PHYSICAL STRUCTURE OF MATERIAL AND STERILIZATION CENTER IN PRIMARY HEALTH CARE UNITS

ESTRUCTURA FÍSICA DE CENTRO DE MATERIAL Y ESTERILIZACIÓN EN UNIDADES DE ATENCIÓN BÁSICA DE SALUD

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ABSTRACT

Objective: to describe the adequacy of the physical structure of the material and sterilization centers of health primary care according to ANVISA standards. Method: descriptive study of a quantitative approach, carried out in 22 health units. The data were collected using systematic observation and interview, analyzed by descriptive statistics and presented in tables with simple frequency and percentage. The research project had the approval by the Research Ethics Committee, Protocol 019178/2011-36. Results: in 86.36% the responsibility of the MSC was the nurse; 77.27% possess physical barrier between the dirty and clean area; 40.9% have washing and decontamination room with the minimum dimensions required; in 22.72%, sterilization room has minimum area recommended. Conclusion: many units are not yet compatible with the Collegiate Board Resolution-CBR 50/2002 of ANVISA, in structure and dimension, hindering the process of sterilization of materials and quality of assistance provided to the community. Descriptors: Sterilization; Architecture of Health Institutions; Health Centers.

RESUMO

Objetivo: descrever a adequação da estrutura física dos centros de material e esterilização de atenção básica de saúde segundo as normas da ANVISA. Método: estudo descritivo, de abordagem quantitativa, realizado em 22 unidades de saúde. Os dados foram coletados utilizando observação sistemática e entrevista, analisados por estatística descritiva e apresentados em tabelas com frequência simples e percentual. O projeto de pesquisa teve a aprovação pelo Comitê de Ética em Pesquisa, Protocolo 019178/2011-36. Resultados: em 86.36% a responsabilidade do CME era do enfermeiro; 77,27% possuem barreira física entre a área suja e limpa; 40,9% possuem sala de lavagem e descontaminação com as dimensões mínimas preconizadas; em 22,72%, a sala de esterilização possui área mínima preconizada. Conclusão: muitas unidades ainda não estão compatíveis com a Resolução de Diretoria Colegiada-RDC 50/2002 da ANVISA, em estrutura e dimensão, dificultando o processo de esterilização dos materiais e a qualidade da assistência prestada à comunidade. Descriptors: Esterilização; Arquitetura de Instituições de Saúde; Centros de Saúde.

RESUMEN

Objetivo: describir la adecuación de la estructura física de los centros de material y esterilización de atención básica de salud según las normas de la ANVISA. Método: estudio descriptivo, de enfoque cuantitativo, realizado en 22 unidades de salud. Los datos fueron recogidos utilizando observación sistemática y entrevista, analizados por estadística descriptiva y presentada en tabla con frecuencia simple y porcentual. El proyecto de investigación fue aprobado por el Comité de Ética en Investigación, Protocolo 019178/2011-36. Resultados: en 86.36% la responsabilidad del CME era del enfermero; 77,27% posee barrera física entre el área sucia y limpia; 40,9% poseen sala de lavado y descontaminación con las dimensiones mínimas preconizadas; en 22,72%, la sala de esterilización posee área mínima preconizada. Conclusion: muchas unidades todavía no están compatibles con la Resolución de Directoria Colegiada-RDC 50/2002 de la ANVISA, en estructura y dimensión, dificultando el proceso de esterilización de los materiales y la calidad de la asistencia prestada a la comunidad. Descriptores: Esterilización; Arquitectura de Instituciones de Salud; Centros de Salud.

