







PATIENT SAFETY IN PEDIATRICS: PERCEPTIONS OF THE MULTI-PROFESSIONAL TEAM

SEGURANÇA DO PACIENTE EM PEDIATRIA: PERCEPÇÕES DA EQUIPE MULTIPROFISSIONAL

SEGURIDAD DEL PACIENTE EN PEDIATRÍA: PERCEPCIONES DEL EQUIPO MULTIPROFESIONAL

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ABSTRACT

Objective: to know the perception of the multi-professional team regarding the patient safety actions in pediatric hospitalizations. **Method:** this is an exploratory-descriptive qualitative study carried out in 2017 in pediatric hospitalization units of a hospital in *Porto Alegre* - RS. Two semi-structured collective interviews were held with 14 members of the multi-professional team. The interviews were transcribed for content analysis of the thematic type. **Results:** a thematic category called "Actions for the safety of the pediatric patient" emerged, unfolded in actions such as correct identification of the child, effective communication, safety in the medication process, prevention of falls, hand hygiene and cleaning of environments, collective accountability for patient safety and organization of the work process". **Conclusion:** it is necessary to develop actions in all stages of care to ensure patient safety by all those involved in the assistance to the pediatric patient.

Keywords: Patient Safety; Patient Care Team; Pediatrics.

RESUMO

Objetivo: conhecer a percepção da equipe multiprofissional sobre as ações de segurança do paciente em internações pediátricas. **Método:** trata-se de estudo qualitativo exploratório-descritivo realizado em 2017 em unidades de internação pediátrica de um hospital em *Porto Alegre* - RS. Realizaram-se duas entrevistas coletivas semiestruturadas com 14 integrantes da equipe multiprofissional. As entrevistas foram transcritas para análise de conteúdo do tipo temática. **Resultados:** emergiu uma categoria temática "Ações para segurança do paciente pediátrico", desdobrada em ações tais como identificação correta da criança, comunicação efetiva, segurança no processo medicamentoso, prevenção de quedas, higienização das mãos e limpeza dos ambientes, responsabilização coletiva pela segurança do paciente e organização do processo de trabalho". **Conclusão:** é necessário desenvolver ações em todas as etapas de cuidado que garantam a segurança do paciente por todos os envolvidos na assistência ao paciente pediátrico.

Palavras-chave: Segurança do Paciente; Equipe de Assistência ao Paciente; Pediatria.

RESUMEN

Objetivo: conocer la percepción del equipo multiprofesional sobre las acciones de seguridad del paciente en internaciones pediátricas. **Método:** se trata de un estudio cualitativo, exploratorio, descriptivo llevado a cabo en 2017 en unidades de internación pediátrica de un hospital de *Porto Alegre*, estado de *Rio Grande do Sul*. Se efectuaron dos entrevistas colectivas semiestruturadas con 14 integrantes del equipo multiprofesional. Se transcribieron los discursos para el análisis de contenido temático. **Resultados:** la categoría temática "Acciones para la seguridad

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del paciente pediátrico" se despliega en acciones tales como: "identificación correcta del niño, comunicación efectiva, seguridad en el proceso medicamentoso, prevención de caídas, higienización de las manos y limpieza de los ambientes, responsabilización colectiva de la seguridad del paciente y organización del proceso de trabajo". Conclusión: deben desarrollarse acciones en todas las etapas del proceso de atención del paciente pediátrico para garantizar la seguridad del mismo por parte de todas las personas involucradas dicha atención.

Palabras clave: Seguridad del Paciente; Grupo de Atención al Paciente; Pediatría.

INTRODUCTION

The actions for the promotion of the pediatric patient safety aim at improving the health care provided to the hospitalized child. The perception of the health professionals is necessary to understand and share successful experiences for safe care.

