RESUMO
Objetivo: conhecer como profissionais da saúde procedem no cuidado com artigos críticos na atenção básica, com vistas à segurança dos usuários. Método: estudo descritivo, exploratório, de abordagem qualitativa, realizado com 42 participantes entre enfermeiros, auxiliares de enfermagem, técnicos de enfermagem e auxiliares de consultório dentário que atuam diretamente no processo de esterilização. Resultados: nas três secretarias de saúde pesquisadas, o reprocessamento de materiais e instrumentos carecem de melhor estruturação e organização, buscando a qualificação dos serviços e gerando maior segurança aos usuários. Conclusão: há necessidade premente de rever o sistema de processamento dos artigos críticos nos locais em que foi desenvolvido o estudo. Descritores: Segurança do Paciente; Enfermagem; Esterilização; Atenção Primária à Saúde.

ABSTRACT
Objective: to know how health professionals proceed in care of critical goods in primary care, with a view to user safety. Method: descriptive, exploratory, study with a qualitative approach, conducted with 42 participants among nurses, nursing assistants, nursing technicians, and dental clinic assistants who act directly in the sterilization process. Results: in the three health departments under analysis, reprocessing of materials and instruments need better structuring and organization, seeking the qualification of services and generating greater user safety. Conclusion: there is an urgent need to review the critical goods processing system in the facilities where the study was conducted. Descriptors: Patient Safety; Nursing; Sterilization; Primary Health Care.

RESUMEN
Objetivo: conocer cómo actúan los profesionales de la salud en el cuidado de bienes críticos en atención primaria, con miras a la seguridad de los usuarios. Método: estudio descriptivo, exploratorio, con enfoque cualitativo, realizado con 42 participantes entre enfermeros, auxiliares de enfermería, técnicos de enfermería y asistentes de clínicas dentales que actúan directamente en el proceso de esterilización. Resultados: en los tres departamentos de salud analizados, el reprocesamiento de materiales e instrumentos necesita una mejor estructuración y organización, buscando la calificación de los servicios y generando mayor seguridad de los usuarios. Conclusión: hay una necesidad urgente de revisar el sistema de procesamiento de los bienes críticos en las localidades donde se realizó el estudio. Descriptores: Seguridad del Paciente; Enfermería; Esterilización; Atención Primaria de Salud.

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INTRODUCTION

Patient safety has increasingly been the subject of numerous approaches, discussions, propositions aimed at the development of strategies whose purpose is minimizing adverse events, generating safety and, in a special way, the qualification of services. According to the Ministry of Health, user safety is “reducing the risk of unnecessary damages associated with health care to an acceptable minimum.”1:1 Therefore, user safety consists in reducing or extinguishing unsafe acts in clinical procedures and in using the best practices described, guaranteeing the best result possible and, consequently, in the qualification of nursing care.1

User safety is a responsibility of all health professionals, it is up to them to adopt strategies for preventing damages and reducing risks. The Health Professional’s Handbook, created by the Brazilian Network of Nursing and Patient Safety (REBRAENSP), at its Rio Grande do Sul Center, consists of 12 strategies that meet this need. Primarily, the strategies proposed are: hand hygiene; patient identification; effective communication; fall prevention; pressure ulcer prevention; safe administration of medicines; safe use of intravenous device; safe surgical procedures; safe administration of blood and blood components; safe use of equipment; partner patients in their own safety; health professional’s education for safe care.2

Infection control is key in health services, since it directly implies quality and safety of the service provided, defining the length of treatment and, consequently, its costs. Professionals' understanding that this control takes place through the sterilization process is extremely significant, because the failure in some stage of the process can entail patients' complications. Nurse’s work, in general, is quite complex, it involves clinical functions, as well as administrative and bureaucratic functions and service coordination and orientation, thus transcending direct patient care.3

As far as infection control is concerned, studies, practices, and pieces of legislation are rather focused on the hospital environment, and primary care becomes secondary. In terms of processing of instruments, there is a need to consider that, regardless of the process to be undergone, all instruments should be considered as contaminated before the disinfection and sterilization procedures.

