# RESEARCH

# CLINICAL-EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS IN THE PEDIATRIC UNIT OF A PUBLIC HOSPITAL IN CEARÁ

PERFIL CLÍNICO-EPIDEMIOLÓGICO DE INTERNAMENTOS NA UNIDADE PEDIÁTRICA DE UM HOSPITAL PÚBLICO CEARENSE

PERFIL CLÍNICO-EPIDEMIOLÓGICO DE INTERNACIONES EN LA UNIDAD PEDIÁTRICA DE UN HOSPITAL PÚBLICO DEL ESTADO DE CEARÁ

Anny Caroline Santos Olímpio <sup>1</sup> Brena Shellem Bessa Oliveira <sup>2</sup> João Breno Cavalcante Costa <sup>3</sup> Emanuella Silva Ioventino <sup>2</sup>

- <sup>1</sup> Santa Casa de Misericórdia de Sobral, Serviço Especializado em Engenharia e em Medicina do Trabalho. Sobral, CE Brazil.
- <sup>2</sup> Universidade da Integração Internacional da Lusofonia Afro-Brasileira UNILAB, Instituto de Ciências da Saúde, Curso de Enfermagem. Acarape, CE Brazil.
- <sup>3</sup> Centro Universitário Instituto Superior de Teologia Aplicada UNINTA, Curso de Enfermagem. Sobral, CF – Brazil.

Corresponding author: Brena Shellem Bessa Oliveira. E-mail: brennashellem@gmail.com Submitted on: 2017/10/07 Approved on: 2018/04/25

#### **ABSTRACT**

Objective: To outline the clinical and epidemiological profile of hospitalizations in the pediatric unit of a public hospital in Ceará. Method: Retrospective, quantitative documentary study carried out with 283 medical records of children hospitalized in a public hospital located in the interior of Ceará. A form was used to collect the sociodemographic data, as well as information about the origin, Manchester classification, diagnosis by the International Code of Diseases, length of hospital stay, type of treatment, antibiotic use and reason for leaving. Results: The majority of the hospitalized children were male (N = 48, 52.3%); from one to three years old (N = 73, 25.8%); from Sobral-CE (N = 197, 69.6%); hospitalized for pneumonia (N = 78.3%) and gastroenteritis (14.8%); classified as yellow according to the Manchester protocol (N = 137, 48.4%); remained in the hospital for a period of less than seven days (N = 133, 49.8%); and the main reason for leaving the hospital was due to medical discharge (N = 270, 95.4%). Conclusion: It is perceived that knowing the clinical and epidemiological profile of the hospitalizations is an important tool for nurses, since it allows the planning of the care to be provided in an individualized and comprehensive way, facilitating the definition of the amount of human and material resources necessary for the promotion child care, helping to identify problems related to pediatric care and supports its resolution. Keywords: Hospitalization; Pediatric Nursing; Child Health; Health Profile.

#### **RESUMO**

Objetivo: traçar o perfil clínico e epidemiológico dos internamentos na unidade pediátrica de um hospital público cearense. Método: estudo documental, retrospectivo, quantitativo realizado com 283 prontuários de crianças internadas em um hospital público localizado no interior do Ceará. Utilizou-se para coleta de dados um formulário abordando dados sociodemográficos, além de informações acerca da procedência, classificação de Manchester, diagnóstico pelo Código Internacional de Doenças, tempo de internação, tipo de tratamento, uso de antibiótico e motivo de saída. Resultados: verificou-se que a maioria das crianças internadas era do sexo masculino (n= 48; 52,3%); tinha faixa etária de um a três anos (n= 73; 25,8%); era proveniente de Sobral-CE (n= 197; 69,6%); foi internada por pneumonia (n= 78,3%) e gastroenterites (14,8%); foi classificada como amarela de acordo com o protocolo de Manchester (n= 137; 48,4%); permaneceu no hospital por período inferior a sete dias (n= 133; 49,8%) e que o principal motivo de saída da unidade hospitalar foi alta médica (n= 270; 95,4%). Conclusão: percebe-se que conhecer o perfil clínico e epidemiológico dos internamentos consiste em uma importante ferramenta para o enfermeiro, pois permite que o planejamento do cuidado seja realizado de maneira individualizada e integral, facilita a definição da quantidade de recursos humanos e materiais necessários para a promoção do cuidado à criança, auxilia na identificação de problemas relacionados à assistência pediátrica e subsidia sua resolução.