Patient safety is understood as the reduction to an acceptable minimum of the risk of unnecessary harm associated with health care. An incident is an event or circumstance that could have resulted or resulted in harm, and can be a reported circumstance, an almost error (near miss); an incident without harm to the patient or an incident with harm to the patient, known as an adverse event (AE). As for harm, it is understood as the impairment of the structure or function of the body and/or any effect of it, which can be physical, social or psychological. Finally, risk is the probability of an incident occurring.¹

There is a worldwide mobilization in favor of guidelines for safe child care. Therefore, it is necessary to stimulate studies that promote the safety of the pediatric patient, due to the prevalence of research studies focused on adult hospitalization units.²

There is great diversity of professionals in pediatric hospitalizations. In this logic, teamwork is essential to ensure integrality, complementarity and continuity of care. In view of this, the entire multi-professional team needs to identify obstacles for patient safety by focusing on strategies for the prevention of incidents. However, patient safety is still perceived mainly as a function of the care manager, in this case the nurse, who acquires a strategic position.³

When considering the hospitalized child, vulnerability to incidents due to intrinsic factors related to their anatomical and physiological characteristics and to extrinsic factors is even greater.⁴ Added to the complexity of the care process, these factors can generate risks for the occurrence of AEs in this specific population.

The main risks for the safety of the pediatric patient are related to the communication process and to the relationship between companions and professionals. In addition to that, patient identification, medication and nutritional therapy, hand hygiene, care for falls and the conduction of procedures are also mentioned.⁵ Another study that analyzed 414 AEs that occurred during

pediatric care in 16 hospitals in the United States showed that the most prevalent were those related to infections and vascular access, followed by those related to gastrointestinal and respiratory harms.⁶

The relevance of this research is justified by the importance of the debate of the multi-professional team on the perceptions about the patient safety actions that can subsidize improvements in the care processes of the hospitalized child.

Considering the importance of the participation of professionals and the few studies related to this perspective, the following question was raised: What is the perception of the multi-professional team about the patient safety actions in pediatric hospitalizations? Therefore, this research aimed to know the perception of the multi-professional team about the patient safety actions in pediatric hospitalizations.

METHOD

An exploratory-descriptive qualitative study. All the standards of the COREQ guideline were followed.⁷ The research was carried out in three pediatric hospitalization units of a university hospital in *Porto Alegre* - RS, chosen for incorporating patient safety as a priority in their strategic planning with certification by the Joint Commission International and for serving the users of the Unified Health System (*Sistema Único de Saúde*, SUS). The study is part of the matrix research project entitled "Patient safety in hospital child care services in the city of *Porto Alegre* - RS", which has the general objective of analyzing patient safety in child health care from the perspective of managers, health professionals and companions of hospitalized children in four hospitals in the city of *Porto Alegre* - RS, Brazil.

The population included all the health professionals who work in the aforementioned units, such as nurses and Nursing technicians, physicians, physiotherapists, pharmacists, speech therapists, psychologists, physical educators, occupational therapists and social workers. Selection took place for convenience and those interested chose one of the dates available for participation, as described in an invitation that was personally delivered by the researchers and sent by e-mail to the professionals in the areas under study. The inclusion criterion was having a minimum experience of one year in caring for hospitalized children. The professional who were away from work or on vacation during the data collection period were excluded.

Data collection took place from May to June 2017, by means of semi-structured interviews. This data collection technique was designed to build pertinent information for a research object from the approach of equally pertinent themes, combining closed and open questions, in which the interviewees had the possibility to discuss the theme in question interacting with other individuals.⁸ These interviews lasted a mean of one hour and a half and were carried out outside working hours in a reserved room in the

institution itself. Questions such as the following were addressed in the interviews: "What is your understanding about patient safety?" and "What safety actions and institutional protocols are used in your professional practice?"

Initially, the participation of at least one representative of each professional category in each meeting was estimated; however, the estimate did not materialize due to non-attendance of the professionals, which can be considered as a loss for the study.

In the first interview there was the participation of professionals from Nursing, Pharmacy, Physiotherapy and Nutrition, totaling six professionals. In the second, representatives of Physical Education, Nursing, Pharmacy, Speech Therapy, Medicine and Nutrition participated, making up eight professionals. A total of 14 professionals participated. These interviews were recorded on digital audio and later transcribed into the Microsoft Office Word® program, Version 2014, generating 35 pages with reports.

