

Risk management: implementation of a clinical protocol for the prevention and management of pediatric falls

Gestão de riscos: implantação de protocolo clínico de prevenção e manejo de quedas pediátricas

Gestión de riesgos: aplicación de un protocolo clínico para la prevención y gestión de caídas pediátricas


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ABSTRACT

Objective: To describe the process of elaboration and implementation of a protocol for the prevention and management of pediatric falls.

Method: This was an action research developed at a public hospital in Southeast Brazil with 10 members of the multidisciplinary team from the pediatrics, maternity, neonatal intensive care sectors, and the patient safety center. To elaborate the protocol, literature review, three meetings with the group, and two rounds of online correction were carried out. Online training was carried out for all professionals and then the use of the protocol was started at the sectors.

Results: A pediatric fall prevention protocol was implemented. Educational materials were developed and the Humpty Dumpty Falls Scale was chosen to assess the risk of falling.

Conclusion: The process was conducted in a collective and participatory way. The protocol and the educational materials guide and standardize behavior based on the best evidence and involve users, family members and professionals in the management of the risk of falling.

Keywords: Accidental falls. Child hospitalized. Risk management. Pediatric nursing. Clinical protocol. Patient safety.

RESUMO

Objetivo: Descrever o processo de elaboração e implantação de um protocolo de prevenção e manejo de quedas pediátricas.

Método: Pesquisa-ação desenvolvida em um hospital público do Sudeste do Brasil, com 10 membros da equipe multidisciplinar dos setores de pediatria, maternidade, terapia intensiva neonatal, e do núcleo de segurança do paciente. Para elaborar o protocolo realizou-se revisão de literatura, três encontros com o grupo e duas rodadas de correção online. Foi realizado treinamento online para todos os profissionais e, depois, iniciado o uso do protocolo nos setores.

Resultados: Implementado protocolo de prevenção de quedas pediátricas. Definiu-se a escala *Humpty Dumpty Falls Scale* para avaliação do risco e foram elaborados materiais educativos.

Conclusão: O processo foi realizado de forma coletiva e participativa. O protocolo e os materiais educativos orientam e padronizam as condutas baseadas nas melhores evidências e envolvem usuários, familiares e profissionais na gestão do risco de queda.

Palavras-chave: Acidentes por quedas. Criança hospitalizada. Gestão de riscos. Enfermagem pediátrica. Protocolo clínico. Segurança do paciente.

RESUMEN

Objetivo: Describir el proceso de elaboración e implementación de un protocolo para la prevención y manejo de caídas pediátricas.

Método: Investigación-acción desarrollada en un hospital público del Sudeste de Brasil, con 10 integrantes del equipo multidisciplinario de los sectores de pediatría, maternidad, cuidados intensivos neonatales y centro de seguridad del paciente. Para la elaboración del protocolo se realizó una revisión bibliográfica, tres encuentros con el grupo y dos rondas de corrección online. Se realizó capacitación en línea para todos los profesionales y luego se inició el uso del protocolo en los sectores.

Resultados: Se implementó un protocolo de prevención de caídas pediátricas. Se desarrollaron materiales educativos y se definió la escala *Humpty Dumpty Falls Scale* para evaluar el riesgo de caídas.

Conclusión: El proceso se llevó a cabo de manera colectiva y participativa. El protocolo y los materiales educativos guían y estandarizan el comportamiento en base a la mejor evidencia e involucran a los usuarios, familiares y profesionales en el manejo del riesgo de caídas.

Palabras-clave: Accidentes por caídas. Niño hospitalizado. Gestión de riesgos. Enfermería pediátrica. Protocolo clínico. Seguridad del paciente.

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INTRODUCTION

The hospitalization of the child is marked by a process of removal from the family, social and affective environment to an environment different from their daily lives, by the absence of usual recreational activities, submission to invasive procedures that can cause discomfort and pain, and that, combined with care, often unsafe, can lead to the occurrence of several incidents, among them the falls^(1,2).

Childhood falls are more common in children under three years of age. The mechanism of fall can change according to the child's age group and developmental stage: in babies falls can occur when rolling out of bed, crawling, or falling off the caregiver's lap; in school-age children, falls can happen when they begin to explore the world around them, at this stage, the child is already more mobile, however, he/she is still not so steady in movements and sometimes does not know how to recognize dangers; and with adolescents when hesitating to ask for help, for example, when going to the bathroom or when presenting challenging behaviors that may predispose to the occurrence of fall^(3,4).

When dealing with in-hospital pediatric falls, besides age, intrinsic factors such as gender (male), mobility status at admission, previous history of falls, health conditions such as seizures and the use of medications; and extrinsic factors such as parental involvement in the safety culture and environmental conditions – use of inappropriate furniture, wet floors – all play a role in increasing the risk of pediatric falls at hospitals⁽⁴⁻⁶⁾.

Every pediatric patient is at risk of falling and, in some cases, falls are seen as a normal event of the child's development process. These particularities may lead to underreporting of cases of falls in pediatrics, especially when they do not cause damages. However, when classifying all children and adolescents at risk of falls, without stratifying this risk, it can be difficult to identify those who really have a high risk of fall and injury^(5,6).

An integrative literature review based on 10 articles found a variation in the prevalence of pediatric falls from 0.6 to 1.7 cases of falls per 1,000 patients/day⁽⁶⁾. Four categories of falls are described in hospitalized children: developmental falls, accidental falls, unforeseen physiological falls and predicted physiological falls^(5,6). International studies point out a predominance of predicted physiological falls in children, therefore subject to preventive actions to avoid or even minimize the damage related to falls^(7,8).