METHOD

This is a descriptive and exploratory study, with a qualitative approach.6 The survey was conducted at 14 primary care services that had, at least, nurse, nursing technician or assistant, and dental clinic assistant in three different municipalities in the northwestern region of Rio Grande do Sul, Brazil. The services where data has been collected are located in towns with 34, 25, and 86 thousand inhabitants, respectively.

Service 1 consists of 7 Family Health Strategy (FHS) teams and 1 Brazilian primary health center (UBS) (12 interviews); service 2 consists of 8 FHS teams (15 interviews); and service 3 consists of 12 FHS teams and 5 UBS (15 interviews). Data collection took place from September to December 2014. Out of the 42 professionals interviewed, 14 were nurses, 4 nursing assistants, 10 nursing technicians, and 14 dental clinic assistants, who work in UBS. The number of respondents has been defined through theoretical saturation of data in relation to the study purposes.

The inclusion criteria were: professionals who worked for at least 1 year in the primary health network, working directly in one of the sterilization stages, instrument custody and distribution. Professionals who are not directly involved in the sterilization process and those who work in the service under analysis for less than 1 year were excluded from the survey. In order to guarantee the participants' privacy and their respective workplaces, they were identified by codes, to do this, the codification by functional category ‘N’ was used, for ‘nurse,’ ‘NT’ for ‘nursing technician,’ ‘NA’ for ‘nursing

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assistant,’ and ‘DCA’ for ‘dental clinic assistant.’ For the departments surveyed, we adopted the abbreviation ‘D’ (1 to 3).

Due to the range of data, a selection was needed. In this study, the issues related to user safety in care of critical goods in primary care are addressed. We chose to describe three categories because of space limitations. In each category three or four fragments of answers were placed.

For constructing this study, a semi-structured interview was conducted, containing open-ended and closed-ended questions about the procedures taken at each stage of the sterilization process. The interviews were recorded and later transcribed for analysis and performed at a time agreed with participants. Data underwent the Content Analysis method, as proposed by Bardin. The study was approved by the Research Ethics Committee of the Federal University of Santa Maria (UFSM), according to the Consolidated Term no. 693.802.

RESULTS

The thematic analysis of interviews allowed the definition of two categories. The first category refers to responsibility for the sterilization procedures in the health facilities; the second depicts care in the preparation of materials and instruments for sterilization.

♦ Responsibility for the sterilization procedures

When asked about the person in charge of processing materials at the facility, it became clear that this activity is usually carried out by nursing assistants and technicians and dental clinic assistants, and a nurse sporadically accompanies the execution of this process.

_The nursing technician, the nursing issue, you know, and the dental clinic assistant, and when it fits the nurse also helps._ (N1 D2)

_Usually, the nursing technicians, when it there is nursing material, and dental clinic assistant, when there is dental material._

_Sometimes, I also do some procedure, but sporadically._ (N4 D3)

_Now, the nursing technician and the dental clinic assistant._ (NT2 D1)

Despite the numerous tasks of nurses working in primary care, it is understood there is no justification for their absence or their occasional presence in the processing of materials and instruments. This fact implies the process to be in charge of professionals with High School education, taking into account that most technical courses offer reduced learning workload on the material sterilization process, these professionals end up having to learn in practice the whole process, and this is the time the presence of a nurse is crucial, training and supervising her/his team to perform correctly and safely the processing of materials.

In primary care, there are more and more medical, dental, and nursing procedures, requiring instruments and sterile materials. Patient safety regarding the use of these materials and instruments involves several factors: structuring of physical space, organization of actions, educational actions, observation of the sterilization, custody, and distribution standards, as well as definition of the technical professional in charge of managing this service, particularly, defining and implementing patient safety strategies.