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INTRODUCTION

This study deals with the physical structure of Material and Sterilization Center (MSC) in units of the primary Health Care. The MSC is a technical support unit for the reception, purification, preparation, sterilization, custody and distribution of materials for healthcare units.1

According to the Collegiate Board Resolution-CBR 50/2002, the MSC includes: washing area and decontamination; material preparation area; sterilization area; storage area and distribution of materials and sterilized clothing.2 CBR 307/2002 states that the MSC must exist when there is a surgical center, birth and/or outpatient center, hemodynamics, emergence of high complexity and urgency. The simplified MSC can only exist like technical support, procedures that do not require surgical environmental conditions for its realization, frequent in primary health units.3

The flow on the MSC must be practical and continuous, so the team and the material should follow a one-way flow, i.e., the direction is of a contaminated area to a clean. The physical structure of the Health Care Institutions and health laws are matters of extreme importance and can be designated as essential elements to the MSC's operating dynamics, because an adequate physical plant will provide a one-sided flow, which is required by the laws of health.4

With the changes arising from the process of institutionalization of the Unified Health System (SUS), the primary health care have been developing more efficient and effective social assistance practices, increasing demand of small invasive procedures performed in health units.5 Some municipal health units carry out the sterilization process of articles and for that, they need to have a placeholder for the adequate realization of this process and follow the unique flow.6

The MSC is a work environment which presents occupational hazards, that expose health workers the body fluids vehicles of microorganisms, organic and inorganic contaminated substances. Therefore, there is the importance of the use of personal protective equipment (PPE). The use of PPE in this sector reduces the risk of direct contact of the skin and mucous membranes with any contaminated material and chemicals needed to the process.7

About MSCs human resources, the CBR 15/2012 recommends that professionals for which these activities are regulated by the class board must perform all stages of the processing of healthcare articles. The MSC must possess a professional responsible for the university coordination of all activities related to the processing of papers, according to professional competencies defined in specific legislation.8

For the operation of a MSC, the presence of the nurse is of vital importance. The role of the nurse starts in the planning phase of the unit, with the appropriate choice of material resources as humans, as well as the selection and training of personnel, taking into account the profile of the sector. It is still responsible for coordinating activities, guidance and supervision of all stages of the reprocessing of products.9

Within the complex context of infection control related to healthcare (IRAS) and its determining factors, the MSC occupies a relevant role. The planning of this unit is of paramount importance, considering the different stages of processing articles dental-medical-hospital until its distribution to the consumer units. Therefore, such planning should be carried out by a multidisciplinary team, whose care should be focused on the dynamics of functioning of the sector.10

OBJECTIVES

- To describe the adequacy of the physical structure of the Material and Sterilization Centers of Primary health care units according to ANVISA's regulations;
- To identify whether such health units are compatible with the CBR 50/2002 ANVISA;
- To analyze the Material and Sterilization Centers flowchart of such units;
- To ascertain organizational and human resources conditions according to ANVISA.

METHOD

Descriptive cross-sectional cohort study and quantitative approach. When using such a method, it was possible to analyze the physical structure of MSCs in PHU, beginning in August 2011 and ending in August 2012.

The research was conducted in 22 primary health care units in a municipality in the State of Alagoas, which corresponds to the units that are MSC, and a professional unit. It was respected the Resolution 196/96 of the National Commission of Ethics in Research – NCER.

The research was initiated after signing a term of authorization by the Municipal Health Secretary and authorization by the Committee of Ethics in Research (CER) at the Federal University of Alagoas with file number 019178/2011-36.

The subject research’s volunteers were informed and enlightened about the study and
signed an informed consent (TFCC), as guides the resolution nº 196/96, of the National Health Council.

Data collection occurred through systematic observation with the application of a structured form and interview with the professionals of the units, led by elaborate issues from a National Inspection Instrument in Health Services (INAISS) provided by ANVISA for the physical and human resources structure of MSCs and for the development of the research. Data analysis was conducted through the statistical technique and descriptive.

RESULTS

The municipality researched has 69 registered units, however the research sample consisted of 22 units, because they have structure of material and sterilizing center. Of the population interviewed, 21 (95.45%) professionals were female and only one was male, representing 4.55% of the population surveyed.

Regarding the age of professionals, 27.27% were in the age group of 30 to 40 years old. Most professionals (n=13), representing 59.1% of the population were between 40 to 50 years old and the minority were 50 to 60 years old and provided a sample of 3 professional (13.63%).