Falls at the hospital environment are a type of safety incident capable of causing unnecessary damage to the patient and their prevention is among the International Patient Safety Goals^(2,6,9-10).

In Brazil, the National Patient Safety Program⁽⁹⁾ considers the elaboration and implementation of safety protocols, including of fall prevention⁽¹⁰⁾, being an instrument that provides greater safety to the user and the health professional by minimizing the variability of behaviors and support evidence-based decision making. Protocols are a set of rules, norms or standards, with the objective of standardizing a behavior to ease the management of actions⁽¹¹⁾. Protocols are instruments to build a safety care practice, and are mandatory components of patient safety plans in health facilities, according to RDC No.36, of July 25, 2013 of Anvisa^(12,13).

In patient safety, risk management aims at the early identification of potential risks and, therefore, the reduction or elimination of adverse effects resulting from health care⁽⁹⁾.

Considering the high rates of falls in pediatrics and the importance of promoting patient safety in hospital institutions, the following guiding question emerged: How to implement the best evidence for the prevention and management of falls in pediatrics? This research aimed to describe the process of elaboration and implementation of a protocol for the prevention and management of pediatric falls.

METHOD

Action research operationalized by the 12 phases described by Thiollent⁽¹⁴⁾. The study was developed during 2021, in a medium-sized hospital in the public network of Espírito Santo, with 249 beds, a reference in the lines of Maternal-Infant and Urgent and Emergency care. The protocol in question was designed for the pediatric ward, Neonatal Intensive Care Unit (NICU) and maternity sectors.

The methodological path based on the 12 phases proposed by Thiollent (2011) is described in Chart 1.

The development of action research took place through a flexible script, considering the interaction between researchers, participants and the investigated context. This script was a starting point that began in the "exploratory phase" and ended in the "dissemination of results". The intermediate themes of the research were not conducted in a rigid sequence, and the researchers reorganized the 12 phases proposed by Thiollent in three axes of action: 1. Preparation Axis; 2. Execution Axis; and 3. Dissemination Axis, as shown in Figure 1.

As part of the Preparation Axis, an integrative literature review was performed, which used the guiding question: What is the available evidence on the prevention of accidents by falls in hospitalized children? The search was conducted in the databases Latin American and Caribbean Health Sciences Literature (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), Bibliographic Database Specialized

Stage	Operationalization
1. Exploratory phase	Identification of the problem with the Patient Safety Center (PSC) and teams, and literature review.
2. Research theme	Prevention and Management of Pediatric Falls defined by the institution and researchers, and sub-themes defined together with the multiprofessional group.
3. Problem Setting	Presentation of the literature findings on pediatric hospital falls and the overview of institutional fall notifications.
4. The Theory's Place	Patient safety policies and programs. Use of articles and protocols from other institutions to discuss best practices with the working group.
5. Hypotheses	Raising questions about pediatric hospital falls.
6. Seminars	Conducting three in-person seminars with the working group and two rounds of online corrections for elaboration of the protocol.
7. Field of observation, sampling and informal knowledge	The pediatric hospitalization, maternity and NICU sectors, represented by professionals working in the respective fields and representative of the patient safety center.
8. Data collection	Recorded collective seminars, protocol correction form in online rounds, field diary, and talk circles in face-to-face training.
9. Learning	Result of theorizing and discussions during face-to-face seminars with the working group, online training and talk circles with the whole team.
10. Formal knowledge and informal knowledge	Represented by research, written contributions and discussions with the working group and feedback from the team during training and talk circles.
11. Action Plan	Developed collectively between the researchers and the working group.
12. External dissemination	Result of the research presented at the institution, production of scientific article and papers in congresses.

Chart 1 – Methodological path: description of the 12 phases of action research according to Thiollent. Vitória, Espírito Santo, Brazil, 2021
Source: Research data, 2021.