The transcriptions were analyzed together, and the data were organized sequentially, assigning "E1" for the first interview and "E2" for the second. For being a collective interview, the objective was not to identify the professional category in each statement.

Organization and processing of the transcripts were performed with the NVivo® Program, Version 11.0, and then went through the content analysis process of the thematic type proposed by Minayo.⁸ The results of this study were discussed based on updated scientific literature relevant to the theme.

The professionals who agreed to participate in the study signed the Free and Informed Consent Form. The project had been previously approved the Research and Ethics Committees of the proposing (CAAE 43549115.0.0000.5347) and co-participating (CAAE 45330815.7.0000.5327) institutions. All the Regulatory Guidelines and Rules for Research in Human Beings set forth in Resolution 466/2012 were followed.

RESULTS

Through the analysis, the main category entitled "**Actions for the safety of the pediatric patient**" emerged, as well as seven thematic sub-categories, namely: **Correct identification of the child**, **Effective communication**, **Safety in the medication process**, **prevention of falls**, **Hand hygiene and cleaning of environments**, **Collective accountability for patient safety** and **Organization of the work process**.

CORRECT IDENTIFICATION OF THE CHILD

Regarding the correct identification of the patient, the professionals discussed the double check of the identification at all times/opportunities, being performed by two professionals, in addition to verifying at least two indicators (full name and number of the medical chart) and maintenance of the legibility/integrity

of the wristbands. The importance regarding the performance of exams, procedures and the medication process was emphasized:

If I'm going to take him for an exam, I'll do the checks, when I'm going to take this medication out of the machine (electronic dispensary) I will do all the checks (E2).

I always check the full name and the chart number, if it's not erased from the wristbands, if it's not peeling off (E1).

EFFECTIVE COMMUNICATION

Effective communication is an indispensable strategy in the opinion of those surveyed. Some of the facilitators of effective communication include the following: checking and passing on information instantly, face-to-face discussion with all those involved in care, approach to effective communication in health courses, communication techniques in care transfer and evolution of the diverse information in the patient's medical chart.

One way cited to obtain the reliability of a piece of information is, for example, to verbally confirm the message with the sender and review whether it is correctly described in other means, for example, in the medical chart. The importance of validating not only the content of the message but also its meaning, in order to check if the interpretation is correct, was also stressed.

When I get information from the lab, I check if it's from the right patient and if it's the right test (E2).

When I check the identification, I see if it has been released by the responsible teams, if the test has an oral administration, if it's going to be suspended (E1).

In addition, the professionals reported the need to share information in person with all those involved. A facilitating tool for this process are the rounds, which include the multi-professional team, the companion and the patient.

You have to discuss in real time with everyone there what the patient has and then the decisions are made together (E2).

The testimonies illustrated that this communication process has historically been undervalued, especially in the training of the professionals:

The doctors are precariously trained in the issue of communication, either because they don't have this training in a discipline or because they don't value it (E2).

Another point identified were critical moments inherent to the work process, such as care transfer between the services themselves, between hospitalization units, between teams and between work shifts, where effective and assertive communication and its registration are mentioned as contributors to strengthen patient safety in care:

The care transfer is needed because you in recreation have difficulty to know if the patient has am MDR [Multidrug resistant bacteria] or not (E2).

SAFETY IN THE MEDICATION PROCESS

The medication process in Pediatrics involves specificities in the several stages, from before the prescription to the administration of the drug. Adjustments in the route of administration are indispensable, respecting the child's swallowing conditions for oral medication, subcutaneous tissue thickness for injectables, dose and frequency of medication according to weight, body surface, age, renal and liver function, physiological maturity, clinical condition, and ability to communicate undesirable effects or recognize and name the medication. The participants suggested as a main strategy following-up all the "rights" of the medication process, as reported:

It [medication] goes through a large number of processes that need to be done to get to the right patient, at the right time, in the right way (E1).

