

**Disposal of contaminated materials in primary health care: Nursing assistance grants**

Descarte de materiais contaminados na Atenção Primária a saúde: subsídios para a assistência de Enfermagem

Disponer de los materiales contaminados en la Atención Primaria: subsidios para el cuidado de enfermeira

Layze Braz de Oliveira¹, Artur Acelino Francisco Luz Nunes Queiroz¹, Matheus Costa Brandão Matos², João Gabriel Noleto Ferreira de Matos², Luana Rodrigues da Silva³, Andréia Rodrigues Moura da Costa Valle²

1. Postgraduate Program in Fundamental Nursing, School of Nursing of Ribeirão Preto, University of São Paulo. Ribeirão Preto-SP, Brasil.

2. Postgraduate Program in Nursing. Federal University of Piauí (UFPI). Teresina-PI, Brasil.

3. University Center UNINOVAFAPI. Teresina-PI, Brasil.

ABSTRACT

Objective: to analyze how nurses who provide home care discard contaminated materials in primary health care. **Methods:** a descriptive study was carried out, with 42 nursing professionals working in 21 Basic Health Units of a capital city in the Northeast of Brazil. The statements were processed in the IRaMuTeQ and analyzed by the Descending Hierarchical Classification. **Results:** Three classes were obtained: Domiciliary Solid Residues produced during the domiciliary visit, How the dynamics of the attendance influence in the production of residues?, Responsibility for the production and Management of Solid Residual Domiciliary. **Conclusion:** There is a correct conception about the solid waste formation in the health services and consequent adequate disposal of the same, however there is a gap between the knowledge and the implementation of this action in the daily practice of these professionals.

Descritores: Knowledge; Nursing; Health Care Waste; Primary Health Care.

RESUMO

Objetivo: analisar como enfermeiros que prestam atenção domiciliar descartam materiais contaminados na atenção primária a saúde. **Método:** realizou-se um estudo descritivo, com 42 profissionais de enfermagem atuantes em 21 Unidades Básicas de Saúde de uma capital do Nordeste brasileiro. Os depoimentos foram processados no IRaMuTeQ e analisados pela Classificação Hierárquica Descendente. **Resultados:** foram obtidas três classes: “Resíduos Sólidos Domiciliares produzidos durante a visita domiciliar”; “Como a dinâmica do atendimento influencia na produção de resíduos?” e “Responsabilidade frente a produção e gerenciamento de Resíduos Sólidos Domiciliares”. **Conclusão:** existe uma concepção correta sobre o processo de formação de resíduos sólidos nos serviços de saúde e necessidade de descarte adequado dos mesmos, entretanto há uma lacuna entre o conhecimento e a implementação dessa ação na prática diária dos profissionais.

RESUMÉN

Objetivo: analizar cómo enfermeros que prestan atención domiciliar descarta materiales contaminados en la atención primaria a la salud. **Método:** se realizó un estudio descriptivo, con 42 profesionales de enfermería actuantes en 21 Unidades Básicas de Salud de una capital del Nordeste brasileño. Los testimonios fueron procesados en el IRaMuTeQ y analizados por la Clasificación Jerárquica Descendente. **Resultados:** se obtuvieron tres clases: “Residuos Sólidos Domiciliarios producidos durante la visita domiciliar”; “¿Cómo influye la dinámica de la atención en la producción de residuos?” Y “Responsabilidad frente a la producción y gestión de Residuos Sólidos Domiciliarios”. **Conclusión:** existe una concepción correcta sobre el proceso de formación de residuos sólidos en los servicios de salud y necesidad de descenso adecuado de los mismos, sin embargo hay una laguna entre el conocimiento y la implementación de esa acción en la práctica diaria de los profesionales.

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INTRODUCTION

The advances in the Health Care Networks, and consequent increase in the number of health institutions, resulted directly in a greater generation of Health Care Waste (HCW). The generation of this waste is directly related to the type of care provided, and has been increasing according to the expansion of the care in its most diverse forms, arriving at the home of the users through home care and by the professionals of the Family Health Strategy (FHS)¹.

Home care is defined as a modality of action performed by members of the health team at home² (Ministerial Order No. 356, of February 20, 2002). This alternative care model directs the care and clinical treatment of several diseases and patients to their house, and can function as an auxiliary service or continuity of hospital care³.