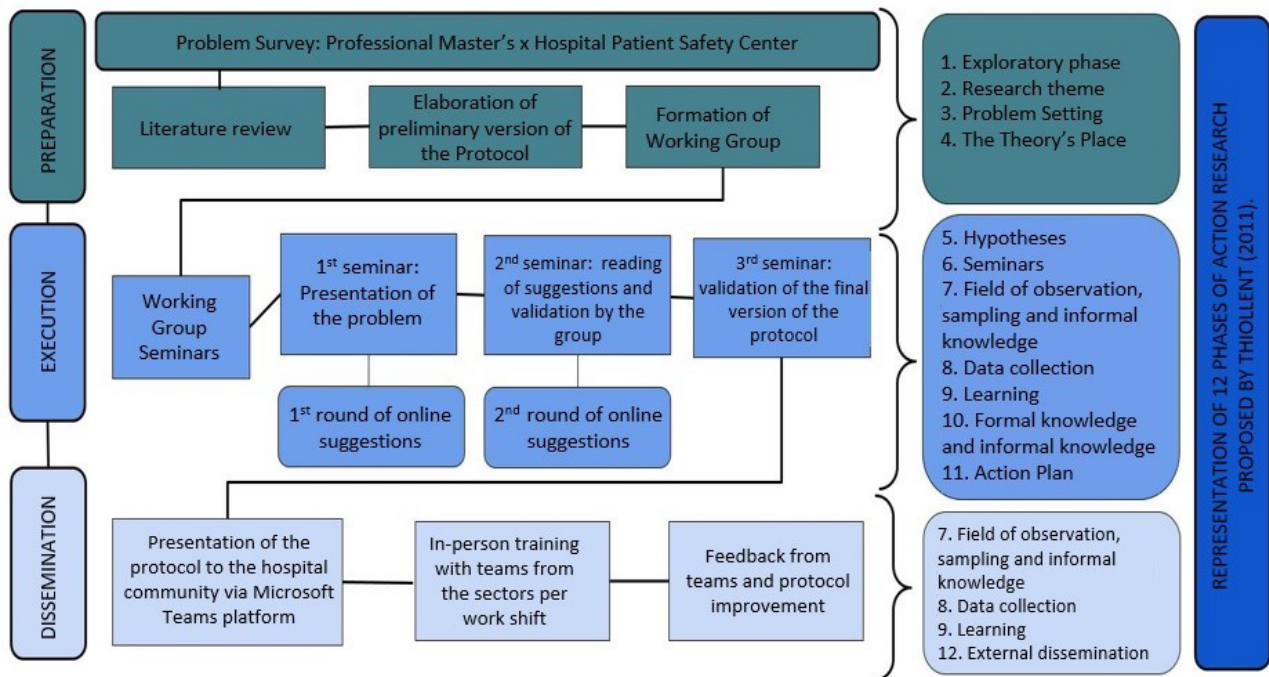


Figure 1 – Methodological path: grouping the 12 phases of action research into three axes of action for the operationalization of the project. Vitória, Espírito Santo, Brazil, 2021
Source: Research data, 2021.

in the Nursing Field (BDENF), and Cumulative Index to Nursing and Allied Health Literature (CINAHL Complete), through the search sites of the Virtual Health Library (VHL/BVS) and *Periódicos Capes*.

The Mesh descriptors chosen were: (“Child, Hospitalized” OR “Child”) AND (“Risk Management”) AND (“Accidental Falls”), in English and Portuguese, with a time frame of 10 years (2010 to 2020), due to the lack of studies in the area focused on pediatric patients. The inclusion criteria were articles that addressed the prevention and management of falls in pediatric hospitalization in the abstract or subject, studies with a qualitative or quantitative approach, and available in full text. Exclusion criteria: articles on falls in adult patients or in an out-of-hospital environment, editorials and reflections.

In the literature review, 115 articles were identified and, after applying the inclusion and exclusion criteria, 14 articles remained for full reading. The summary chart of the 14 articles evaluated in the review is available at the link (<https://enfermagem.vitoria.ufes.br/pt-br/pos-graduacao/PENF/detalhes-da-tese?id=16071>). After literature review, manuals from the Ministry of Health (Protocol for Management and Prevention of Falls) and other materials developed by university hospitals that collaborated with the selection of content for the construction of the first version of the protocol

were also selected. After the search, the following were selected, Standard Operating Procedure: Prevention of Falls in Pediatrics at *Hospital das Clínicas*, by Prof. Romero Marques, from the *Universidade Federal de Pernambuco*; Protocol for the Prevention of Falls in Children, *Universidade Federal do Ceará*; Standard Operating Procedure: Reducing the Risk of Falls in Pediatric Patients, *Universidade Federal de Pelotas*.

Among the contributions of the literature review for the construction of the protocol, one can mention the knowledge about the pediatric risk assessment scales, the sensitivity and specificity attributed to each one, the knowledge of the risk factors for pediatric falls and the means to prevent and manage the risk of a fall and the damage caused by that incident.

The actions of the Preparation and Execution Axes were developed by a working group of falls composed of the main researcher, a representative of the Patient Safety Center (PSC) and three nurses (pediatrics, NICU, maternity), as well as the following representatives of the multiprofessional team: pharmacist, physical therapist, social worker, occupational therapist and pediatrician. The type of sampling to form the working group was by convenience, using the snowball technique, in which the objective was to select people with expertise in the investigated topic or with experience

in pediatrics. Participants received an invitation letter and the Free and Informed Consent Form (FICF) with guidelines regarding the research stages.

As part of the Execution Axis, 3 in-person seminars were conducted with an average duration of 1 hour, and 2 online rounds, mediated by the main researcher (pediatric nurse and master's student in nursing) and by the representative of the PSC (nurse with a master's degree). The facilitators had experience in conducting seminars/groups and the participants knew the reasons for carrying out the research.

In the online rounds, the protocol was sent to the working group members via institutional email with instructions and a color code to include or exclude topics. The mediators (researcher and PSC representative) received the material, compiled it and presented it at the subsequent seminar, mediating the discussion of the changes proposed by the group and, at the end, the group validated the protocol by consensus. Data production took place from January to July 2021.

The seminars were recorded in mp3 format and recorded in a field diary. The recordings were transcribed in chronological order and the analysis of the results was performed using the Bardin content analysis technique⁽¹⁵⁾. Each participant was identified as participant P, in the sequence (P1, P2, P3, ..., P9), the researcher was identified as RE, and the coding (...) means that part of the speech was omitted. The qualitative analysis aimed to contribute to structuring and defining the contents of the protocol for the local context, based on the perception of the members of the working group.

After the final writing and approval of the protocol by the working group, the actions of the Dissemination Axis began, which contemplated the last phase of action research, with the dissemination of results. The presentation of the final version of the protocol to the entire hospital community was made through the Microsoft Teams platform. Eight remote meetings were held, lasting 1 hour each. In-person training was also conducted with the multidisciplinary teams of the pediatric ward, NICU and maternity sectors. The dynamics used was a talk circle with discussion of printed materials for use in the sector. The training was conducted in each work shift, when questions and feedbacks arose for the improvement of the materials. The suggestions were forwarded to the working group, which evaluated and made minor adjustments to the protocol. At the end, the protocol was sent to the quality sector for approval and availability on the institution's intranet.