If I'm going to administer a medication, I do all the barriers, the nine rights of medication (E2).

Those interviewed also listed the different age groups of children and adolescents who are assisted in detention facilities among the factors that predispose to incidents. Differences in age and, consequently, in weight and developmental stage can predispose to incidents:

I have a two-month-old baby and a 14-year-old child in the same room. It's a thing so like Pediatrics, it varies because when the size varies everything varies as it all depends on the weight (E2).

PREVENTION OF FALLS

The elevation of the bed rails and the continuous presence of the companion were considered important factors in preventing falls, especially in the displacement between environments due to the child's psychomotor (in)ability, developing balance, possible agitation and underestimation of environments with risk for falls.

They can never go alone. They're always with someone (E2).

No child can remain unaccompanied and the fact of being accompanied already prevents some events. We always advise the parents to leave the railing upright and inform before they leave the nearby area (E1).

HAND HYGIENE AND CLEANING OF ENVIRONMENTS

Correct hand hygiene at all times recommended, the disinfection of surfaces and cleaning of the environment, the use of equipment and measures of individual and collective protection were reported as indispensable to avoid the transmission of microorganisms, as suggested by the lines:

We always work with preventive measures [against infection], goals of correct hand hygiene (E2).

Another safety and infection prevention measure raised is the cleaning of the environments, both of the child's bed and of the collective environments of the hospitalization unit.

We always try to keep and guide about cleaning, about keeping the tables without food leftovers, correct garbage disposal, use of disposable aprons and gloves (E2).

COLLECTIVE ACCOUNTABILITY FOR PATIENT SAFETY

The discussion of the safety culture makes it possible to identify the conditions that intervene in the work process and that have an impact on patient safety. It was emphasized that the team, companions and institutions must acquire behaviors that express the patient safety actions, for example, following the six international patient safety goals. The speeches represent the above:

There needs to be more people involved, it has to be a systemic thing, it really won't work if it depends on only one person (E2).

Everybody must feel responsible for what they do (E1).

ORGANIZATION OF THE WORK PROCESS

This subcategory encompassed workflows, information systems management, staff training and sizing, adequate hospital structure, the performance of the risk management commission, and the effectiveness of the security protocols and of the Standard

Operating Procedures (SOPs). The report represents what was discussed by the participants:

The organization of the processes so that they place barriers in order that these errors don't happen (E1).

The use of computerized systems can facilitate the organization of prescriptions, for example, so that they can be shared with other professionals, checked and validated in order to verify possible errors.

We at the pharmacy follow [via the computerized system] the validation of the medical prescription, at that time we identify possible errors (E1).

Another way of contributing to the organization of the work process is the permanent training of the team. It can be accomplished by means of courses, the employees' own evaluation and feedback of their work.

I think that training is really the ideal (E1).

Feedback of the work is important for that professional (E2).

Proper professional staffing was also reported as a key element for the safety of the pediatric patient:

There's no way for a professional to take care of 12 children and there are many falls that could be avoided if we had more employees (E2).

There are classic mistakes of people who always did a wonderful job, but according to how the shift goes about it turned into chaos and caused problems (E2).

During the professionals' debate, the need was evidenced to have an adequate structure, such as the availability of some medications in dispensaries within the unit itself, avoiding displacement in case of emergencies; and specific materials for children, with up-to-date maintenance.

We thought it absurd that all the medications were on the ninth floor [pharmacy] and there it is a very dynamic unit, so the patients change very fast (E2).

Some beds are not of the right size and so are not always the equipment, we have to improvise and that can be a risk, right? (E1).

The risk management committee was recognized as an important organizational initiative, focusing on the identification of failures, safety barriers and deficits in the organization of processes, as well as encouraging the notification of incidents, supported by education, promoting non-punishment of those involved and with the complete analysis of the AE.

We have risk management that acts then to identify these situations and implement best practices so that it doesn't happen (E1).

[In risk management] some things are done, for example, analysis of falls and talking with the units things that are happening, if there is underreporting (E2).