About the academic formation, fifteen nurses were interviewed (68.18%), five nursing technicians, which correspond to 22.72% of the studied population and a (4.55%) nursing assistant because the nurse was not on the health unit at the time of the research. In addition, a dental Office Assistant was interviewed (4.55% of the population).

Analyzing the working time of employees interviewed in the health unit, it has been found that 4.55% have up to two years; 18.18% are between two and five years of work; five to ten years the sample is 45.45%; 22.72% of the population have between ten and fifteen years of work; and 9.10% working fifteen to twenty years in the health unit.

According to the interview with the professionals, the results found on human resources and the labor process in the municipal health unit as regards sterilization were: 86.36% of units in the MSC was the responsibility of nurses; in 72.72% of the units had assistant or nursing technician with specific training to act in the sector; and in 45.45% of the units, there was scale of nursing staff in visible place.

Regarding the use of personal protective equipment by professionals of the units during the processing of items, it was found that 100% of the professionals use gloves of procedures; 72.72% use mask or face protection; the goggles are used by 36.36% of professionals; 22.27% use waterproof apron for dirty area, while 18.18% use apron to clean area, and 9.09% use rubber boots.

About the variable ‘organizational conditions of unity’, data according to the condition of the cleaning and sterilization carried out in the unit were found, as the condition of packaging materials, there are monitoring through indicators and tests, form of washing and disinfection of articles, use solution for disinfection, storage of sterilized material and flowchart that are presented in table 1.

Table 1. Distribution of units according to the organizational conditions (n = 22), Alagoas, 2012.

<table>
<thead>
<tr>
<th>Organizational conditions</th>
<th>n</th>
<th>%</th>
<th>IC (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy and standardized label wrappers</td>
<td>21</td>
<td>95.45</td>
<td>76.49 - 99.99</td>
</tr>
<tr>
<td>Visual monitoring via chemical indicator</td>
<td>10</td>
<td>45.45</td>
<td>26.91 - 65.35</td>
</tr>
<tr>
<td>Visual monitoring through heat sensitive tape</td>
<td>21</td>
<td>95.45</td>
<td>76.49 - 99.99</td>
</tr>
<tr>
<td>Realization of biological control</td>
<td>6</td>
<td>27.27</td>
<td>12.88 - 48.43</td>
</tr>
<tr>
<td>Internal and external pressure, negative pressure and temperature</td>
<td>10</td>
<td>45.45</td>
<td>26.91 - 65.35</td>
</tr>
<tr>
<td>Manual ways of washing and disinfection of material</td>
<td>22</td>
<td>100</td>
<td>82.45 - 100.00</td>
</tr>
<tr>
<td>Automated ways of washing and disinfection of the material</td>
<td>0</td>
<td>0</td>
<td>0.00 - 17.35</td>
</tr>
<tr>
<td>Use of chemical solution for disinfection</td>
<td>22</td>
<td>100</td>
<td>82.45 - 100.00</td>
</tr>
<tr>
<td>Use of chemical solution for sterilization</td>
<td>0</td>
<td>0</td>
<td>0.00 - 17.35</td>
</tr>
<tr>
<td>Periodic and preventive maintenance of equipment</td>
<td>3</td>
<td>13.63</td>
<td>3.90 - 34.18</td>
</tr>
<tr>
<td>Storage of sterilized material in exclusive location</td>
<td>15</td>
<td>68.18</td>
<td>47.15 - 83.81</td>
</tr>
<tr>
<td>Temperature control in the area of custody of material</td>
<td>2</td>
<td>9.09</td>
<td>1.34 - 29.00</td>
</tr>
<tr>
<td>Sequential flow of procedures (physical barrier)</td>
<td>15</td>
<td>68.18</td>
<td>47.15 - 83.81</td>
</tr>
<tr>
<td>Sequential flow of procedures (technical barrier)</td>
<td>6</td>
<td>27.27</td>
<td>12.88 - 48.43</td>
</tr>
</tbody>
</table>

Another fact to be analyzed is the characteristic of physical area of the units sterilization centers. The table below (table 2) presents the results observed according to this variable.
In the cleaning and disinfection room, it might be observed that only 22.72% of the units have recycle bin with lid and pedal in the purge. In addition to these, in ten units there was trash in the washing room, however they were open and had no pedal. An important factor to be considered is that in a health unit there was no room for the purge, and washing the material was held in the dressings room.