This research followed the criteria established in the Consolidated Criteria for Reporting Qualitative Research (COREQ). The research was approved by the Research Ethics Committee of UFES, under No. CAAE 57930016,00000,5060.

■ RESULTS AND DISCUSSION

The process of elaboration, approval and implementation of the protocol was organized in three axes of action: 1. Preparation, 2. Execution and 3. Dissemination.

Preparation involved identification of the problem, based on the institution's need for continuous improvement in safety and quality processes, initially identified by the researcher and the PSC team. After reading the texts found in the review, the "Fall Prevention Protocol" developed jointly by the Ministry of Health, Anvisa and Proqualis/Fiocruz⁽¹¹⁾ was chosen as the base text for the preliminary construction of the protocol.

The Pediatric Fall Prevention and Management Protocol was structured according to the model provided by the institution and addresses introductory topics such as: responsible area; scope and concepts. Then it describes the management and prevention actions of pediatric falls based on the risk assessment of falls, the education of the companion and patient and the implementation of prevention actions that will be assigned to the entire multiprofessional team and those responsible for the pediatric patient from admission. The protocol also includes management procedures in the event of a fall (initial care, notification, and registration), monitoring through indicators and a flowchart of pediatric fall risk assessment actions from patient admission to discharge. The protocol can be accessed in full at the link: <https://enfermagem.vitoria.ufes.br/pt-br/pos-graduacao/PENF/detalhes-da-tese?id=16071>.

The assessment of risk factors for falls through protocols helps decision-making, allows directing preventive interventions to the correct patients, ease care planning and promotes effective communication between health professionals and care locations⁽¹²⁾. This includes planning preventive actions for any risks found, as well as planning actions regarding the personal risks of any patient that may not have been captured by the tool⁽⁶⁾.

The "Monitoring" will be performed by the index of falls [(number of events / number of patients-day)]; proportion of patients with a fall risk assessment performed on admission; number of falls with damage; number of falls without damage. Monitoring these indicators will allow the detection of failures and the implementation of improvements in work process^(11,13). The elaboration of the "Flowchart of the pediatric fall prevention and management protocol", present in the protocol, aimed to present an overall view of the process, since the flowcharts are graphic representations that support the assessment and decision-making on a given subject⁽¹²⁾.

In the Execution process, hospital professionals were involved in the collective construction of the fall protocol, considering not only the data collected in the literature, but

the routine of the teams, the physical structure of the units, the available human resources and the local reality. These aspects were raised during the group discussions and the definition of consensus was essential for the protocol to be elaborated in a feasible way.

As for the professionals involved, the mean age of the members was 35.6 years, regarding the maximum degree, 44.4% had a specialization (*lato sensu* postgraduate degree or residency), 33.3% had a master's degree and 22.2% had doctoral degree. The average time of graduation was 13 years, 66.6% had more than 5 years of experience in the maternal and child area and the other 33.3% had expertise in the development of institutional risk management protocols.

In the first seminar, the participants of the working group were introduced; presentation of the problem, the research topic and the data found in the literature by the researcher; presentation of data on falls at the hospital by the PSC representative; presentation of the preliminary protocol; discussion of the scale to be chosen and agreement on the group work method and schedule of the following seminars.

To organize management and prevention actions of the protocol, a pediatric fall risk assessment scale was chosen. The scale chosen by the group was the Humpty Dumpty Falls Scale (HDFS) due to its prevalent use in the reviewed studies, in the institutional protocols consulted, as well as for being the only scale validated and translated into Portuguese in Portugal and in translation and validation phase in Brazil^(3,16,17).

The HDFS scale was created in 2009, and it is an instrument that assesses seven items, which are age, gender, diagnosis, cognitive impairments, environmental factors, response to surgery/sedation/anesthesia, and medication usage. After the risk assessment, the scale classifies patients as high or low risk of falling, according to the score obtained⁽³⁾.

In addition to the interventions suggested by the Humpty Dumpty scale, other specific prevention measures related to risk factors for pediatric falls were scored based on the fall prevention protocol of the Ministry of Health, in the literature reviewed and adapted by the working group to the reality of the institution, from the content discussions during the seminars.

In the first seminar, due to the COVID-19 pandemic, the researcher and collaborators decided that, to speed up and reduce the number of in-person meetings, contributions would be made in a mixed way, with in-person and online activities, with the material being reviewed by email and in-person.

The preliminary protocol was sent by email to group participants in the first online round. The inclusions, exclusions and suggestions to the preliminary text of the protocol

were conducted by the group and returned via email to the researchers, who compiled the information.

In the second in-person seminar, the preliminary protocol was read with the suggested changes. After discussion, the 2nd version of the protocol was validated by consensus. Then, the second online round was followed by sending this new version of the protocol by email to the participants of the group, who made new suggestions, and the changes were compiled by the researchers and sent back to the participants.

In the third seminar, the 3rd version of the protocol was read, especially the attachments. After discussion, the final text of the protocol and educational materials was approved by consensus. The researchers also presented slides with the protocol content that were used in the training for the hospital community.

The seminars⁽¹⁴⁾ were spaces for the synthesis, exchange and scientific knowledge translation that allowed to organize a protocol based on the best evidence.

The group discussions in the seminars were recorded, transcribed and, after content analysis⁽¹⁵⁾, two categories were established that guided the elaboration of the protocol, giving meaning and bringing the protocol closer to institutional reality.