♦ Care in the preparation of materials for sterilization

Correct preparation of materials, separation, washing, and correct packaging are some actions that must be taken to ensure a good sterilization process, however, when asked about the procedures taken in the process, most respondents briefly mention the material preparation steps prior to sterilization, as explained below:

_Well, so, we have a sterilization room, this room receives contaminated material, and washing, cleaning, drying, packaging take place there._ (N2 D2)

_Material washing, drying, packet closure, and sterilization._ (N4 D1)

_There are cleaning, washing, then drying and packet closure._ (N4 D3)

_Separation, washing, drying, and wrapping._ (NT2 D1)

Cleaning consists of material manual or automatic washing, rinsing in running water, and drying with compressed air or clean cloth, aiming at the total removal of debris and dirt from the instruments. It is recommended that a Material and Sterilization Center (MSC) should contain at least: reception and cleaning area (dirty sector); preparation and sterilization area; chemical disinfection room; areas for monitoring the sterilization process; and finally the storage and distribution area for sterile materials. Despite the services surveyed do not have a MSC, spaces to receive dirty and contaminated material cannot be in the same room for preparation, sterilization, storage, and distribution of sterile materials.

Although recommendations by the regulating bodies point out the importance of observing the products used for immersion of...
materials and instruments and the length of time they should remain immersed, most of respondents report not having the adequate products available in the facilities, besides not specifying the length of time that the materials remain immersed, noticed in these statements:

 [...] as we do not have enzymatic soap, I soak material in the dishwashing detergent, you know. (DCA4 D3)

 [...] we soak material, when we have material that can be soaked, we wash it, we take it out, we dry it, we pack it. (NT4 D1)

The next step concerns materials packaging, which must follow a sequence in the preparation of folds, in order to keep asepsis in the working area and present identification on adhesive tape, including product name, batch number, date of sterilization, date of use, sterilization method, and name of the person in charge of preparation. In addition, sealing of envelope-type packages must be done by thermal sealer.

 [...] it is packing, putting the date, then putting to sterilize. (DCA2 D1)

 [...] because our sealer was sent to fixing about half a year or more and it did not come back, yet. (N5 D2)

 [...] but they do not provide it, they do not have a sealing machine for each ward. (DCA4 D3)

The analysis of answers evidences the absence of a MSC, as well non-structuring and organization of sterilization in the services surveyed. The provision of structure implies adequate physical spaces, so that people do not allow contaminated instruments to be handled in the same environment, as well as sterilization and storage/distribution. Another fact demonstrated is lack of primary resources for preparation of instruments. Safe sterilization is initiated by accurate cleaning of instruments, since the presence of dirt interferes with the sterilization process. As already mentioned, structuring, organization of services, and availability of working conditions is among the tasks of the technician in charge and also the municipal managers’ tasks.

Analyzing the discourses, it was noticed that this stage does not receive the attention needed, it is barely mentioned, and when this occurs, only superficially. Also, there is a lack of support on the part of managers regarding the availability of material resources that are indispensable for carrying out the activity adequately.

The availability of critical goods to nursing, dental, and medical professionals working in primary care is related to commitment to qualified and safe care for users. To do this, the processing of critical goods must follow a planning, systematized process. For this, the professional in charge of the process must know all steps: cleaning, inspection, packaging, sterilization, and storage. It is worth noticing that all stages of the process must be based on technical standards and safety principles.

### DISCUSSION

Although the Resolution RDC no. 15 advocates a technical professional in charge of product processing in the health service, it does not specifically define the training of this professional. In turn, the legislation that defines nursing tasks states that it is a nurse’s task to participate in planning, execution, and evaluation of health programming; prevention and systematic control of damages that may be caused to clients during nursing care. Therefore, while the Resolution RDC no. 15 does not recommend which professional should take the technical responsibility for services, nurses receive in their training the technical and legal preparation that support pursuing this function.6,8

The technical leader should ensure the implementation of processing standards, predict and provide for human and material resources that can ensure proper functioning and compliance with standards, ensuring that all responsibilities and professionals are formally designated, defining the means to be used for traceability of the health product processing steps.8 Managers and professionals’ commitment and involvement, especially nurses, are key factors in adjusting care of sterile materials in any environment that provides health care.10

Sterilization of materials under adverse conditions can endanger users. In order to promote patient safety, there is a need for management support, adequacy to the recommended standards, continuous education, seeking to improve the process and eliminate avoidable risks.11

It is key that patient safety is included in the curriculum of undergraduate Nursing courses, empowering prospective professionals through knowledge and skills about minimizing strategies, establishing knowledge and skills about strategies to minimize injuries, work safety in all spheres, i.e. through structural, managerial, and clinical issues.12

Numerous irregularities were identified regarding the sterilization process in all the
unions of the departments surveyed. This denotes lack of professionals’ preparation and failure to comply with current legislation. This drawback could be minimized with the adoption of continuing education as an instrument for updating and training professionals. Another possibility to remedy this demand is implementing the Brazilian Standard Operational Procedure (POP), adjusting and standardizing the process.