There has been an expansion of this model of assistance in Europe, and the United States, which already has more than 30,000 service providers registered in the country⁴. The activities of this assistance modality are centered on programs that mainly serve elderly patients and/or those with difficulties to go to basic care units. Of particular note is the care given to patients with chronic, terminal and infectious-contagious diseases⁵.

Thus, home care involves complex procedures which generate solid waste health including potentially contaminated sharps (vacuum, syringes, vials, etc)⁶, which does not always have the necessary treatment for disposal after use. Based on this, this study aimed to analyze how nurses who provide home care discard contaminated materials in primary health care.

METHODS

This is a descriptive, cross-sectional and qualitative study carried out with nursing professionals working in the Family Health Strategy (FHS) of a capital city in Northeastern Brazil, belonging to

two health centers (East/Southeast and South). This municipality has 63 Basic Health Units (BHU), 36 of which are in the Eastern/Southeast region and 27 in the South⁷. The selection of these regional and respective Health Units was based on a lottery.

The sample consisted of 22 nurses, selected by the proportional stratified random sampling method. For inclusion in the study, the professional should be a permanent worker in the Health Unit for at least one year. Professionals who were on leave or vacations and those who refused the invitation were excluded.

Data were collected from June to September 2016, in a reserved room of each institution, by two suitably trained researchers, guided by a semi-structured script previously tested, adapted from Mendes⁸ with open and closed questions that explored the daily knowledge and practices of professionals.

Recorded interviews had an average duration of 40 minutes and were later transcribed. At the end of each interview the participants were asked if they would like to leave the study or change their answers, but there were no withdrawals or changes.

The statements, in turn, were grouped and formed a corpus, which had statistical treatment in the software IRaMuTeQ (acronym of *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*), analyzed on the basis of the Descending Hierarchical Classification (DHC)⁹⁻¹¹.

Then, key expressions were extracted from the interviewees' speeches, which complemented the CHD findings and allowed the delimitation of the speeches in "definitive classes". The analyzes were based on the Collective Subject Discourse method.

The study was approved by the Research Ethics Committee (CAAE: 18110614.1.0000.5214). In order to preserve the identity of the participants, an alphanumeric system (NUR01 and TEC01).

RESULTS

Regarding the characterization of the professionals, the majority were female (83.3%), and were formed more than 15 years (45.2%), with only primary health care (52.4%).

From the statements of the subjects, starting from 42 Units of Initial Context (UIC), the software recognized the separation of the corpus in 192 Elementary Context Units (ECU), using 68.9% of the total corpus (Figure 1).

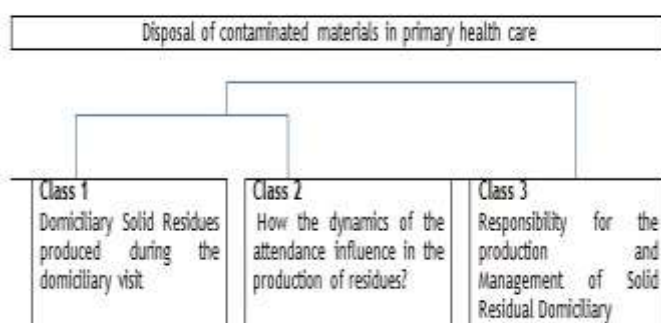


Figure 01: Thematic structure of the classes produced.

Class 1: Household Solid Residues produced during the home visit

This class pointed to the nurses' experience in primary health care and establishes a relationship between care delivery and solid waste production in the home environment.

The professionals identified the presence of contaminated and potentially contaminated materials in the development of their activities and report the importance of achieving segregation, an essential step in the management of waste.

We do vaccine application, catheter placement and removal, dressings ... everything generates waste, right? (NUR 05)

I think mainly gloves and contaminated gazes, but syringes and collection needles is also common. (TEC 02)

Here we have many old people and bedridden, so I have a whole range of procedures to do, and a plastic bag to put the waste generated. (NUR 02)

Class 2: How the dynamics of the attendance influence in the production of residues?

This class is linked to the previous one, based on a cause-effect relationship, pointing out that home care incorporates a dynamic that does not corroborate with the safe flow for the correct disposal of solid health waste, when it comes to this type of care is often carried out improvised and fall short of the real needs of users.

Within the home environment, professionals face difficulties in arranging the necessary devices for a safe care, these gaps involve both the unavailability of resources for the provision of services and the inability of this mode of care to provide sufficient materials for care within the homes.