Regarding the sterilization room and storage of material, the following table (table 4) presents the data obtained.

Table 4. Distribution of the Units according to the sterilization room (n=22). Alagoas, 2012.

<table>
<thead>
<tr>
<th>Sterilization room and storage of sterilized material</th>
<th>n</th>
<th>%</th>
<th>IC (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window of communication with the cleaning room</td>
<td>11</td>
<td>50</td>
<td>30,72 - 69,28</td>
</tr>
<tr>
<td>Counter top of material for easy cleaning and disinfection</td>
<td>16</td>
<td>72,72</td>
<td>51,57 - 87,12</td>
</tr>
<tr>
<td>Two benches of compatible height (counter top)</td>
<td>6</td>
<td>27,27</td>
<td>12,88 - 48,43</td>
</tr>
<tr>
<td>Cabinets over and/or under counter top</td>
<td>4</td>
<td>18,18</td>
<td>6,71 - 39,12</td>
</tr>
<tr>
<td>Shelf</td>
<td>3</td>
<td>13,63</td>
<td>3,90 - 34,18</td>
</tr>
<tr>
<td>Washbasin</td>
<td>3</td>
<td>13,63</td>
<td>3,90 - 34,18</td>
</tr>
<tr>
<td>Dispenser with liquid soap</td>
<td>3</td>
<td>13,63</td>
<td>3,90 - 34,18</td>
</tr>
<tr>
<td>Support with paper towels</td>
<td>3</td>
<td>13,63</td>
<td>3,90 - 34,18</td>
</tr>
<tr>
<td>Trash can with plastic bag and cover drive by pedal</td>
<td>5</td>
<td>22,72</td>
<td>9,71 - 43,85</td>
</tr>
<tr>
<td>Single-port Autoclave</td>
<td>20</td>
<td>90,90</td>
<td>71,00 - 98,66</td>
</tr>
<tr>
<td>Unique location for material output</td>
<td>16</td>
<td>72,72</td>
<td>51,57 - 87,12</td>
</tr>
<tr>
<td>Window material distribution</td>
<td>6</td>
<td>27,27</td>
<td>12,88 - 48,43</td>
</tr>
<tr>
<td>Environment with minimum 7.50 m² with minimum size of 2,50 m²</td>
<td>5</td>
<td>22,72</td>
<td>9,71 - 43,85</td>
</tr>
</tbody>
</table>

It has been found that in two units no autoclave, therefore, sterilization was performed in the unit of reference. In the variable about sterilization room, in one unit, the same room was used to purge, preparation and sterilization. It was observed that in three health units, there was a sealing machine for the packaging of materials.

On the conditions of conservation and safety of Material Centers of health units the ceiling, walls, floor heating and climate control were assessed, as shown in the following table (table 5).

Table 5. Distribution of units in accordance with the conditions of storage (n=22). Alagoas, 2012.

<table>
<thead>
<tr>
<th>Storage conditions and safety</th>
<th>N</th>
<th>%</th>
<th>IC (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full ceiling/easy cleaning and disinfection</td>
<td>19</td>
<td>86,36</td>
<td>65,82 - 96,10</td>
</tr>
<tr>
<td>Full walls/easy cleaning and disinfection</td>
<td>17</td>
<td>77,27</td>
<td>56,15 - 90,29</td>
</tr>
<tr>
<td>Full flooring/waterproof/easy to clean and disinfect</td>
<td>21</td>
<td>95,45</td>
<td>76,49 - 99,99</td>
</tr>
<tr>
<td>Air conditioning and/or Artificial or Natural ventilation</td>
<td>14</td>
<td>63,63</td>
<td>42,86 - 80,36</td>
</tr>
</tbody>
</table>

It was observed that in twelve units (54.54%) of MSC the walls were covered with tile. In 40.90%, the walls were masonry with paint finish, and only one unit (4.54%) was from PVC.