Palavras-chave: Hospitalização; Enfermagem Pediátrica; Saúde da Criança; Perfil de Saúde.

How 1	to ci	te ti	nis	arti	cle

#### RESUMEN

Objetivo: trazar el perfil clínico y epidemiológico de las internaciones en la unidad pediátrica de un hospital público del estado de Ceará. Método: Estudio documental retrospectivo con enfoque cuantitativo realizado con 283 prontuarios de niños internados en un hospital público del interior de Ceará. Para la recogida de datos se utilizó un formulario con cuestiones sobre datos sociodemográficos, además de información sobre la procedencia, clasificación de Manchester, diagnóstico por el Código Internacional de Enfermedades, tiempo de internación, tipo de tratamiento, uso de antibióticos y motivo de la salida . Resultados: se verificó que la mayoría de los niños internados era del sexo masculino (N = 48; 52,3%); de uno a tres años (N = 73; 25,8%); procedía de Sobral-CE (N = 197; 69,6%); fue internada por neumonía (N = 78,3%) y gastroenteritis (14,8%); se clasificó como amarilla de acuerdo con el protocolo de Manchester (N = 137; 48,4%); permaneció en el hospital por un período inferior a siete días (N = 133, 49,8%) y que el principal motivo de salida de la unidad hospitalaria fue el alta médica (N = 270, 95,4%). Conclusión: conocer el perfil clínico y epidemiológico de las internaciones consiste en una importante herramienta para el enfermero, pues permite planificar los cuidados de manera individualizada e integral, facilita la definición de la cantidad de recursos humanos y materiales necesarios para la promoción de los cuidados del niño, ayuda en la identificación de problemas relacionados con la atención pediátrica y colabora para su resolución.

Palabras clave: Hospitalización; Enfermería Pediátrica, Salud del Niño; Perfil de Salud.

#### INTRODUCTION

Child mortality is a world public health problem and, as a result, several actions have been adopted over the years to reduce this index, namely: improvement of access to water supply and basic sanitation, creation of health programs aimed at quality care to the gestation, parturient and neonate, and access to vaccines and oral rehydration serum. It is notorious that this goal has been achieved since the child mortality rate decreased by 56% between 1990 and 2016.<sup>1</sup>

However, although this reduction is evident, there are still about 15,000 child deaths daily worldwide,<sup>1</sup> mostly triggered by avoidable causes, which could be prevented with the implementation of profitable and low-cost actions in primary care.<sup>2</sup>

Among the main causes of death in children under the age of five, in 2016, worldwide, these can be mentioned: premature childbirth complications (18%), pneumonia (16%), intrapartum complications (12%), diarrhea (8%), neonatal sepsis (7%) and malaria (5%).<sup>1</sup>

It is known that the child is constantly growing and developing and, as a result, they present high risks to develop diseases and possibly need hospitalization.

In addition, they have peculiarities and greater need for qualified care when compared to other age groups, since they are more susceptible to the worsening of their clinical condition and development of viral, bacterial and parasitic infections, due to the vulnerability of their anatomy and physiology, extreme of age and immaturity of the immune-biological system.<sup>3</sup>

Child hospitalization, in addition to modifying the family routine, is characterized as an often traumatic experience for the child, since it distances them from their daily life and family environment, and confronts them with sensations such as pain, physical limitation and passivity, contributing to the development of anxiety, feelings of guilt and fear of death.<sup>3</sup>

Currently, in Brazil, the main causes of illness and hospitalization in children under five years old are respiratory and

gastrointestinal disorders,<sup>4</sup> being realized that infectious and parasitic diseases still occupy a leading position in some regions of the country.<sup>5</sup>

Moreover, the development of diseases and the need for hospitalization in children are directly related to risk factors associated with the child itself, gestation, childbirth, and inadequate social and health conditions, among others, standing out: being newborn or infant presenting low birth weight, and being premature. Regarding the risk factors related to inadequate social and health conditions, these stand out: low family income, lack of access to basic sanitation and water treatment, extremes of age and reduced maternal education.<sup>5</sup>

In this scenario, the importance of nursing is emphasized, since it has the potential to contribute to the development of strategies that can minimize or solve problems related to morbimortality, providing more quality of life to the infant population. For this reason, it is urgent the need to know and understand the profile of the hospitalizations, so efficient strategies are drawn up for the health promotion, prevention of diseases in the infant population, and for the qualified planning of the nursing care provided to the child in the hospital.

