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INFORMATIONAL ARTICLE

# UPDATE ABOUT THE OCCURRENCE OF ACCIDENTS INVOLVING CHILDREN

## ATUALIZAÇÃO SOBRE A OCORRÊNCIA DE ACIDENTES ENVOLVENDO CRIANÇAS

## ACTUALIZACIÓN ACERCA DE LA OCURRENCIA DE ACCIDENTES CON NIÑOS

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**ABSTRACT**

***Objective:*** presenting updated scientific production that addresses accidents in the infant stage. ***Method:*** a descriptive study, update type, which used search of articles published from 2008 to 2012 in the virtual library SciELO, selected as the descriptor: accidents, refining with the word child. ***Results:*** nine articles analyzed suggest that prevention to parents and caregivers can reduce accidents involving children in the household. Priority should be focused on the care of accidents in children under 10 years old, whether domestic or transit, parents and professionals should be vigilant on a day-to-day. ***Conclusion:*** it is relevant before the negative results regarding prevention of accidents in children, develop educational programs together with the communities, professionals and managers to take responsibility for children's health. ***Descriptors:*** Accidents; Children; Public Health.

**RESUMO**

***Objetivo:*** apresentar atualização da produção científica que contemplem a ocorrência de acidentes na fase infantil. ***Método:*** estudo descritivo, tipo atualização, que se utilizou da busca dos artigos publicados de 2008 a 2012 na biblioteca virtual SciELO, selecionados conforme o descritor: acidentes, refinando com a palavra criança. ***Resultados:*** os nove artigos analisados levam a crer que a prevenção dirigida aos pais e cuidadores é possível reduzir os acidentes que envolvem crianças no ambiente doméstico. A prioridade deve ser focada aos cuidados com acidentes em crianças menores de 10 anos, seja doméstico ou de trânsito, os pais e profissionais devem estar vigilantes no dia-a-dia. ***Conclusão:*** é relevante, diante dos resultados negativos em relação à prevenção de acidentes em crianças, desenvolver programas educacionais juntos as comunidades, profissionais e que os gestores se responsabilizem pela saúde pública infantil. ***Descritores:*** Acidentes; Crianças; Saúde Pública.

**RESUMEN**

***Objetivo:*** presentar la actualización de la producción científica que se ocupan de los accidentes en la etapa infantil. ***Método:*** un estudio descriptivo, tipo de actualización, que se utilizó de la búsqueda de artículos publicados desde 2008 hasta 2012 en la biblioteca virtual SciELO, seleccionados como el descriptor: accidentes, refinando con la palabra niño. ***Resultados:*** los nueve artículos analizados sugieren que la prevención a los padres y cuidadores pueden reducir los accidentes con niños en el hogar. La prioridad debe centrarse en el cuidado de los accidentes en los niños menores de 10 años, si doméstico o de tránsito, los padres y los profesionales deben estar atentos en un día a día. ***Conclusión:*** es relevante, dado los resultados negativos con respecto a la prevención de accidentes en los niños, el desarrollo de programas educativos a las comunidades, profesionales y directivos para asumir la responsabilidad de la salud de los niños. ***Descriptores:*** Accidentes; Niños; Salud Pública.

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## INTRODUCTION

Accidents that have occurred in children are a major public health problem faced by health professionals and families. So parents need to take greater care and authority, to establish firm and precise limits in order to avoid further difficulties in the development of motor skills in the infant stage. [1]

The specific aspects of the child at this stage are characterized by domestic socialization, in which adults' attention becomes crucial security and decision-making, if it occurs some trauma that prevent or makes difficult the physical and psychological growth of the child. Some risk factors highlighted for the occurrence of accidents in children, such as age, specific injuries occur at ages set representing windows of vulnerability in which children are threats to their physical integrity, that due to insufficient maturity; low socioeconomic group, research shows that the number of child deaths is 5 times lower in developed countries; boys are twice as likely to have accidents than girls.[1]