Category 1 – Risk factors and measures for the prevention and management of falls

The prevention and adequate management of falls in the hospital environment is a multifactorial event, and a challenge for the health team. Therefore, fall risk management must be comprehensive and multifaceted, emphasizing individualized risk assessment, the involvement of users, family members and professionals in risk management, with the establishment of measures aimed to the individual, to the environment and to work processes, adopting measures that aim to minimize or eliminate possible complications inherent to this incident, since the fall is considered a multifactorial incident^(10,11,13).

An integrative literature review grouped the most recommended actions to prevent pediatric falls: 1) use of baby crib and age-appropriate beds; 2) risk assessment of falling whenever there are changes in the clinical picture, transfer between sectors or performing surgical procedures; 3) guidance from caregivers; 4) supervision of the child at high risk of fall; 5) use of identifiers that warn about the high risk of falling; and 6) training of newly admitted professionals at the institution⁽⁶⁾. These findings corroborate the issues discussed in the seminars and incorporated into the developed protocol.

International research point out that the bed or crib appears as the main place for children to fall, and the mother's bed or the companion's armchair for newborns^(18,19). This was

also the main focus of concern of the participants of the working group, according to the statements.

I have opened (the grid) to handle (the child), I cannot move away. (P5)

They (the mothers) sleep in the bed with the baby and I keep thinking, what if he/she rolls over? (P4)

And the armchairs? Because mothers like to sleep with their children in armchairs of pediatrics. (P3)

Unsafe behaviors during hygiene and comfort actions were also reported, and specific prevention measures were included in the protocol.

Sometimes the mother is bathing, leaves the towel away and let the child to pick it up. (P7)

These data point to the need for risk assessment and management plans to focus on education to caregivers on bed safety and during hygiene care, especially regarding the importance of keeping one of the grid or bed grid elevated during diaper or clothing changes, and the use of non-slip slippers, among others^(11,18-19).

In the case of newborns, although the main cause is related to the fall from the parents' arms, other circumstances were also exposed during the seminars, as illustrated by the following statements.

The mother arrived in labor and asked to go to the bathroom, when she got in the room the baby was born and fell, luckily, she was crouching and the fall was from a small height. (P9)

There was a baby from the NICU who needed to go down to have a transfontanelar ultrasound and went down with the mother, and the doctor, in order to put the device in the crib, put the baby on the mother's lap, the mother had a seizure and the baby and the mother fell down. (P3)

It is worth mentioning that children under 6 months of age must be transported on the lap of the parent or companion and, in their absence, by the nursing professional, seated in wheelchair⁽¹¹⁾. This measure was included in the protocol.

In the seminars, reports emerged about care during use of the toy library space, which were included in the protocol as specific prevention measures related to the environment.

We don't let them stay in the toy library without a companion up to 13 years old. (P5)

The toy library is not a place to leave the child alone, it is a place for everyone to be together. (P5)

Hospitals that had a toy library had a higher rate of falls. It is necessary to educate parents and professionals to keep constant surveillance over children and adolescents. However, the risk of falling should not be an obstacle to leisure and playing^(20,21).

Another issue that guided the formulation of specific measures to prevent falls in pediatrics was the need to hold accountable all those involved in child care (parents or guardians and the health professional).

It is the right (Law 8.069/90) of children and adolescents to have a full-time companion during hospitalization, which is not mandatory for parents. The hospital patient profile does not always allow the full presence of parents or guardians. I consider important to provide guidance to child's responsible, but I think it is necessary to share responsibility with the institution for the care of the child in the absence of the responsible person. (P7)

Often the fall is occurring not related to infrastructure, but to supervision, this week was due to a lowered grid. (P9)

As for the attributions and competences of the multiprofessional team, it was discussed what would be feasible for each professional to do regarding the prevention of accidents caused by falls, to adapt to the reality of the hospital.

We (occupational therapist) do not attend just to show, but for active search. (P6)

The protocol is everyone's contribution, but its main axis is driven by nursing, which is the professional who is at the bedside 24 hours a day. (P9)

Prevention programs developed in the United States and Japan that relied on the involvement of health professionals in their elaboration and implementation, described excellent results^(20,21). Although the nurse is responsible for assessing the risk on admission and on a daily basis, the entire team must contribute to maintaining a safe environment and identifying signs of risk of falls, reinforcing the guidelines for the patient and companion^(11,19-21).

A fall prevention program conducted in the United States was able to sustain and improve its results by emphasizing the continuing education of nurses and the interdisciplinary team to provide consistent weekly guidance to family members on fall prevention. There was a reduction of 50% in falls in the presence of post-intervention family members⁽²⁰⁾.

Category 2 – Education about the prevention of pediatric falls

The education about the prevention of pediatric falls should include the professional, the patient and the companion. In the seminars, there was a need to develop signs to signal the bedside of high-risk patients, as already happens in the hospitalization units for adults. Thus, the “Bed Identification Sign for Patients at High Risk of Falls” was created (Figure 2) which, in addition to signaling the risk, lists guidance for incident prevention. About the use of bedside signs, the following reports emerged.

As a professional, even though there is visual pollution, it communicates a lot, sometimes I go to a service that I still haven't been able to discuss with the team and the signs help us (...) it started to communicate much better. (P6)

I think the sign should not come out because it is self-explanatory. (P9)

International studies point out to the need for high-risk patients to receive some type of visual signal, at the bedside, in the medical record or on the patient himself. Risk alert

mechanisms can reduce the occurrence of injuries related to falls^(3,8,16).