Thus, this study aimed at tracing the clinical and epidemiological profile of hospitalizations in the pediatric unit of a public hospital in Ceará, Brazil.

## **METHOD**

The study consisted of a documentary, descriptive and retrospective research, with a quantitative approach; it was carried out in the pediatric hospitalization unit of a public hospital located in the city of Sobral, Ceará.

The population consisted of the number of children attended in the pediatric sector of the mentioned hospital, which totaled 1,071 attendances. The calculation for finite samples was made, and it was established a sampling error of 5%, a phenomenon prevalence of 50% and the critical value as-

sociated with the confidence degree of 95% ( $Z_{CC}$ : 1.96), obtaining a sample of 283 medical records.

The sample was composed of 283 medical records of children aged between 28 days and 13 years old, who were hospitalized in the pediatric hospitalization unit of the mentioned hospital during January and December 2015. The selection of the medical records was made using the stratified probability sample per month, that is, the sample of the study (n = 283) divided by 12 months. It must be highlighted that the selection of the records in each month was randomly performed by an employee from the hospital.

The legibly filled records of the variables investigated in the study were used as an inclusion criteria, and as an exclusion criteria, the medical records that were unavailable for data collection were adopted, for being in the hospital medical bills sector.

The data were collected from October to December 2016. A form was used for the collection of data, which addressed information concerning the child and the companion. The investigated variables related to the child were: gender, age, educational level, origin, main complaint, Manchester risk classification, affected organic system, hospitalization time, treatment type, diagnostic procedures carried out and therapeutic procedures used in the first 72 hours (average time required for access to imaging and laboratory examinations and therapeutic definition), prescribed antibiotics, reason for leaving and previous hospitalizations. The variables related to the companion were: relationship with the child, gender, age, job, current occupation, workplace, marital status, family income and social benefit.

The data were tabulated and analyzed through the Statistical Package for the Social Sciences (SPSS) version 20.0, by means of descriptive statistics with a calculation of absolute and relative frequency, percentage, average, and standard deviation. It is noted that, in general, several actions and therapeutic procedures were carried out per patient. Thus, in these variables, the sum exceeded the size of the sample. In addition, some variables investigated were not recorded in some charts, thus resulting in a quantity lower than the total sample.

The research was approved by the Ethics Committee in Research of the *Instituto de Saúde e Gestão Hospitalar (ISGH)*, according to the opinion 60866816.1.0000.5684, via Brazil Platform. It must be noted that, since it is a documentary research, it was requested the waiver of the Free and Informed Consent Term (FICT), being used instead of the Depositary Term.

### **RESULTS**

Regarding the characterization of the sample, a little more than half of the patients were male (n = 148; 52.3%); aged between one and three years old (n = 73; 25.8%), with an average

of 4.9 years (SD =  $\pm$  4.1); studied (n = 45; 97.8%); attended the Elementary school (n = 44; 95.7%); and was born in Sobral-CE (n = 197; 69.6%) (Table 1).

Table 1 - Distribution of pediatric hospitalizations according to so-ciodemographic characteristics. Sobral, 2016

Variable			Mean (±SD)			
Gender (N= 283)						
Male	148	52.3				
Female	135	47.7				
Age (years) (N= 283)	Age (years) (N= 283) 4.9 (±4.1)					
<1	64	22.6				
1-3	73	25.8				
4-6	51	18.0				
7-9	39	13.8				
10-13	56	19.8				
Studying (N= 46)						
Yes	45	97.8				
No	1	2.2				
Educational level (N= 46)						
Early childhood	2	4.3				
Elementary school	44	95.7				
Health area where the child was born (N= 283)						
Sobral	197	69.6				
Camocim	26	9.2				
Others	60	21.2				

As for the children's companions, it can be noted that the majority was composed of mothers (n= 197; 84.2%), female (n= 213; 91.4%), working outside of the house (n= 93; 89.4%), was a farmer (n= 26; 57.8%), single (n= 26; 81.3%), had a family income of less than R\$880.00 (n= 78; 50%), received the social benefit of the government (n= 67; 70.5%), and the most prevalent benefit was the *Programa Bolsa Família* (n= 50; 52.6%) (Table 2).

As shown in Table 3, the main complaint presented by the children was pain (n= 125; 44.2%), a good part of the sample remained hospitalized for a period of seven days or less (n= 133; 49.8%), was classified as yellow according to Manchester protocol (n = 137; 48.4%) and had the digestive system as the most frequently affected system (n= 81; 28.6%). In addition, the drug treatment was the main choice of the health team (n= 170; 60.5%), most of the children received medical discharge (n= 270; 95.4%) and had not been previously hospitalized (n= 230; 82.4%).