In the patient's home is very complicated, because we already go in an improvised car, with an improvised team and arrives there we have to improvise procedures and the place to throw trash as well. (NUR 18)

The structure is totally different, I have to take it if you want to use it. So I have to take a sharp punch box, but several teams make several visits during the week, so does each team keep their box? Why a box per visit does not give ... (TEC 05)

Class 3: Responsibility for the production and Management of Solid Residual Domiciliary

The contents seized in this class evidenced that nurses realize that despite being a small environment, there is a generation of waste within the dynamics of care to users at this level of care, however the support provided by the health unit still make feasible the completeness of all stages involved in the waste management flow.

The professionals expressed the importance of their action in relation to the waste management, however there is still an asymmetry between the perception and the integrated performance of the team in maintaining a

continuous and safe flow according to the demands of these services.

The team has to be aware that it is in a different environment, and that it is responsible for what it produces. (NUR 08)

I think we have to understand that we are in the patient's home, and that what we leave there can be detrimental to his health. (TEC 11)

Even when I was in the patient's home, I was the one who did the procedure, so it's my responsibility. (NUR 18)

DISCUSSION

Nursing professionals recognize the existence of a fragility in the workflow in home care, which seems to be related to the care environment, willing supplies and human resources.

UBS are small care environments that offer simple, basic care. Although the generation of resources in them may seem small, considering the number of units providing this service in Brazil (around 31,418), the generation of waste tends to be equivalent to large units¹².

The main problem in this scenario is the dynamics of the waste stream produced within these service units. In addition, it is highlighted that the home environment is considered an extension of the UBS, thus being an environment of health care.

Health facilities are placed in makeshift places, which often do not have sufficient support for an adequate flow of such waste, with facilities that do not allow group storage, assistance and internal circulation areas that allow the transit of transportation of waste and external storage facilities¹³.

When performing home care the professional may encounter unhealthy environments, which makes it difficult to manage waste correctly. These difficulties may be related to both the activities carried out within the

Contaminated materials in primary health care

patients' homes and the transport of the material to the BHU.

In Brazil, there is legislation that provides a framework for the proper management of health waste and provides for the stages of waste management (306/04). However, although it has been in force for 10 years, this resolution does not integrate the peculiarities that involve the production of waste in primary care, and especially those in home care.

The materials present in the generation of these residues are classified into the following groups: A-potentially infectious, B-chemicals, C-radioactive, D-common residues and E-sharps, proper handling of such wastes involve steps such as segregation, storage, identification, internal transportation, temporary storage, treatment, external storage, collection and external transportation and final disposal¹⁴. In the domicile scope, common waste is the most frequent, however, due to the procedures performed during the service there is a significant production of potentially contaminated materials.

Potentially infectious, chemical and perforating agents generated during home care must be packaged and collected by the service providers themselves or by a person trained for such activity and the waste must be in a container compatible with the residue group¹³.

In the studied municipality, there is no service that correctly disposes of these residues, being the same, although collected separately, has as final destination a common sanitary landfill. This incorrect form of disposal exposes the environment and people who collect recyclable materials in this scenario to risks of contamination and accidents with puncture-sharp materials¹⁵.

Weave discussions about waste management within the primary health care can help to mitigate the potential impacts in the health of professionals, patients and the environment.

Nursing professionals, due to being in daily contact with the needs of their area of coverage

and carrying out a large number of procedures at home, should attend to issues such as waste management¹⁶.

CONCLUSION

Solid waste is present in the care of patients cared for in the home, the perception of this reality is perceived among primary care nursing professionals. Because it is a home care, they acknowledge the existence of a fragility in the accomplishment of this workflow, which may be related to the care environment, to the willing supplies or human resources failure.

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COLLABORATIONS

Oliveira LB and Queiroz AAFLN contributed in the stages of interpretation of the obtained results, elaboration and organization of the ideas and successive revisions of the manuscript. Matos MCB, Matos JGNF and Silva LR contributed in the collection of critical analysis data and revisions of the manuscript submitted. Valle ARMC guided the research collaborating in all phases. All authors approved the final approved and published version

INTEREST CONFLICTS

No conflicts of interest to declare

CORRESPONDENCE

Layze Braz de Oliveira
Avenida dos Bandeirantes, 3900
Campus Universitário - Bairro Monte Alegre Ribeirão Preto - SP - Brasil
CEP: 14040-902
E-mail: layzbraz@usp.br