The most common accidents that happen are for drug poisoning, burns occurring mainly in the kitchen, drowning, electricity and the famous falls are more common in boys, due to unrestricted freedom achieved by means of locomotion, combined with a lack of attention to the dangers in a given environment, which refers to the need for greater care of family members in an attempt to avoid sequelae, deaths and serious injuries.[2]

Accidents have been around the world a problem for society, taking the child a big target. The children at risk of injury reflect the physical, social and emotional environment in which they live. Often, an underlying fault in the social and emotional environment resulting from a society where children's safety is not seen as a priority; however, with regard to the environment in which they live, facing a city that there is, for example, physical separation of vehicles and pedestrians and can easily have access to the streets or suffer injuries not use road safety equipment.[3]

Trauma is the leading cause of death in children, where 80% of these deaths can be avoided through prevention and appropriate treatment strategies, health professionals can help prevent accidents and/or serious injury, before pediatric care. Therefore, these professionals require complete knowledge of the characteristics of growth and development of children and can thus carry out an assessment and appropriate care to this public also provide important information to parents or guardians, especially with regard to measures prevent accidents.[1]

Remember that for each type of accident there is a specific service and that it is through this support that the child will survive the accident. Trauma is a leading cause of death in children divided into: Spinal Cord Trauma, Trauma Thoracic, abdominal trauma, trauma at the ends, burns and drowning.[4]

Trauma Spinal Cord: immediate immobilization column of pediatric patients after physical examination, with manual stabilization, cervical collar, immobilization of the child in long board. The body must be in neutral and aligned position without harming patient ventilation, opening the mouth or carrying out any other maneuver necessary for resuscitation.[4]

Thoracic Trauma: the child's rib cage is flexible which makes it occur less bone structure damage, thus increasing the risk of parenchymal lesions, such as pulmonary contusion, pneumothorax and hemothorax. The transportation of children should be monitored while the child is the way to hospital.[4]

Abdominal trauma: the presence of instability of the pelvis, bloating, abdominal tenderness or stiffness may indicate intra-abdominal hemorrhage. Key elements of treatment are fluid resuscitation, oxygen at high concentrations and rapid transport to the hospital.[4]

Trauma at the ends: the child's skeleton is still cartilaginous and metabolically active growth areas, supporting major impacts.[3]

Burns: injuries produced by hot liquids are the most common, especially in children under 5 years old, while the majority of fatal accidents is determined by flame. The care of these children depend directly from the parents' attention.[4]

Drowning: the procedure is performed CPR is 30 compressions performed by 2 breaths. While checking vital signs and send quickly to pre-hospital care.[4]

The family with the health professional has to be important figures in making decisions aimed at accident prevention and health promotion, showing all the precautions to be adopted at that stage, resulting in a low in cases of accidents in children in this age group.

Regarding traffic accidents, traffic safety is an important determinant of health because of the use of appropriate bikes for every age and safety equipment such as helmet, wear

appropriate shoes, avoid carrying unsuitable passengers, teach the rules of traffic and wear seat belts, teach the way to school, avoid going out late home (the hurried child is exposed to greater dangers) are accident prevention measures.[5]

Promote the health of children performing domestic accident prevention, with the right knowledge and taking care according to the needs of each phase and child development becomes crucial factor, especially if outpatient care is permeated by health education passes to be crucial in improving the whole child. For this reason the health professional should always be present, so as to understand the needs of families and through preventive guidelines, continuing education try to avoid future problems, improve the care for hospitalized children sharing feelings, frustrations and satisfactions. The study aims to lift articles that address accidents in the infant stage and describe trends of these articles.

The justification for the approach to this theme is that currently accidents with children are very common and collaborate with increased morbidity and mortality in this age group. Thus, this issue needs more and more studies in order to provoke discussions that may contribute to the development of strategies to reduce this major public health problem, with the main contribution of literature as a supplier of information on the topic covered, thus enabling a better understanding of accidents and their causes, both by professionals and their families. In this regard it is important that this study is available and broadcast in order to enrich the educational activities in general.

## OBJECTIVE

- Displaying update of scientific literature that address accidents in the infant stage.