Among the diseases that affected the digestive system, appendicitis (38.2%), diarrhea (14.8%) and acute abdomen (6.1%) were highlighted. As for respiratory causes, pneumonia (78.3%) was the main cause of hospitalization among the diseases that affected the respiratory system.

Table 2 - Distribution of children's companions, according to sociodemographic characteristics. Sobral, 2016

demographic characteristics. Sobral,	2016		
Variable	N	%	Mean (±SD)
Relationship with the child (N=234)			
Mother	197	84.2	
Father	19	8.1	
Grandfather/Grandmother	9	3.8	
Uncle/Aunt	8	3.4	
Sister	1	0.4	
Gender (N=233)			
Male	20	8.6	
Female	213	91.4	
Job (N=45)			
Farmer	26	57.8	
Trader	6	13.3	
Cleaning agent	5	11.1	
Others	8	17.8	
Current occupation (N=137)			
Informal Work	67	48.2	
Formal Work	35	25.2	
Unemployed	35	25.2	
Workplace (N=104)			
Outside the home	93	89.4	
At home	11	10.6	
Family income (in minimum wages –	MW)* (1	N= 156)	2.5 (±1.0)
Without income	14	9.0	9.0
< 01 MW	78	50.0	
01 a 02 MW	39	5.0	
02 a 03 MW	16	10.3	
> 03 MW	9	5.8	
Marital status (N=32)			
Single	26	81.3	
Married	5	15.6	
Steady union	1	3.1	
Social Benefits (N=95)			
Yes	67	70.5	
No	28	29.5	
Type of Social Benefit (N=67)			
Bolsa Família Program (BFP)	50	52.6	
Benefício de prestação continuada (BPC)	10	10.5	
Retired	3	3.2	
Pensioner	4	4.2	
rensioner	7	7.2	

<sup>\*</sup>The minimum wage (MW) at the time of data collection was R\$ 880.00.

Table 3 - Distribution of pediatric hospitalizations, according to child's care. Sobral, 2016

Variable			Mean (±SD)
Main complain (N= 283)			
Pain	125	44.2	
Fever	61	21.6	
Dyspnea	40	14.1	
Others	37	13.1	
Cough	20	7.1	
Hospital Stay (N= 267)			11 (±10)
<=7 DIH	133	49.8	
8-14 DIH	83	31.1	
>=15 DIH	51	19.1	
Manchester Risk Classification(N= 28	33)		
Red	5	1.8	
Orange	137	48.4	
Yellow	120	42.4	
Green	20	7.1	
Blue	1	0.4	
Affected system (N= 283)			
Digestive	81	28.6	
Respiratory	74	26.1	
Genitourinary	35	12.4	
Integumentary	34	12.0	
Immunological and lymphatic	16	5.7	
Cardiovascular	14	4.9	
Neurological	11	3.9	
Musculoskeletal	8	2.8	
Endocrine	7	2.5	
Sensorial	3	1.1	
Type of treatment (N= 281)			
Drug	170	60.5	
Surgical	29	10.3	
Drug and surgical	82	29.2	
Reason for leaving (N= 283)			
Discharge	270	95.4	
Transfer	12	4.2	
Death	1	0.4	
Previous hospitalizations (N= 279)			
Yes	49	17.6	
No	230	82.4	

According to Table 4, it is noted that in the first 72 hours of hospitalization, the most used diagnostic procedure was CBC (complete blood count) (n= 243; 85.8%); the most prevalent therapeutic procedure was the peripheral venous access (n= 255; 90.1%) and the most used antibiotic was ceftriaxone (n= 93; 32.9%).

Table 4 - Distribution of pediatric hospitalizations, according to diagnostic procedures and therapeutic procedures performed in the first 72 hours of hospitalization. Sobral, 2016

