

# PROTOCOL FOR DISINFECTION OF TOYS IN PEDIATRIC HOSPITAL UNIT: ACADEMIC NURSING EXPERIENCE<sup>1</sup>

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## ABSTRACT

Child hospitalization is a difficult time for children and their families, their right to play must be protected. The law number 11.104/2005 recommends that every health care center with pediatric unit must have a toy-library available. However it's a well-known fact that the shared toys are one of the causes of the hospital cross infection, to prevent it, there should be a correct, efficient e frequent hygiene of the toys. This paper was developed with the intuit of elaborating a Standard Operation Protocol (SOP) about the disinfection of shared toys in a School-hospital with pediatric unit in the city of Curitiba, Parana, in 2011. It is a report of nursing academic experiences from the nursing course of the UFPR. The SOP developed in partnership with the Service of Infection Control (SIC) provides the purpose of the procedure for cleaning of toys, equipment and materials necessary for their achievement, general conditions, effecting and frequency. This experience allowed the establishment of partnership between education institution and hospital service, awareness of professionals involved in pediatric care, and contributes to other sectors pediatric, and, added to academics education.

**Keywords:** Child Hospitalized. Cross Infection. Play and Playthings. Humanization of Assistance. Pediatric Nursing.

## INTRODUCTION

Playing is essential to children's development. It is present in all stages of a child's life, and promotes, in addition to the fun, the expression of individual feelings and emotions<sup>(1)</sup>. It is playing that she socializes, creates and learns<sup>(2)</sup>. In child development, the toy operates mediating transformations between basic psychological functions into more elaborate functions<sup>(3)</sup>. During hospitalization that right is backed by law, Federal Law. 11.104/2005 which advocates the existence of playrooms in any health facility with pediatric inpatients, a space provided for educational toys and games that encourage both the children and their parents to play<sup>(4)</sup>.

It is understood that child hospitalization is a stressful and traumatic experience for the child, because they are away from their everyday life, friends, school and home; they may bring along feelings of guilt, punishment, fear, insecurity and uncertainty about the death<sup>(5,2)</sup>. Thus, in this situation the child's right to play must be

preserved and respected, because it consists of an activity essential for their mental, emotional and social wellness<sup>(5)</sup>.

The play activity in the hospital environment is therapeutic because it allows the modification of daily hospitalization, it may save the emotional stress and produces an environment similar to the daily living. It may help in the development of the child and the quality of life by providing socialization and interaction<sup>(2,6)</sup>. A study conducted with seven nurses on the use of therapeutic playing in the hospital showed that its use is related to the promotion of well-being and tranquility in children, it is therefore a tool that supports the nursing care and understanding of the needs of children in hospital settings<sup>(7)</sup>.

However, the toys in the hospitals, commonly found in playrooms, are shared-use, so they offer risk of crossed nosocomial infection to the children who handle them<sup>(8)</sup>. A study evaluated contamination in 10 plastic toys, the result showed contamination of toys with six genera and 22 species of bacteria, 90% of microorganisms found were resistant to one or two antibiotics<sup>(9)</sup>.

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Hospital infection is the infectious cause of injury acquired by the patient after admission to the hospital, which may manifest during hospitalization or after discharge, as long as they are related to hospitalization. They represent an important problem of admissions and quality of care in health, since its incidence in pediatric gradually increases due to: the increase in the number of invasive procedures, increase in hospitalization, and, by the indiscriminate use of antibiotics; these situations may cause the appearance of resistant germs<sup>(8)</sup>. The combination of these factors is highly relevant to the child population in view of their immature immune system, and may be an important factor in mortality rates in this segment. From this, it is recommended to incorporate a proper, efficient and routinely cleaning of these toys in order to prevent nosocomial infections<sup>(9)</sup>.

The selection of toys to be used in hospital playrooms should consider: the risk of cross-transmission, the toy material and the possibility of cleaning and disinfection. The materials suitable for use in hospitals are those which allow disinfecting between uses, or plastic, rigid and non-porous materials<sup>(10)</sup>.

The first stage is cleaning the used toys. To this procedure it may be used: detergent for manual cleaning, cleaning detergent or detergent enzyme. For the disinfection process, the described methods include both the physical and the chemical. In the physical method it is used the thermal disinfection, which is the use of temperatures of 60 to 95 ° C for 10 to 30 minutes. In the chemical method it is used a germicidal solution by immersing the toy in sodium hypochlorite or frictioning all parts of the toy with 70% ethanol for 30 seconds, or by the use of Peresal 0.5%, the toy should be soaked with the product and it must be allowed to dry naturally<sup>(10)</sup>.

To accomplish disinfection it is necessary to wash and disinfect toys between each use; plush toys aren't appropriate since they cannot be washed. The cleaning and disinfection process of toys should follow a routine, comprising a step of cleaning, another for storage of toys, and the establishment of the frequency of cleaning and disinfection, as well as its proper registration<sup>(10)</sup>.