The creation, update, review and, mainly, the follow-up of the safety protocols and SOPs were also considered strategies.

We have SOP, manuals, which is already described in our professional performance will be contributing to patient safety (E1).

For the professionals, it is essential that the assistance team participates in the creation of these protocols:

Whoever writes is there in a room and doesn't talk to the one that does it. The person that executes has to participate in this process (E2).

The debates indicated actions that promote patient safety in diverse assistance processes, such as patient identification, effective communication, medication processes, prevention of falls, and hygiene. Even so, the greatest proportion of the actions for patient safety cited is related to the organization of the work process, which demonstrates the importance of an institutional culture focused on safety with proactivity of those involved.

DISCUSSION

Despite the existence of assistance protocols, there is still an opportunity for improvement in the execution of care guided by guidelines standardized by the institution.

Patient identification with double check was emphasized in the prevention of incidents. A number of studies agree with the practice and even assert that, for this guideline, it is necessary that the wristband is complete and legible, because this interferes in other processes inherent to care.^{9,10}

Complementing this, permanent education regarding the importance of the identification wristbands increases adherence to

their use in the care processes.¹¹ The above led to the reflection that the strategies mentioned, allied to the sensitization and education of the professionals, have the potential to reduce the number of incidents.¹²

The knowledge of the professionals about the importance of correct patient identification is perceived; however, it is necessary to align this initiative in the practice, following the recommendations of the literature.

The testimonies give importance to the need for effective communication between all the actors involved in the care process. A strategy would be the adoption and implementation of multidisciplinary rounds in which the clinical situation, the pending issues and the forecast for hospital discharge are discussed, defining the conduction of the cases.¹³

Improvements in the records and promotion of effective communication since academic training were also highlighted strategies. The study converges by presenting the deficit in professional training in relation to communication.¹⁴ Therefore, it is necessary to include the theme in a transversal manner in the disciplines of health courses, as recommended by the National Patient Safety Program.¹⁵

A number of research studies revealed that the lack of records and inadequate documentation in medical charts are related to the occurrence of AEs.^{9,12} When deficient, communication can generate safety risks.

Therefore, it is necessary to implement training for the professionals on communication techniques and to standardize intra-hospital communication, such as from structured rounds and models for registration in medical charts, for example.

Drug therapy constantly undergoes changes in its protocols with the inclusion of new "rights". In this study, performing all the check stages before administration was the main action mentioned. The "9" rights in the medication process are as follows: right patient, right medication, right route, right time and right dose, right record, plus right indication, right form of presentation and correct response, and are already described in the literature as actions to avoid incidents.¹ Another study adds the use of electronic prescription, clinical simulation, dose protocol and incident notification with strategies for safe care in Pediatrics.¹⁶

In addition to that, most of the children do not have adaptive defense mechanisms, and their metabolism is more accelerated, causing the effect of these drugs to occur almost immediately, with no time to correct the error, consequently increasing the chance of adverse events.¹⁷ It is important to follow the safety measures in the medication process and the attention of the professionals. Providing a safe environment for the preparation and administration of medications, free of distractions, with wide benches and exclusive partitions for each patient, can also be an important strategy adopted at the institutional level.

Care for the prevention of falls makes the participation of the companions fundamental, because the occurrence of falls in the hospital environment among children is related to several intrinsic factors of the patient, of the environment, of care organization and also of the caregiver.¹⁸ In the researched institution there is the Assistance Protocol for Falls in Children, with standardized measures in accordance with recommendations for patient safety.

It was concluded that the guidance of the companion for the supervision of the child and elevating the bed rails are important to prevent falls, and this highlights the need to value this professional-family partnership.