X-Rays     116     48       Ultrasound     72     22       Urine test     71     2       CT scan     29     10       Arterial blood gas     24     8	5.8 0.9 5.4 5.1
X-Rays       116       44         Ultrasound       72       22         Urine test       71       22         CT scan       29       16         Arterial blood gas       24       8	0.9 5.4 5.1
Ultrasound         72         2:           Urine test         71         2:           CT scan         29         10:           Arterial blood gas         24         8:	5.4 5.1
Urine test         71         2           CT scan         29         10           Arterial blood gas         24         8	5.1
CT scan 29 10 Arterial blood gas 24 8	
Arterial blood gas 24 8	0.2
Echocardiogram 10 3	3.5
	3.5
Blood culture 8 2	2.8
Endoscopy 4 1	1.4
Lumbar puncture 3	1.1
Myelogram 1 0	).4
Contrasted X-Rays 1 0	).4
Magnetic resonance 1 0	).4
Bronchoscopy 1 0	).4
Gastric lavage 1 0	).4
Therapeutic procedures performed (N= 750)	
Peripheral venous access 255 9	0.1
Antibiotics 202 7	1.4
Zero diet 90 3	1.8
Water balance 73 25	5.8
O <sub>2</sub> Support 47 10	6.6
Central venous access 17 6	5.0
Drainage 17 6	5.0
Blood and blood derivatives transfusion 16 5	5.7
Gastric catheterization 15 5	5.3
Laparotomy 10 3	3.5
Vesical catheterization 6 2	2.1
Chemotherapy 2 C	).7
Most used types of antibiotics (N= 213)	
Ceftriaxone 93 3:	2.9
Others 37 1:	3.1
Oxacillin 29 10	0.2
Gentamicin 21 7	7.4
Cefalotin 17 6	5.0
Penicillin 16 5	5.7

## DISCUSSION

In this study, it was observed that 52.3% of the children in the hospital were boys, a finding that corroborates a research conducted in Tocantins, which verified that 61.3% of the children hospitalized were male. This result may be related to the fact that girls are seen by the society as fragile and boys as strong. This social vision triggers more care towards girls and provides boys with activities that expose them to pathogens since childhood.

The age is a relevant determinant during nursing care, as it directly influences the choice of treatment and is associated with the individual's ability to defend himself against micro-organisms. In this research, the most prevalent age group in hospitalizations was children aged between one and three years old (n= 73; 25.8%). This result is similar to a study by Ferreira et al.º in a private hospital in São Paulo, which showed that 33.6% of patients were less than two years old.

Regarding the educational level, it was perceived that 97.8% of the children were studying. However, this data was deficiently filled, because from the 283 records analyzed this information was found in only 46 charts. This variable is important because, in the children's scenario, the fact of attending school can increase the risk for the child to develop diseases, because this institution serves a public that is still with the immune system in development and exposes it to an agglomerated environment, increasing the risk of illness by infectious diseases.<sup>10</sup>

Regarding the characterization of the companions, it was perceived that mothers were the main responsible for being with their children during their hospitalization. This finding is corroborated by a study carried out with patient's companions in a university hospital in Brasilia, which showed that 74% of the children's companions were their mothers. This scenario shows that even with women modifying their participation in society, increasingly participating in the labor market, they remain prominent in their role and responsibility for taking care of themselves, their children and family, to the detriment of the other members of the family.<sup>11</sup>

It was found that most of the companions worked in the field (n = 45; 57.8%), however it is important to highlight that this information was absent in 72.7% of the records. The occupation of the caregiver is an important factor, since besides being directly related to the generation of family income also acts as a way to relieve stress, anxiety and depression.<sup>12</sup>

The income lower than a minimum wage is a risk factor for the occurrence of future problems in the child's state of health, as it undermines rapid access to health services, adherence to preventive measures against diseases, diagnosis and early treatment of diseases.<sup>13</sup>

Although this variable is important to direct the assistance and guide families regarding the child care, it was noted that in some medical records this information was absent. However, based on the records that contained this data, it was noted

that 50% of the families survived with less than R\$880.00 per month, that is, less than a minimum wage in force at the time.

It was found that 52.6% of the families receiving financial aid from the government were linked to the *Programa Bolsa Família*. This finding may be related to the fact that this program has caused beneficial changes in the family routine, since the authors Marcondes, Chamon and Lacerda<sup>14</sup> identified that it reduced the rates of poverty and increased the school frequency of children and the demand for health services.

The main complaints presented by the children at the time of attendance were: pain (n= 125; 44.2%), fever (n= 61; 21.6%) and dyspnea (n= 40; 14.1%). This finding was similar to a study carried out in an emergency unit in Rio Grande do Sul, where the most frequent complaints reported to the doctor were cough (32%), fever (30%) and vomiting (9.7%).

The pediatric hospitalization time in this survey varied from two to 90 days, and 49.8% of the sample remained hospitalized for less than one week. However, in the study developed by Silva and Teixeira<sup>7</sup>, it was found that 66.2% of children remained hospitalized between zero and three days. This divergence may be related to the peculiarities of the children studied in each research and the diseases presented at the time of attendance.