## METHOD

It is a descriptive study, type update, which was used in the literature search of articles published in SCIELO from 2008 to 2012.[6] The procedure was carried out from June to August 2012, using the descriptor: accidents. There were identified 340 articles, which after refinement, using the word child, met 25; of these nine articles were selected for analysis.

## RESULTS

Figures 1 and 2 show data about the articles analyzed for the year of publication, the journal where it was published the article, the authors, objective of the work and the results found.

| Order | Authors | Journal/Year |
|---|---|---|
| A1 | Lourenco J, Furtado BMA, Bonfim C. | Acta Paulista of Nursing/2008 |
| A2 | Franciozi CES, Tamaoki MJS, Araújo EFA, Dobashi ET, Utumi CE, Pinto JÁ. et al. | Acta Brazilian Orthopedic/2008 |
| A3 | Martins CBG; Andrade SM. | Journals of Public Health/2008 |
| A4 | Malta DC, Mascarenhas MDM, Silva MMA, Macário EM. | Science & Public Health/2009 |
| A5 | Oliveira SRL, Carvalho MDB, Santana RG, Camargo GCS, Lüders L, Franzin S. | Journal of Public Health/2009 |
| A6 | Vieira LJES, Carneiro RCMM, Frota MA, Gomes ALA, Ximenes LB | Science & Public Health/2009 |
| A7 | Vendrusculo TM, Balieiro CB, Echevarría-Guanilo ME, Farina Junior JA, Rossi LA. | Latin American Nursing Journal/2010 |
| A8 | Fernandes, Fernanda Maria Félix de Alencar et al. | Gaúcha Nursing Journal/2012 |

Figure 1 – Characteristics of studies about accidents in children according to the order, author, year of publication and journal. Teresina (PI), 2012.

| Order | Objective | Results |
|---|---|---|
| A1 | Describing the epidemiological characteristics of exogenous poisoning cases in children served in a pediatric emergency unit of Recife (PE), in the period from April to September 2006. | -26 cases of accidental exogenic poisoning.<br>-Predomina Males (65,4%)<br>-Age of children under five years of age (65,4%). Medicines were involved in 50,0% of cases. |
| A2 | Major traumas in childhood and adolescence: epidemiology, treatment and economic aspects in a public hospital. | -Male with 71%.<br>-The Most frequent trauma was the fall (36%).<br>-A Mortality rate was 2,74%<br>-The Head trauma accounts for 80% of mortality.<br>-Bad treatment present in 40% of deaths. |
| A3 | Analyzing the accidents with foreign body between under 15 years old, residents in Londrina, Paraná, Brazil, met in emergency services/hospitalization or who have died for these causes, in 2001. | -Hospitalization rate 3,7%.<br>-Death rate of 0,7%.<br>-Male (53,7%)<br>-Age 1-3 years old (7,2 per thousand children).<br>-Strange body in natural orifices (eyes, nostrils and ears) with 94%.<br>-Inhalation/Food intake was 2,8%.<br>-Inhalation/Ingestion of objects 2,5%.<br>-Inhalation of gastric contents by 0,7%, accounting for all deaths. |
| A4 | Profile of emergency calls for accidents involving children under 10 years old: Brazil, 2006-2007. | -Hospitalization rate 3,7%.<br>-Death rate of 0,7%.<br>-Male (53,7%)<br>-Age 1-3 years old (7,2 per thousand children).<br>-Strange body in natural orifices (eyes, nostrils and ears) with 94%.<br>-Inhalation/Food intake was 2,8%.<br>-Inhalation/ Ingestion of objects 2,5%.<br>-Inhalation of gastric contents by 0,7%, accounting for all deaths. |
| A5 | Estimating the prevalence of use of child safety seats and associated factors. | -Accidents with ASI (Child Safety Seat) was of 36,1%.<br>-Accidents without the ASI 45.4%.<br>-There were associated with: child's age and weight.<br>-The driver's gender.<br>-Use of the driver seat belt.<br>-Interaction of the use of seat belts.<br>-Place of the seat in the vehicle.<br>-Income of the nursery.<br>-Number of passengers in the car.<br>-Presence of another child and adult passengers. |
| A6 | Describing actions and possibilities for prevention of accidents in nurseries of Fortaleza, Ceará . | -The teachers conceive this type of accident as preventable through family orientation.<br>-Physical changes in the home space.<br>-Development and compliance with specific laws. |
| A7 | Characterizing the accidents by burns. | The risk factors were:<br>-Low socioeconomic status and education of mothers and guardians of the child. -Small homes for the number of residents.<br>-Precarious kitchen equipments.<br>-Disatention of those responsible.<br>-Health professionals should investigate the circumstances of |

