the statements.

Regarding the sterilization process, there is a consensus in the reports about the need and the conspicuous effectiveness of the autoclave; however it is possible to observe doubts and uncertainties regarding the rules and techniques relevant to the standardization and efficiency of the process, reflecting in inadequate and mistaken practices, inconsistent with current legislation. It is noteworthy that sterilization is a processing method that is characterized by the complete destruction of any microorganism, physically or chemically[11].

According to the Brazilian regulation RDC March 15, 2012, the use of ovens is prohibited, and the sterilization by physical method must be carried out by autoclave, with parameters set in advance, not being authorized to flexibilize the qualification and performance criteria of the sterilization phases, a fact verified in the speeches. In addition, all cycles and processes must be duly monitored by effectiveness tests, including biological and chemical indicators, daily, and at each load respectively[2], which confirms the relevance of appropriate practices, as well as a standardization of professional conduct.

With regard to the exposure of health products under steam, the time factor is emphasized as essential for the effectiveness of the sterilization process. In the statements, there is incipient knowledge about ideal temperatures, reflected in a similar way in professional practices and in the absence of control over the equipment cycles. In addition, the pressure exerted and reaching adequate temperatures are essential criteria for the proper operation of sterilization[11]. Thus, the importance of knowledge about professional practices in work environments is highlighted, taking into account, in an additive way, implementations and interventions in these directions[21].

In this context, heterogeneous behaviors were observed during the reports about the work processes, and it is possible to observe a mismatch in the professional practices in relation to the PHP, carried out by the team. There is an absence in the standardization of the performance of activities both in relation to the products, in professional performances and in time. Thus, the need and obligation to organize professional activities based on scientifically consolidated routines that will standardize the

activities performed deserves to be highlighted. In this sense, it is highlighted that the Standard Operating Procedure (SOP) is essential for compliance with the country's legislation[2], and helps to validate the cleaning process, which, in turn, is of significant relevance and intimately connected the recognition of the importance of this stage of the PHP by the entire health team[22].

Furthermore, weaknesses in the sterilization process in primary care can be recurrently evidenced[23,24], reiterating the importance of standardizing professional practices, with the standardization of conduct being essential, enabling work processes to be performed assertively , synchronized and in harmony with the necessary and desired security in health care[24].

Thus, PHP in primary care is configured as a theme that demands attention, as irregularities are not seen in isolation[3,7,25], particularly in the cleaning and sterilization stages, urgently requiring sanitary management[25]. Thus, the importance of a detailed look at the practices related to the PHP is ratified, considering the importance for public health in an integral way.

FINAL THOUGHTS

In summary, there is the presence of mistaken practices in carrying out the cleaning and sterilization processes of health products, implying potential dangers to the health of patients. Furthermore, a profound disorder in the understanding of cleaning and disinfection processes becomes evident, inferring the need for training and qualifications, permeating reflections on assertive and safe practices. Furthermore, it is possible to observe in some speeches the awareness of the wrong conduct in relation to the performances performed, which allows emphasizing the importance of management and supervision, demanded by the notable lack of direction among professionals. Still, the study demonstrates the importance of standardizing work processes, aiming at practices in line with current regulations, harmonious between the team, permeating responsibility, knowledge and safety. Likewise, the theme becomes timeless, as it reiterates the importance of the proper operationalization of the PHP and the standardization of work guided by the rigor arising from science, by the discipline of regulatory norms, but specifically by the commitment to life, the essence of all nursing practice.

Furthermore, studies of this nature contribute substantially to the expansion of the theme, considering the knowledge gaps that involve the PHP in primary care, enabling reflections and discussions, implying the strengthening of assertive practices in favor of patient safety in favor of public health.

Limitations of the study: as limitations of the study, there is the impossibility of generalizations is highlighted, since the practices analyzed refer to specific units; however, it is essential to encourage more studies in the area, providing greater visibility to the theme.

ATUAÇÃO DA EQUIPE DE ENFERMAGEM NO PROCESSAMENTO DE PRODUTOS PARA A SAÚDE NA ATENÇÃO BÁSICA

RESUMO

Objetivo: analisar a prática dos profissionais de enfermagem sobre o processamento de produtos para a saúde na atenção básica. **Método:** trata-se de um estudo descritivo e exploratório, de abordagem qualitativa, realizadono mês de janeiro de 2015, em três Unidades Básicas de Saúde, de um município do Sul do Brasil, com 19 profissionais de enfermagem. Os dados foram coletados por meio de entrevista semiestruturada e analisados por intermédio da análise textual discursiva. A pesquisa foi aprovada pelo Comitê de Ética em Pesquisa. **Resultados:** emergiram da análise, resultados que expressam aprática da equipe de enfermagem e a forma como organizam o trabalho acerca do Processamento de Produtos para a Saúde (PPS). **Considerações finais:** constata-se a presença de práticas equivocadas na realização dos processos de limpeza e esterilização dos produtos para a saúde, implicando em potenciais perigos para a saúde dos pacientes. O estudo demonstra a importância da padronização dos processos de trabalho, visando práticas compassadas com as normatizações vigentes, harmônicas entre a equipe, permeando a responsabilidade, o conhecimento e a segurança.

Palavras-chave: Equipe de enfermagem. Atenção primária à saúde. Serviços de saúde. Esterilização.

ACTUACIÓN DEL EQUIPO DE ENFERMERÍA EN EL PROCESAMIENTO DE PRODUCTOS PARA LA SALUD EN LA ATENCIÓN BÁSICA

RESUMEN

Objetivo: analizar la práctica de los profesionales de enfermería sobre el procesamiento de productos para la salud en la atención básica. **Método:** se trata de un estudio descriptivo y exploratorio, de abordaje cualitativo, realizado en el mes de enero de 2015, en tres Unidades Básicas de Salud, de un municipio del Sur de Brasil, con 19 profesionales de enfermería. Los datos fueron recolectados por medio de entrevista semiestructurada y analizados por medio del análisis textual discursivo. La investigación fue aprobada por el Comité de Ética en Investigación. **Resultados:** surgieron, del análisis, resultados que expresan la práctica del equipo de enfermería y el modo que organizan el trabajo respecto al Procesamiento de Productos para la Salud (PPS). **Consideraciones finales:** se constata la presencia de prácticas equivocadas en la realización de los procesos de limpieza y esterilización de los productos para la salud, implicando potenciales peligros para la salud de los pacientes. El estudio demuestra la importancia de la estandarización de los procesos de trabajo, buscando prácticas acordes a las normalizaciones vigentes, armónicas entre el equipo, permeando la responsabilidad, el conocimiento y la seguridad.

Palabras clave: Equipo de enfermería. Atención primaria de salud. Servicios de salud. Esterilización.

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