The Manchester protocol consists of a dynamic process, which allows the nurse to be able to partition the risk of death presented by the patients and to define promptly and objectively which one needs priority attendance. Regarding this classification, it was perceived that 48.4% of the studied children were categorized as orange, that is, they needed almost immediate care provision and could wait for it for 10 minutes at most.

This finding is troubling, because a study<sup>17</sup> proves that patients classified as red and orange have a higher percentage of hospitalization and deaths when compared to patients categorized as green and blue. Thus, it is emphasized the importance of fast care provision and effective intervention so that the risk of child deaths is minimized.

Regarding the user's diagnosis, it was perceived that the diseases that led to most of the child hospitalizations in the studied hospital were those that affect the digestive (28.6%) and respiratory (26.1%) systems, respectively. However, a study developed by Maisel<sup>18</sup> showed that the respiratory disorders are the main causes of hospitalization in children, with bronchiolitis (21%), pneumonia (18%), bronchitis (17%), asthma (9%) and bronchopneumonia (9%) standing out in the research.

Pneumonia is also presented in this study as an important child morbidity, being present in 78.3% of the children with respiratory disorders. Similar findings were found by a research carried out in Uberlândia-MG,<sup>19</sup> which showed that the diseases that led to most of the pediatric hospitalizations were pneumonia, upper airway infection, acute viral bronchiolitis, bronchospasm, gastroenterocolitis and diarrhea.

Moreover, it is noticed that this scenario is also present in primary care, with pneumonia being the main cause of illness in children under five years old.<sup>20</sup> However, Toso et al.<sup>21</sup> reiterated that this disease is a sensitive condition to primary care, that is, it is liable to be reduced and/or avoided if it is correctly and effectively diagnosed and treated in the primary health care area.

Thus, it is emphasized the need to invest in effective strategies to promote health and prevention of diseases and to capacitate the professionals who work in the assistance, so that they are able to carry out diagnostics and promote adequate health education.

The therapeutic actions most performed in children care were the drug treatment (65%), peripheral venous access (90.1%), antibiotics (71.4%) and request for CBC (85.8%). Similar results were described by Dalcin et al.<sup>22</sup>, who described that from the 248 attendances carried out in the emergency unit, 67.7% were medicated at the institution and laboratory tests were requested for 15.2%.

These actions are directly related to initial complaints and diagnostic hypothesis during the care provision, since, in this investigation, appendicitis (38.2%) and pneumonia (78.3%) stood out as the main causes of hospitalization and, to be efficiently identified and treated, laboratory tests and the use of drugs are necessary - especially antibiotics - which are administered, most of the time, intravenously.<sup>23,24</sup>

Finally, it was found that 95.4% of the users were discharged, while 0.4% evolved to death, corroborating a study carried out in a university hospital in Ceará, in which 95.8% of children were discharged.<sup>25</sup>

This finding is important and shows that most of the patients were discharged, demonstrating the existence of good clinical performance on the side of the patients who were admitted to the studied pediatric unit.

#### CONCLUSION

It was found that the hospitalizations were prevalent in males, in children aged between one and three years old, and that pneumonia and gastroenteritis were the diseases that led to most of the hospitalizations among the studied children, even being diseases that are preventable and can be treated using low-cost technologies. In addition, appendicitis stood out as the most important cause of inflammatory abdomen in children and teenagers.

Thus, the present study can help pediatrics professionals to know the most frequent diseases in children and to rely on these results to develop strategies for disease prevention and health promotion and to develop an individualized, holistic and comprehensive care plan for each patient, thus contributing to reduce children morbimortality by avoidable causes.

The non-systematic and incomplete filling of some medical records stands out as a limiting factor in the study, hinder-

ing the analysis of variables that were relevant to this research. In this way, it is emphasized the importance of raising awareness on the responsible professionals for the opening of the medical records, classification of risk and medical care as to the relevance of filling the data necessary for the characterization, evaluation of the evolution of the patient's clinical condition and promotion of holistic, humanized and individualized care.

Finally, it is noted that, although this study presents a considerable sample and with many variables, it is essential to carry out more researches that evaluates separately the prevalent diseases in the child's hospitalization, and that follows up the child and their families in the long run.