**DISCUSSION**

In order to provide a quality health service users of Primary Health Units, the critical articles, to be processed properly, they require a complex and sequential system, following methods and criteria as guiding and legal guidelines. This process requires physical structure, technological and human resources that allow secure stock executions based on criteria based on scientific information updated.
As shown previously on human resources, in 86.36% of the units, responsibility in the area of sterilization is the nurse. The presence of the nurse in the MSC is of fundamental importance, because it exerts a set of activities that drive their practice for the administration, organization and management. Their duties in this sector are classified into three major groups: coordination unit, technical-administrative activities and personnel administration.11

In a study on reprocessing of articles in Primary Health Units held in São Paulo, it was found that the professional category of the responsible for the completion of reprocessing in the units was almost entirely composed of members of the nursing staff (97.0%). Of these operators, the majority were composed of nursing assistants (88.2%), followed by the technicians of nursing (8.8%), operating in three units, and one of the dental area (2.9%). 5 Corroborating this study, on data collection, it was possible to notice that although responsible for processing or reprocessing of medical materials, the nurses do not perform this activity in any of the steps.5

Among the surveyed units, in 72.72% were auxiliary or had a nursing technician with specific training to perform the steps in the processing of articles. It is necessary for employees who work in the area to receive training consistent with the function, plan, organize, be aware, have professional attitude and maintain aseptic chain.12 When the professionals are trained, the processing of the articles is performed properly, avoiding the occurrence of IRAS.

The proper use of PPE in MSC (gloves, masks, eye protectors, waterproof aprons) is vital to ensure the safety and health of employees. The professional responsible for the MSC must ensure that the PPE’s are available and are used by professionals properly.13

In a survey in the municipality of Ponta Grossa-Paraná in primary health units, the result revealed the following data in relation to the use of EPE’s professionals: 13% used mask, 53% used gloves, 47% used rubber gloves, 20% used waterproof apron, 6% used rubber boots and 13% used goggles.14

Health units were analyzed according to the organizational conditions of their MSC’s. In 95.45% of the units, the articles were prepared in healthy and standardized label wrappers. The purpose of packaging is to maintain the sterility of the processed material until the moment of use.13

In 95.45% of the units, visual monitoring of the material was accomplished through heat-sensitive tape, while biological control was accomplished in only 27.27% of health units. Similarly, in the State of Paraná, 100% of the units used only the chemical indicator tape for autoclave, and was not used bacteriological control with resistant spores for validation of the process, which must be held on a weekly basis.14 The sterilization validation tests consist of ways to evaluate the effectiveness of the process of sterilization of instruments, so it is important to their practice in MSC.

Regarding the washing of materials, in all units was performed manually using chemical solution for disinfection. Manual cleaning can be intensive and require a lot of time, but this practice can be recommended for the cleaning of delicate, complex or sensitive materials at high temperatures15. This data is similar to the study carried out in the interior of Parana to perform cleaning of materials, 27% of the units were just cleaning under running water, soap or detergent, and 73%, before performing cleaning with soap and water, left the material immersed in water for a few minutes.14

The chemical solution used for cleaning the articles in all units was the enzymatic cleaner, a result similar to that found in the study conducted in a hospital of Recife (2010), in which 100% of the sample made use of enzymatic detergent in the washing process of hospital articles.7

Among the units surveyed in any of them chemical sterilization is performed whose practice was suspended according to CBR 8/2009 of ANVISA16, this is because the sterilization of articles through immersion in chemical solution is doubtful, since it presents several disadvantages as slow action, incompatibility with articles, impregnation of organic waste. In addition, the handling is complex and laborious, and contact with the chemical solution exposes the professional at risk.