Three orientation posters were produced for the prevention of pediatric falls at the hospital environment for use during the guidance of parents or companions, which were fixed on an acrylic plate in the wards, thus translating scientific knowledge to the population (Figure 3).

A folder was also produced to deliver to patients, parents or guardians in pediatrics, with guidance on risk factors for falls, as well as prevention and management measures (Figure 4). Another folder was elaborated for the maternity hospital that addressed the specifics about maternal risk and falls in newborns (Figure 5). In the seminars, the participants discussed about the importance of materials with images and language appropriate for the population, which would enable the knowledge translation.

(...) there are many patients and family members who do not have any instruction and that we need to explain by showing the picture, it can reach a user that we were not able to do before. (P6)

But for the child, the mother likes to have something to read. (P2)

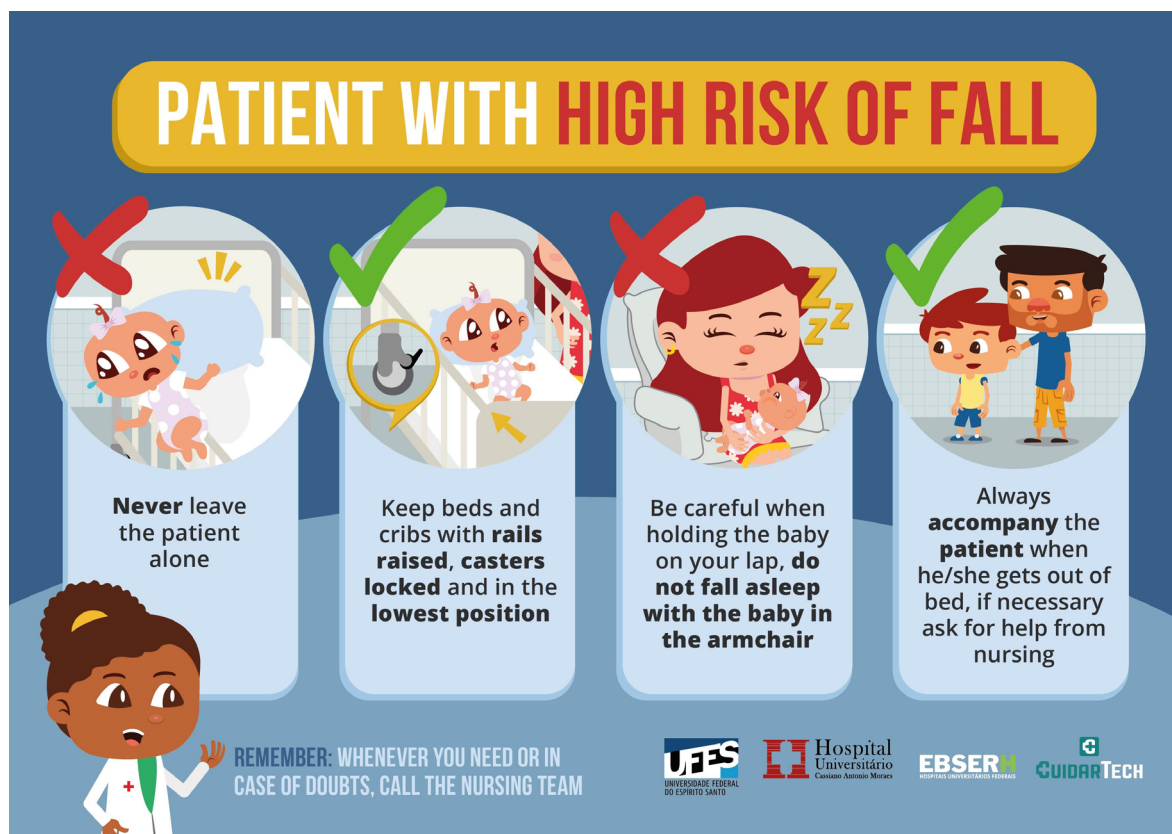


Figure 2 – Bed identification sign for patients at high risk of falls. Vitória, Espírito Santo, Brazil, 2021
Source: Research data, 2021.



Figure 3 – Guidance poster for the prevention of pediatric falls at the hospital environment. Vitória, Espírito Santo, Brazil, 2021
Source: Research data, 2021.

At the time of the fall, most children have an adult present, which highlights the need to prioritize the education of parents and companions regarding the prevention of the occurrence of this type of incident upon admission and during the entire hospitalization^(8,19–20). National and international studies have found lower rates of falls in units that shared information with high-risk patients and that used an informational folder to educate children and caregivers about the proper use of crib and bedside grid^(16,21).

Also, during the discussions, there was a need to prepare a “Shared Responsibility Term for the risk of pediatric falls at the hospital environment” to be signed by the child’s guardian upon admission, after receiving guidance from the health team.