#### REFERENCES

- Fundo das Nações Unidas para a Infância (UNICEF). Levels & Trends in child mortality. 2017[cited 2018 Feb 21]. Available from: http://www.unicef.pt/ docs/pdf\_publicacoes/Levels-an-Trens-Child-Mortality.pdf
- Canabrava PBE, Rocha JLFN, Costa AM, Elias KJ, Lima RV. Infant mortality from preventable causes in the Federal District from 2003 to 2012. Rev Med Saúde Brasilia. 2016[cited 2017 Sept 29];5(2):192-202. Available from: https://portalrevistas.ucb.br/index.php/rmsbr/article/view/7000
- Escobar EM, Mellin AS, Tapia CEV, Piovesan RC, Noguchi ST. O uso de recursos lúdicos na assistência a criança hospitalizada. Rev Ciênc Ext. 2013[cited 2017 Sept 29];9(2):106-19. Available from: http://ojs.unesp.br/index.php/revista\_proex/article/view/828
- Pedraza DF, Araujo EMN. Hospitalizations of Brazilian children under five years old: a systematic review. Epidemiol Serv Saúde. 2017 [cited 2017 Sept 29];26(1):1-13. Available from: http://www.scielo.br/pdf/ress/v26n1/ en\_2237-9622-ress-26-01-00169.pdf
- Huber E, Vinholes DB. Estado nutricional de crianças internadas na pediatria de um hospital terciário. Arq Ciênc Saúde. 2015[cited 2017 Sept 29];22(3):91-5. Available from: http://www.cienciasdasaude.famerp.br/index. php/racs/article/view/243
- Souza RS, Ferrari RAP, Santos TFM, Tacla MTGM. Pediatric health care: practice of nurses in the family health program.REME - Rev Min Enferm. 2013[cited 2017 Sept 29];17(2):340-8. Available from: http://www.reme.org. br/artigo/detalhes/653
- Silva HF, Teixeira ACS. Caracterização das internações pediátricas na região sul no estado do Tocantins. Rev Cereus. 2016[cited 2017 Sept 30];8(3):83-95. Available from: http://ojs.unirg.edu.br/index.php/1/article/view/1142/475
- Botton A, Cúnico SD, Barcinski M, Strey MN. Os papéis parentais nas famílias: analisando aspectos transgeracionais e de gênero. Pensando Fam. 2015[cited 2017 Sept 30];19(2):43-56. Available from: http://pepsic.bvsalud. org/pdf/penf/v19n2/v19n2a05.pdf
- Ferreira MV, Hirose EY, Gasparini SC, Vianna TFS, Rodrigues ALCC, et al. Perfil de crianças e adolescentes internados em um hospital privado do Estado de São Paulo. Nutr Bras. 2016[cited 2017 Sept 30];15(3):163-8. Available from: http:// portalatlanticaeditora.com.br/index.php/nutricaobrasil/article/view/213/2058
- Pedraza DF, Queiroz D, Sales MC. Doenças infecciosas em crianças préescolares brasileiras assistidas em creches. Ciênc Saúde Coletiva. 2014[cited 2017 Sept 30];19(2):511-28. Available from: http://www.scielo.br/pdf/csc/ v19n2/1413-8123-csc-19-02-00511.pdf
- Melo MC, Cristo RC, Guilhem D. Perfil sociodemográfico de acompanhantes de pacientes e suas concepções sobre atenção recebida. Rev Eletrônica Gestão Saúde. 2015[cited 2017 Aug 19];6(2):1550-64. Available from: http://dx.doi.org/10.18673/gs.v6i2.22485