Based on that, we ask: *How to promote disinfection of toys in a playroom in the*

*pediatric inpatient unit?* This paper aims to report the academic experience in developing an action generated by a process of observation - Standard Operating Protocol (POP) on the disinfection of toys in common use - in Inpatient Pediatric Unit of a Teaching Hospital during Discipline Supervised Nursing, Curitiba, Paraná, in 2011.

## METHODOLOGY

This study was conducted in a pediatric unit of a university hospital in Curitiba, Paraná, in the period of March 21 to April 12, 2011. This is an experience report of an academic experience, in exploratory and descriptive form, arising from the interaction between academia and service. It is exploratory since it characterizes, defines and classifies the problem, and descriptive as there is the observation of facts, without interference of the researcher. For the data collection we used systematic observation<sup>(11)</sup>.

This very Pediatric Unit is composed of two clinics, the Pediatric Clinic and the Hematology Pediatric Unit, each with eight beds available, which showed in 2009 the average occupancy rate of 67.19% and 75.45% respectively. The Hospital is a reference institution for locoregional high and medium complexity in all age groups.

## REPORT OF EXPERIMENT

The orientation aimed in the internship suggested the observation of situations that allow the planning and execution of an initiative to add value to the sector. The learners were encouraged and supported by the teacher to critically observe reality (in its broadest sense) found in the industry. We applied a tool for systematic and daily observation of the unit, namely: the physical structure, the working process of the nursing team of child care and family; the administrative structure.

After this step, we had guidance to brainstorm ideas with the nursing staff, especially with the nurse regarding the detected situations and their priority of accomplishment. Thus, from the consensus of the issue, the point of disinfecting toys was voted for approach.

We noticed that the playroom of that sector was widely used by hospitalized children in educational activities, developed by the educators, occupational therapists, psychologists and / or accompanied by their mothers. It was found that the care with toys, disinfection and packaging were not appropriate. We began to think of strategies to reduce the potential risks to the environment presented to the children, especially regarding cross-infection.

Thus, the main goal of the disinfection procedure was to standardize the actions related to cleaning and disinfection in the unit as well, to avoid cross transmission of infections, given that toys are constantly manipulated by several children, they get in contact with the skin which is not always healthy, and mucous membranes of patients.

It was observed a lack of information to substantiate the process of cleaning and disinfection of toys, as well as the lack of registration of conducting such activity. To support the process of developing the protocol for disinfecting toys, references were sought on the subject and the organization stages of planning and executing the chosen action.

We sought the partnership with SCIH Hospital for recommended technical guidance on disinfection of toys, in order to enable the development of a material that meets the needs of the infant hospitalization unit. We did research on the bibliographic collection of SCIH and then began the process of developing a disinfection protocol, by the suggestion of a nurse in the field and also from SCIH.

Regarding the construction of POP we discussed with the nurse and the nursing staff of the pediatric inpatient unit, to ensure the applicability of POPs on site.

The equipment required for the procedure was listed in the POP, namely: water, liquid soap, scraps of cloth or gauze, proceeding gloves and Peresal 0.5%. We chose Peresal (peracetic acid) due to the fact that it is a sanitizing agent for efficient large capacity oxidation of cellular components of microorganisms, it has a fast action in low concentrations over a broad spectrum of microorganisms and no toxic waste. The Peresal provides safety during application, but should be handled in a dry and ventilated site

and the use of personal protective equipment (proceeding glove, apron, mask and goggles)<sup>(12)</sup>.

We requested to the management of the unit two plastic boxes for packing toys, one for clean toys and the other for used toys, they should have the proper identification: "Clean Toys" and "Used Toys". The playroom should start each shift with the "Clean Toys" box in quantity to meet the demand and the dirty toys box empty. At the end of the shift, the used toys may be stored in the box labelled "used toys" and forwarded to be sanitized.

All employees and / or academics who work in the playroom should advise mothers or guardians for requesting the exchange of the toy when it falls on the floor, and avoid exchanging toys among children.

In the purge, the procedure for disinfecting plastic toys should be started with all the toys of the "used toys" box as well as the box itself. The person in charge may wash his/her hands with water and liquid soap, wear procedure gloves, wash the toys and the box with soap and water, rinse and dry, and finally use Peresal 0.5% allowing it to dry naturally.

The sanitized toys should be packed in the appropriate and sanitized box labelled "Clean toys". This process should be performed at the end of each shift.

Books and magazines should also go through measures to reduce the potential of becoming a carrier of infection. Therefore, it is necessary to handle these items with clean hands they should be lapped with plastic material, in order to allow the disinfection with Peresal 0.5%.

In POP there are also some observations on the ideal type of toys which should be rigid, non-porous plastic and waterproof to allow cleaning and disinfection, and the inadequacy of plush toys as they do not allow the proper cleaning process.

It is emphasized, in POP, that any child under any precautionary measure should not go to the playroom, and may carry out recreational activities in their own room, using exclusive toys.