You use that instrument (the shared responsibility term) when you guided, documented and he is signing, so it is because (the patient and family) received all those guidance. (P4)

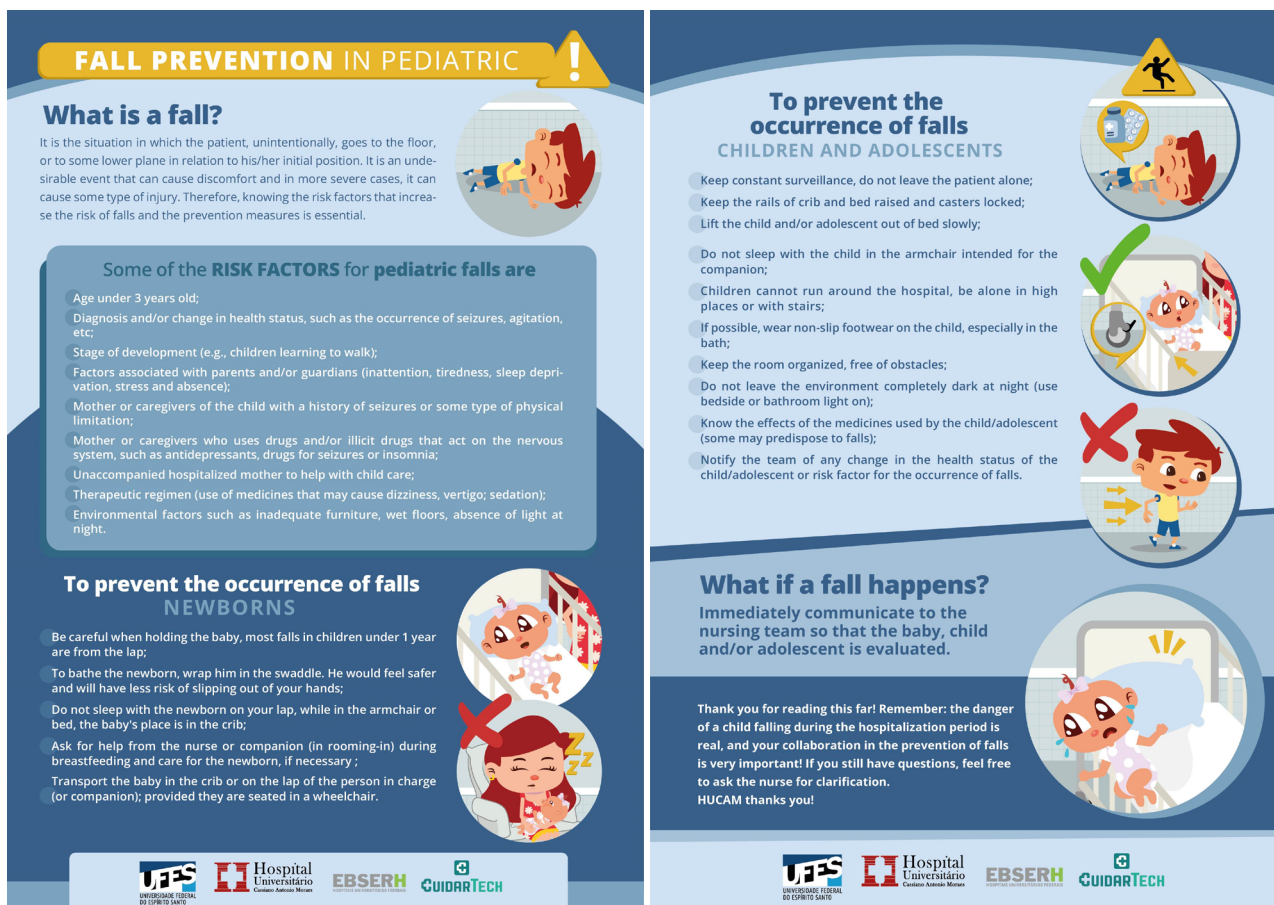


Figure 4 – Guidance folder for the prevention of pediatric falls at the hospital environment. Vitória, Espírito Santo, Brazil, 2021
Source: Research data, 2021.

Patient and companion guidance and this documentation does not exclude our civil, criminal, and administrative liability in relation to a fall, it only documents the orientation process. (P9)

Interventions with several components tend to be more effective in prevention of falls and, therefore, this protocol comprises knowledge of risk factors, identification of these factors through a scale, implementation of safety measures and guidance to responsible companions^(12,22).

For quality care, it is essential that work processes are reviewed and professionals are qualified and trained, as well as that institutions make technologies available that can assist in this improvement^(10-11,16,22). In this perspective, the development of instruments that assist the team in managing the risk of falls allows to establish a shared commitment of professionals to patient safety, the engagement of leaders and peers with safety-promoting behaviors and the use of incidents as opportunities for learning and improvement^(3,5-6,9).

In developing protocols, the main challenge is to ensure that it is a reliable instrument and that health professionals feel safe in adhering to its recommendations. In this sense, the methods of elaboration of protocols have sought to increase the transparency and quality of the process and encourage the participation of stakeholders throughout each stage⁽¹²⁾.

The protocol and educational materials are strategies for risk management in patient safety. The participation of the entire team, from managers to those who perform the activities, is essential to ensure that risk management reaches the local problem, from strategic angles and positions^(10-11,13).

Pediatric patients are susceptible to accidents, therefore, healthcare professionals and caregivers need to observe and assess the risk of falls in this population, share information among healthcare professionals, and intervene, especially in high-risk patients. The hospital environment is unknown and different from the home, to reduce pediatric falls, it is important to educate patients, caregivers and health professionals^(5-6,10-11,13,20).