For a good operation of the sterilization process, it is necessary a continuous flow between the materials and the professionals. As seen previously, 68.18% of the units had sequential flow of procedures observing physical barrier. On the other hand, within the hospitals, in a city in the interior of Goiás, it was observed that, in 77.2% of hospitals, the MSC’s did not possess all areas envisaged for the correct processing flow of articles, which made evident the socialization of areas with different levels of contamination. Only 22.8% of hospitals had correct flow.17

The continuous flowchart in MSC is of extreme importance to the proper processing of articles. The material should follow a
sequence of procedures, starting in the area considered contaminated and it ends in the clean area. When there is a flowchart, or physical barrier separating the areas, the dirty material can contaminate the material that has been sterilized. The same flow must be respected by the professionals of the sector, which must not be carried over between the two areas to prevent contamination of articles.

According to the MSC's structure can be classified into centralized, decentralized or semi-centralized. A study conducted in hospitals of Goiânia showed that most hospitals (65.2%) still remained in a semi-centralized structure. The centralization of material occurred in only 34.8% of MSC's as confronts with the current study 90.90% of the units the area were centralized, and in just 9.10% of the units, sterilization was carried out on the municipal reference unit due to lack of autoclave in the unit.

It was possible to notice that in the vast majority of the surveyed units, the MSC consisted of a centralized area, possessing numerous advantages such as: effectiveness, as there is control of the entire process (washing, sterilization, packaging and storage) by nurses; favors a better organization in the management of material resources and encourages the completion of training for all staff.

The MSC of PHU is considered to be simplified and the physical area must contain the room decontamination and washing of material (purge) and sterilization and storage. In the purge, it was observed that in 72.72% of the units there are exclusive location for receipt of material, which consists of the door itself. It is important that there is an exclusive location for receipt of the articles, as it is in the moment before being cleaned that are evaluated according to their integrity.

It was noted that in 90.90% there are countertop with sink for washing of material. The sinks for washing and decontamination must be designed in such a way as to facilitate soaking, washing and rinsing of equipment, shall be at a height suitable for the use of workers, be large enough to accommodate trays or baskets of instruments, being deep enough to allow complete immersion of larger devices.

With respect to the countertop material with sink, of 20 units that possess it, 65% are made of inox, 20% are of granite and 15% of marble. The appropriate materials for countertops of critical areas and environments semi-critical, must be resistant to washing and use of disinfectants. To a lesser extent, in a survey conducted in hospitals of Goiânia, the benches in the purge were: 34% made of granite; 25% of stainless steel; 11.3% of marble; 6.9% of PVC plastic; 4.6% of ceramic; 9.0% of wood; 6.9% of Formica; 2.2% of litter lined with fabric. Due to the esthetic features and enhanced durability, granite and stainless steel have been indicated and used, because they are washable type, resistant to disinfectants and feature high rigidity to wear by abrasion.

In MSC simplified, the cleaning room must possess minimum area of 4m² with minimum size of 2 m. According to data collection, only 40.90% of the units had the recommended area. In a health unit (4.55% of the sample), there was no room for the purge, and washing the material was held in the dressing room.

Comparing this result with the one found in a study conducted in the State of Paraná, it was observed that only 13% of the sample have exclusive room to perform the process of cleaning and sterilization materials, other PHU this process is carried out in improvise rooms, in which also perform other procedures such as blood collection, dressings, injections among others.

In the area of sterilization and storage of material, 50% of the units had window of communication with the cleaning room. In the hospitals of Goiás, 21.1% of the purges have cages without closing system, potentially leading to mixture of air to different types of areas of MSC, 32.5% of MSC, the purges communicate through doors and in seven (16.2%) is a free communication between the dirty area and clean area.

In only 13.63% of units were present the washbasins in the ready room and sterilization. According to the CBR 50/2002, these washbasins/sinks/wash basins taps must be fitted with surgical or type commands that dispensing with the contact of the hands when water lock. Next to them there must be provision of addition liquid soap for hand drying resources.