- Rocha RS, Pinheiro LP, Oriá MOB, Ximenes LB, Pinheiro AKB, Aquino OS. Social determinants of health and quality of life of caregivers of children with cancer. Rev Gaúcha Enferm. 2016[cited 2017 Sept 30];37(3):e57954.
   Available from: http://www.scielo.br/pdf/rgenf/v37n3/en\_0102-6933-rgenf-1983-144720160357954.pdf
- Lucia CMD, Santos LLM, Anunciação PC, Silva BP, Franceschini SCC, Pinheiro-Sant` Ana HM. Perfil socioeconômico e condições de saúde de pré-escolares de duas creches filantrópicas do município de Viçosa, MG. Rev Assoc Bras Nutr. 2017[cited 2018 Feb 22];8(2):03-11. Available from: https://rasbran.emnuvens.com.br/rasbran/article/view/ 655/168
- Marcondes NAV, Chamon EMQO, Lacerda PG. O Programa Bolsa Família enquanto propulsor de desenvolvimento humano. Rev Ens Educ Cienc Human. 2017[cited 2017 Oct 01];17(4):370-80. Available from: http://www.pgsskroton.com.br/seer/index.php/ensino/article/view/2609/3391
- Santos ML, Silva RB, Vogt MSL, Haeffner LSB, Michelotti MRC. Pronto atendimento infantil: quem utiliza e por que motivo. Rev Saúde. 2013[cited 2017 Oct 01];39(2):7988. Available from: https://periodicos.ufsm.br/ revistasaude/article/view/8916/pdf
- Cunha DM, Vieira JQB, Cruz IP, França AMB. Assistência de enfermagem em setores de classificação de risco em urgência e emergências. Cad Grad Ciênc Biol Saúde. 2016[cited 2017 Oct 01];3(3):133-50. Available from: https:// periodicos.set.edu.br/index.php/fitsbiosaude/article/view/3401/2017
- Oliveira GN, Vancini-Campanharo CR, Lopes MCBT, Barbosa DA, Okuno MFP, Batista REA. Correlation between classification in risk categories and clinical aspects and outcomes. Rev Latino-Am Enferm. 2016[cited 2017 Oct 01];24:e2842. Available from: http://www.scielo.br/pdf/rlae/v24/0104-1169-rlae-24-02842.pdf
- 18. Maisel BA, Oliveira DA, Ferreira CAS, Righetti RF, Torquato JA, Cunha TMN, et al. Perfil epidemiológico das internações em uma unidade pediátrica do Sistema Único de Saúde. Fisioter Bras. 2015[cited 2017 Nov 12];16(1):19-24. Available from: http://portalatlanticaeditora.com.br/index.php/fisioterapiabrasil/login?source=%2Findex.php%2Ffisioterapiabrasil%2Fissue%2Farchive
- Miranda NA, Rezende BD, Oliveira JSF, Franco MBS, Kawata LS. Caracterização de crianças atendidas no pronto-socorro de um hospital universitário. Rev Gestão Saúde. 2013[cited 2017 Oct 01];4(1):1350-64. Available from: http:// periodicos.unb.br/index.php/rgs/article/view/22996/16518
- Rocha MJL, Caldeira AP. Morbidade referida para crianças assistidas por equipes de saúde da família na região Nordeste de Minas Gerais, Brasil. Rev APS. 2016[cited 2017 Oct 02];19(3):446-56. Available from: https://aps.ufjf. emnuvens.com.br/aps/article/view/2442/1021
- Toso BRGO, Ross C, Sotti CW, Brisch SV, Cardoso JM. Profile of children hospitalizations by primary care sensitive conditions. Acta Sci Health Sci. 2016[cited 2017 Oct 02];38(2):231-8. Available from: http://www.redalyc. org/articulo.oa?id=307247622015
- Dalcin JF, Neves ET, Jantsch LB, Arrué AM, Macêdo Junior LHC, Zanon BP. Crianças atendidas em pronto-atendimento infantil: perfil clínico e demanda de atendimento. Rev Contexto Saúde. 2013[cited 2017 Oct 02];13(24/25):54-7. Available from: https://www.revistas.unijui.edu.br/index.php/contextoesaude/article/viewFile/2542/3354
- Lima AP, Vieira FJ, Oliveira GPM, Ramos PS, Avelino ME, Prado FG, et al. Clinical-epidemiological profile of acute appendicitis: retrospective analysis of 638 cases. Rev Col Bras Cir. 2016[cited 2017 Oct 02];43(4):248-53. Available from: http://www.scielo.br/pdf/rcbc/v43n4/0100-6991-rcbc-43-04-00248.pdf
- Brito RCCM, Guerra TCM, Câmara LHLD, Mattos JDPG, Mello MJG, Correia JB, et al. Clinical characteristics and outcomes of acute community acquired pneumonia in children at a reference public hospital in Pernambuco State, Brazil (2010-2011). Rev Bras Saúde Matern Infant. 2016[cited 2017 Oct 02];16(3):259-69. Available from: http://www.scielo.br/pdf/rbsmi/ v16n3/1519-3829-rbsmi-16-03-0247.pdf
- Parente JSM, Silva FRA. Perfil clínico-epidemiológico dos pacientes internados na clínica pediátrica em um hospital universitário. Rev Med UFC. 2017[cited 2017 Oct 02];57(1):10-4. Available from: http://www.revistademedicina.ufc.br/ ojs/index.php/revistademedicinaufc/article/view/126/127