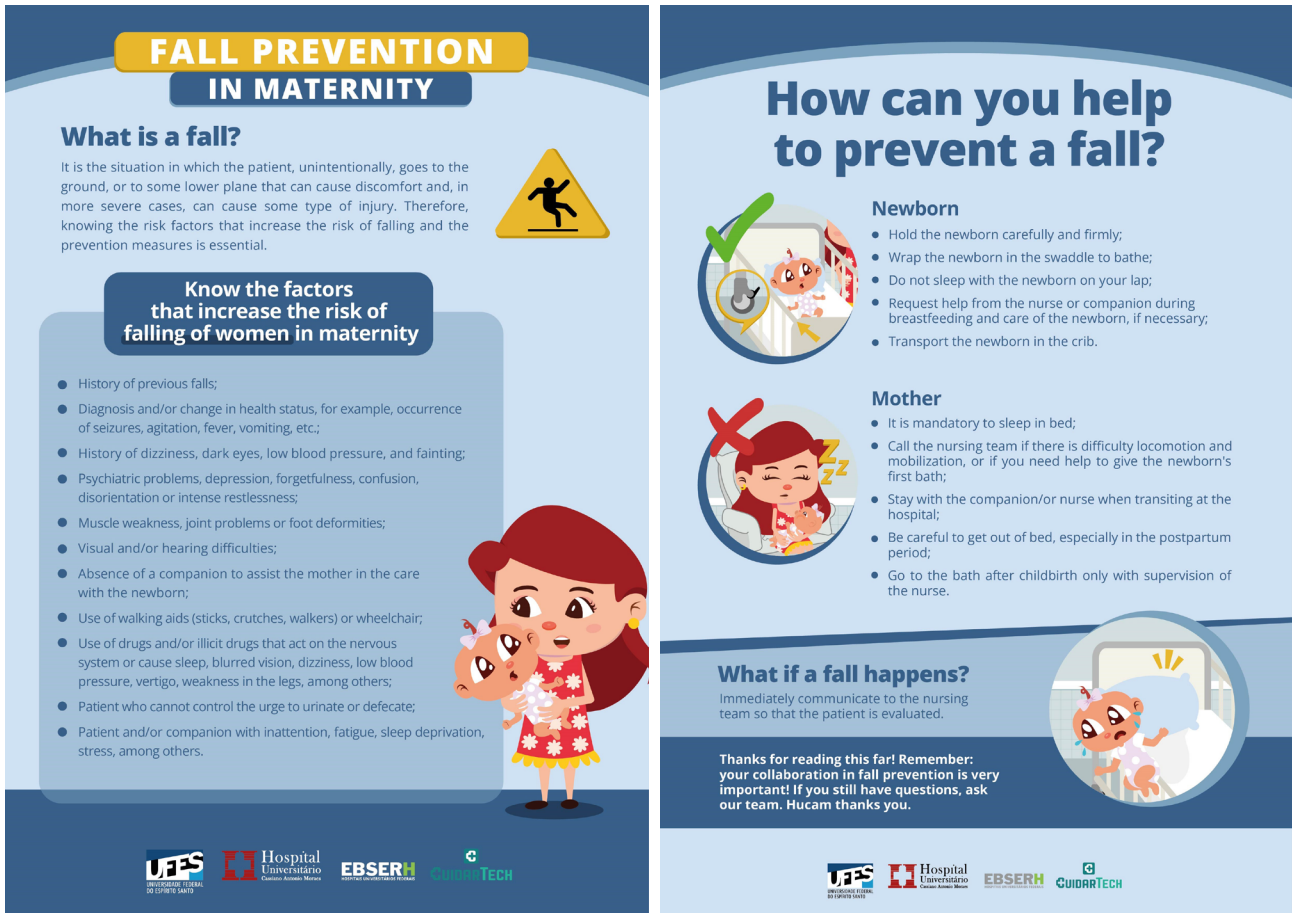


Figure 5 –Guidance folder for the prevention of falls at the hospital – maternity environment. Vitória, Espírito Santo, Brazil, 2021
Source: Research data, 2021.

As a contribution, this study, through action research, demonstrated how to implement management of risk of falls for hospitalized pediatric patients, based on the standardization of actions and behaviors, adoption of preventive measures based on individualized risk assessment and involvement of users, family members and health professionals, according to national and international recommendations on risk and management in health, quality and patient safety.

Action research has as premise the development of research integrating participants and researcher, being a collective production of knowledge, enabling convergence between formal and informal knowledge, theory and practice. It allows the members of an institution to participate in the planning and change of the reality in which they are inserted, incorporating the research findings in the practice scenario⁽¹⁴⁾.

This study contributes to Nursing by describing how to translate and apply the best scientific evidence in the work

process, organizing qualified care, ensuring to the professional a standardization of actions based on the principles of safety and quality, advancing in the knowledge translation in the contexts of care and management.

Knowledge translation is a dynamic process, which requires interaction between researchers and users in the sharing of knowledge, in order to support decision-making, changes in policy, programs and/or health practices⁽²³⁾.

The construction of the protocol considered the best available evidence, professional experience, and existing resources. However, it did not meet the premise of considering the patient's preferences, since it was not validated by the users, which configured as a limitation of the study. It is also highlighted, as a limitation, that the conditions imposed by the COVID-19 pandemic and the necessary restructuring in the field of study due to the advance of this pandemic interfered with the progress of the work and the adequate adherence of the collaborators to the study.

FINAL CONSIDERATIONS

This study elaborated and implemented a protocol for the prevention and management of pediatric falls through the collective, dialogic, and participatory work of health professionals involved in pediatric patient care or who had expertise in the development of risk management protocols related to health care, with the purpose of advance in the construction of a program and in the proposition of specific actions to favor the provision of safer care to hospitalized pediatric patients.

In addition to the protocol, unpublished educational materials were produced for the family and health professionals, with an attractive and creative presentation, which transmit information in a simple, clear and direct way (Guidance Poster; Guidance Folder; Bed Identification Sign for Patients at High Risk of Falls; Flowchart of the pediatric fall prevention and management protocol). These materials configure new technologies in knowledge translation about patient safety for the improvement of care and management in pediatric nursing.

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