The entire development process of the protocol by the SCIH lasted about two months. The POP was presented to the sector team on May 27, 2011, through a meeting, encouraging them to clean the used toys. At this point, we

discussed the importance of playing for hospitalized children, the need for disinfection of toys as a way to prevent cross-infection, as well as the full protocol designed with the necessary materials for its realization. It was based on the principle that education is a continuous process that enables a gap to think about what to do in the work environment, thus favoring nursing care to patients<sup>(13)</sup>.

Later some adjustments were suggested by the nursing staff. We began a new cycle of training to all employees at the hospital, with the aim of presenting, teaching and sharing the new way to treat the toys in the sector.

With the development and implementation of POP we expect to promote the understanding of the need for the disinfection of toys as well as the standardization of the procedures, with families and the health care team, providing a pleasant and safe physical environment.

### FINAL THOUGHTS

Playing in childhood is a matter of extreme

importance, essential for a healthy and harmonious development to the child. This theme has broad theoretical framework about its importance in hospitalization, yet when it comes to the disinfection of toys, it is difficult to find references regarding this matter.

From the understanding of the importance of playing for children in a hospital, and the fact that it does not present a risk, we designed a protocol to standardize and regularize the disinfection of toys in a pediatric unit. This POP, reported from this construction and the result of a partnership between academia and service, has to be implemented in all other pediatric units in the addressed Hospital Institution.

The development of this study, in all its phases, besides contributing to the industry and the Institution Hospital, added a lot of academic training, and certainly points to the feasibility of construction and implementation of a tool that provides greater security for children in pediatric units during hospitalization.

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## PROTOCOLO DE DESINFECÇÃO DE BRINQUEDOS EM UNIDADE DE INTERNAÇÃO PEDIÁTRICA: VIVÊNCIA ACADÊMICA DE ENFERMAGEM

### RESUMO

A hospitalização infantil caracteriza-se como um momento difícil e estressor para a criança e seus familiares, é fundamental que seu direito de brincar seja preservado. A Lei nº. 11.104/2005 preconiza que toda unidade de saúde com internação pediátrica deverá contar com uma brinquedoteca. Contudo, sabe-se que os brinquedos de uso múltiplo constituem um dos itens responsáveis pela infecção hospitalar cruzada, para preveni-la, é necessária uma correta, eficiente e rotineira higienização dos brinquedos. Este estudo foi realizado por acadêmicas do curso de Enfermagem da UFPR, com o objetivo de desenvolver e implantar um Protocolo de Operação Padrão (POP) sobre a desinfecção de brinquedos de uso comum em uma unidade de internação pediátrica de um hospital-escola, na cidade de Curitiba, Paraná, em 2011. Trata-se de um relato de experiência do Estágio Supervisionado curricular de Enfermagem. O POP desenvolvido, em parceria com o Serviço de Controle de Infecção Hospitalar (SCIH), estipula o objetivo do procedimento de higienização dos brinquedos, os equipamentos e materiais necessários para sua realização, condições gerais, efetuação e periodicidade. Esta vivência permitiu o estabelecimento de parceria entre a instituição de ensino e o serviço hospitalar; a sensibilização dos profissionais do setor envolvidos no cuidado pediátrico; agregou na formação das acadêmicas, assim como, contribuiu com a instituição.

**Palavras-chave:** Criança Hospitalizada. Infecção hospitalar. Jogos e Brinquedos. Promoção da Saúde. Enfermagem Pediátrica.

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## PROTOCOLO DE DESINFECCIÓN DE JUGUETES EN UNA UNIDAD DE HOSPITALIZACIÓN PEDIÁTRICA: EXPERIENCIA ACADEMICA DE ENFERMERÍA

### RESUMEN

La hospitalización infantil es un momento difícil para el niño y sus familiares, por lo tanto, su derecho a jugar debe mantenerse. La Ley no. 11.104/2005 recomienda que todas las unidades de salud con un hospital pediátrico deben tener una ludoteca. Sin embargo, los juguetes de uso múltiple constituyen uno de los elementos responsables por la infección cruzada hospitalaria, para evitar que esto ocurra, se requiere una limpieza correcta, eficiente y de rutina de los juguetes. Este estudio fue desarrollado con el objetivo de elaborar un Protocolo de Operación Estándar (POE) para la desinfección de los juguetes de uso común en una unidad de hospitalización pediátrica de un hospital universitario, en la ciudad de Curitiba, Paraná, en el 2011. Es un relato de experiencia

de estudantes de Enfermeria de la UFPR. El POE desarrollado en colaboración con el Servicio de Control de Infecciones del Hospital (SCIH) establece como propósito el procedimiento para la limpieza de los juguetes, los equipos y materiales necesarios para su realización, las condiciones generales, su efectucción y frecuencia. Este vivencia permitió establecer la asociación entre la institución educativa y el servicio del hospital; la conciencia de los profesionales del sector que participan en la atención pediátrica; contribuye a los demás sectores de pediatría, y, añade a la capacitación profesional.

**Palabras clave:** Niño Hospitalizado. Infección Hospitalaria. Juego e Implementos de Juego. Humanización de la Atención. Enfermería Pediátrica.

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