| | | |
|---|---|---|
| | | accidents in vulnerable individuals. |
| A8 | Characterizing the clinical and epidemiological profile of children and adolescents burn victims admitted in a reference Hospital of Joao Pessoa, Brazil, from January 2007 to December 2009. | The demographic characteristics presented evidenced:<br>-Nurseling with 37,0%.<br>-Preschool age with 33,2%<br>-Setting: countryside of the State (55,0%).<br>-Male with 54,0%.<br>-The fact that the majority being male can be attributed to the greater willingness of boys to the risk of play and therefore greater exposure to the causal factors of burns. -The scalding accidents by being the main burn type.<br>-Lesions by flame.<br>-Lesions of contact by heated surface. |

Figure 2. Characteristics of studies about accidents in children according to purpose of the work and results targeted. Teresina (PI), 2012.

## DISCUSSION

The analysis of the articles focuses primarily on a priority in the care we must take when it comes to accidents in children, be it a home or traffic accident, and that parents and professionals should be alert to such care and guidance in the monitoring of each child, taking into account the specific age group. The main results lead us to believe that through specific actions and guidance to parents and caregivers it is possible to reduce mostly the various types of accidents involving children, noting that domestic accidents rank first, followed by car accidents in children.

Importantly, the childhood traumas should be prioritized to undertake preventive measures and have the effect of reducing health care costs in Brazil that fall far short of the amount spent in developed countries. The trauma to the upper limbs in children requiring hospitalization is the most frequent trauma and that depends on a daily care of parents and educators who accompany these children daily.

It should be noted that the factors that may also contribute to the occurrence of accidents are burns: social, environmental and circumstances surrounding accidents.[7] Confirming the author quoted above, burns not only contribute to these accidents as also are the largest causing accidents with victims, and that these accidents mostly happens in the home under the care of their parents.[8-9]

Children account for about 20% of calls in emergencies by accidents and major accidents ratios occurred at home, followed by a public road which comes to be a controversy some authors quoted above. The high prevalence of accidents in children is related to (calling attention to burns) low family income, housing conditions, the large family, the low degree of relatives, psychic disorders and extradomiciliary maternal employment, favoring, especially, the involvement of children under 5 years old.[10]

Another type of accident happening are cases of accidental exogenic poisoning of children, especially in children under 5; it is a public health problem that requires preventive measures in an attempt to prevent their occurrence in childhood.[7]

Next comes the cases of ingestion of small objects and also by introducing in the nasal passages and ear canal thus causing risk of life and trauma to remove the foreign body, it is important to remember that toys should be examined carefully, for little pieces that come off easily they are also responsible for this type of accident, in addition to buttons, grains, seeds, coins and caps.[9]

It is important to note that these accidents can somehow compromise and have consequences on the physical and psychological development of the child who will suffer some trauma.[11] In contrast, traffic accidents has become a growing cause of mortality in children in Brazil, on the same line the more developed countries.[12-13]

In the face of the previous, Brazil is a country that stands out for the large number of accidents compared to the already developed countries and that public health policies do not to develop more specific and resolute programs under the children's accidents. The traffic accident ends up inferring the use of customer prostheses that have suffered accidents and have resulted in the loss of any member.[14-15]

It is relevant to the behavior of health professionals involved in this context, as this may tend to wonder at the behavior of the

company and managers too, and so it is possible that the number of accidents is amortized in the same way, evolving positively in epidemiological data of children's accidents in our country.

## CONCLUSION

It is relevant, given the negative results regarding prevention of accidents in children, develop educational programs together with communities, professionals and that managers take responsibility for public children's health.

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