The type of sterilization that occurs in health units surveyed is physical sterilization performed in autoclaves. Among the units, 90.90% possess single port autoclave on the countertop, this result similar to a study on reprocessing of articles in PHU held in a city in the interior of São Paulo, in whose all PHU investigated the sterilization method used was the physical, is the saturated steam sterilization under pressure (88.24%) by dry heat (2.94%) or by both methods (8.82%). It was found along with the physical processes, the use of 2% glutaraldehyde applied
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separately to the dental offices in their own articles of some of PHU, requiring better investigation.20

According to CBR No. 307/2002, the sterilization room environment simplified MSC must be at least 7m² of area with minimum size of 2.5m. However, through the collection of data, it might notice that only 22.72% of the sample correspond to this criterion.3

Health units also were analyzed according to the conditions of conservation and security of their MsCs. In 86.36% of the units, the roof of the MSC was full, easy cleaning and decontamination, following the Ministry of health that determines that the linings of critical areas and semi-critical should be continuous. There are not allowed removable linings that can give off dusts and particles.21

The materials suitable for the coating of walls, floors and ceilings of critical areas and semi-critical environments must be resistant to washing and use of disinfectants. They should always be prioritized for the critical areas and even in semi-critical areas finishing materials that make monolithic surfaces, with the smallest possible number of grooves or cracks, even after use and frequent cleaning.2

It was evidenced during the data collection that largely the specimen (77.27%) the walls of health units were healthy and easy cleaning, adapting to current regulations for material coating washable, durable and light color to decrease the reverberation of light. The walls must be smooth and flat, without protrusions or recesses. In 54.55% of the units, the walls of the MSC were covered with tile; at 40.90% the walls were masonry with paint finish and 4.55% of PVC. The PHU within the State of São Paulo, it was found that 91.17% were covered with tile; 5.88% were painted and 2.95% coated with tile from the floor until the central area and then the central area to the ceiling, covered with enamel paint.20

With the goal of keeping the ventilation conditions necessary for the correct functioning of the areas of washing, preparation and sterilization, there must be natural climate control (windows) or artificial (air conditioning), which occurred in 63.63% of the units. It is important to stress that the finishing of doors and window must be planned in order to avoid protrusions that might impede cleaning. Thus, according to what was presented, the sterilization process in primary health units requires various factors to occur properly. We need favorable conditions for employees that are provided trainings, capacitation, as well as keeping supplies for the units (materials, wrappers, and disinfecting solutions), as well as an adequate organizational structure, as already said. In addition to the Manager’s role, it is also necessary that the contribution of the health care team who works in such units, whether in organizational aspect but also in the assistance.

CONCLUSION

In places where the search took place, it should be noted that the majority of units perform cleaning materials appropriately however, when it comes to structure and size, not all possess the minimum recommended environment. When it is analyzed the preparation and sterilization room of the units, it was observed that it was quite different than recommended, in terms of minimum size. In addition, for the most part there was the necessary equipment.

One of the organizational conditions of MsC’s basic units, some criteria need to be adjusted, as the record of preventive maintenance of the equipment, as well as the validation of the sterilization process, especially the implementation of biological control, items of great importance to the quality of service. To analyze human resources, it shows that not all MsC’s are under the responsibility of a nurse, as it is recommended. It is recommended to carry out trainings, capacitation and courses for professionals, favoring the acquisition of more knowledge on the subject.

Thus, many units are not yet compatible with the CBD 50/2002 of ANVISA, making not only the work of employees in the sector, as the process of sterilization of materials and mainly the quality of assistance provided to the community.

Apart from the above, it appears that the publications and studies on the subject are scarce, what prevents greater knowledge in the area. It is suggested that more research be undertaken to facilitate the assessment of compliance with the regulations in force by the units in the sterilization process.

REFERENCES


20. Costa LFV. Reprocessamento de artigos críticos em unidades básicas de saúde.
Vital JS, Lins TH, Veríssimo RCSS et al.