The sterilization process entails something more complex than pursuing mere daily tasks because it is an activity that can directly and significantly interfere with patient safety and the health-disease process. Although the sterilization process is regarded as indirect assistance provided to the patient, it has the same importance than direct care, because the quality of the material processing ensures a reduced risk of infections, guaranteeing the safety of patients and professionals who provide care directly.

The ‘portaria’ establishing the Brazilian National Patient Safety Program (PNSP) is designed to promote and implement patient safety initiatives in different areas of care, organization, and management of health services through the implementation of risk management and patient safety centers in health services. It also advocates the inclusion of patients and their family members in actions related to patient safety, expanding society’s access to information on patient safety and produce, systematize, and disseminate knowledge about patient safety.

Although restricted to the universe of this study, regarding user safety in primary care, it is observed that practices concerning infection control are not strictly followed. Some factors corroborate this claim: in primary care services, there is no MSC, and the materials to be sterilized are manipulated by several professionals, using different techniques. Another fact to highlight is the lack of resources that ensure effectiveness of sterilization. Among them preventive maintenance for autoclaves, so that they are ‘mechanically’ capable of ensuring pressure, temperature, drying conditions and, consequently, conditions to sterilize goods.

Excellence in the disinfection and sterilization procedures depends on using materials tested and approved by the sanitary standardization, and the non-use of these, in any of the reprocessing stages, can generate damages to user’s health. The supply of these resources is a responsibility of managers at the municipal level, however, asking for them is a responsibility of each health facility’s manager.

CONCLUSION

This study allowed us to have a differential view on the processing of critical goods in primary care and how they can interfere with user safety and it shows in a special way the nonconformities in the reprocessing of materials in primary care. In this context, we show the lack of nurses’ participation and supervision, who delegate such activity to nursing technicians and assistants. This way, they demonstrate poor knowledge and appreciation of the process, perhaps because this is not included in direct care, it is not seen as determinant in patient safety.

The research showed data that evidence about nonconformities in the reprocessing of materials in primary care. In this context, it shows the lack of nurses’ participation and supervision, who delegate such activity to nursing technicians and assistants.

Legislation, studies, and discussions involving patient safety, although late, brings a series of precepts that, if properly deployed, can generate changes in health education and, especially, in the feasibility in the various health care forms and scenarios.

This study was based on the perception of Nursing undergraduate students about the sterilization of critical goods associated with patient safety. The fact that each health facility is responsible for the sterilization of materials makes it hard to adopt uniform techniques as recommended by the standards and current legislation, as well as the need for a greater number of resources for greater safety.

Understanding the importance of primary health care and the growing number of clinical, surgical, and specialized care interventions, it is also worth structuring services to adopt new forms of continuous training and to implement supplementary services that ensure quality and safety of user care.

It is noticed there is a lot to be done in the qualification of services: designing specific physical spaces suitable for preparation, sterilization, storage, and distribution of critical materials, definition of a technical responsible, providing the services of all resources that guarantee safety in the process. In addition, providing for the construction of a single sterilization center in all facilities as a way to generate control and safety.

Although restricted to three municipal health departments, this research has shown a long way to go in terms of generating user...
safety in primary health care services, regarding the use of critical materials. Even with the limitations of this study, we may understand there is a need to conduct further research involving the study subject in primary care, since the safety of users who seek health services is not restricted to hospital organizations. Finally, it is worth confirming the small number of studies involving the sterilization of critical materials, especially in primary care.

**REFERÊNCIAS**


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