Hand hygiene is the main strategy for the prevention of infections. Correct hand washing, as well as the sanitization of the environments, is an important action for safe care. This is considered one of the most cost-effective safety barriers, and it is responsibility of the professionals to guide the patients/family members, with the consequent possibility of reducing the number of infections and related complications.^{9,18}

In addition to that, the professionals are responsible for ensuring that infection prevention and control practices are routinely implemented, such as precautions and isolation, cleaning and disinfecting equipment and the environment, and aseptic technique, when necessary.¹⁹

The institutions are responsible for adjusting the infection prevention processes and for training the teams in adherence to hand hygiene; the professionals need to follow these recommendations and also guide their development by the patients/companions and the team, because the immaturity of the child's immune system can potentiate infections that are considered AEs. Another strategy that converged from the reports was the need to make everyone involved in the care accountable for patient safety. The companions and the patients themselves, even though they may present limitations, are important barriers in the prevention of incidents.

It is necessary to expand the sense of accountability and, for this, the institution needs to clarify the roles of each person, individually and collectively.²⁰ Protocols, guidelines, goals and recommendations can be elaborated to reach its objective; however, for this, people need to feel part of the process and responsible to adhere to the safety actions and improvements in the assistance processes.

The last strategy described was related to the organization of the work process with a barrier for incidents. Lack of organization, inability to meet institutional demands, noise pollution and stress at work, among other factors, can cause deficits in the service operation and predispose to incidents.¹⁴

This subcategory also related the organization of the processes to the need for computerized systems that enable information sharing. The study concluded that data in computerized systems reduce the chance of errors and speed up clinical decision-making.²¹

Another way of organizing the work processes would be the incentive, by hospital institutions, for permanent education actions on the theme of patient safety, developing training plans for the team, relating the prevention of AEs and the study of incidents that have occurred as a basis for improvements in the processes.¹⁴

The readjustment of the workforce is essential, because a contingent of professionals smaller than necessary or a workload larger than indicated influence the occurrence of incidents.¹⁴ A research study that evaluated the relationship between the workload of the Nursing team and the outcomes of the patients identified that the adequate allocation of resources is crucial to avoid AEs and to reduce patient mortality.²²

The appropriate physical structure and materials must be emphasized as strategies for the realization of organized and quality care, being decisive to minimize risks, because professionals who do not have the necessary equipment and logistical support have their practice limited, potentiating incidents and AEs.²⁰

The reports demonstrated that it is necessary to have a structured process for analyzing the root cause of incidents, providing feedback in order to favor learning and changes in the processes.²³ Another study identified that only 17.24% of the professionals stated having received information about the analysis of incidents occurring in their unit.²⁴

In this study it was perceived that the adoption of protocols is a component that enables care standardization. This finding is in line with a research study that discussed the implications of such an implementation for safe and high-quality pediatric care.²⁵

It is perceived that most of the safety actions cited by the interviewees directly involve the institutional organization, which is also mentioned in the literature as a trigger for safe care. Health care institutions must provide adequate physical structure, material resources, trained multi-professional staff, efficient computerized system and management tools to ensure that other caregivers, such as professionals and the children's caregivers themselves, put into practice good practices in patient safety.

The main limitation of the study was the fact that it was conducted in only one institution, as well as the non-participation of at least one representative of each professional category. This can cause non-generalization and incompleteness in the findings, since there was no representation of all the health professional categories of the units surveyed.

CONCLUSION

The multi-professional team identified and reported several interdependent safety actions, from checking the identification wristbands, developing effective communication strategies, following the "rights" in the medication process, regular hand hygiene, lifting the bed/hook rails, adequate professional staffing,

sufficient material resources, and institutional concern with patient safety, to the inclusion of companions as a child safety barrier.

It is demonstrated that these actions have a direct relationship with the international patient safety goals. It is suggested to implement validated falls scales for children and a specific space for the preparation of medications by the Nursing team in the institution surveyed. Collective accountability was an important finding, as it revealed that the professionals recognize and value the role of the multi-professional team, child, companions and institution regarding patient safety. Finally, the organization of the work process illustrated how safety incidents are inherent to health care due to the very way in which it is (un)structured.

New studies on pediatric patient safety actions in other health institutions are suggested in order to consider their organizational culture and specificities in the adherence to safe practices.

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