ORIGINAL ARTICLE

DEMAND OF A PEDIATRIC FIRST-AID SERVICE: CHARACTERIZATION OF THE NURSING CARE

DEMANDA DE UN PRONTO-SOCORRO PEDIÁTRICO: CARACTERIZACIÓN DE LOS ATENDIMIENTOS DE ENFERMERÍA

RESUMEN

Objetivo: caracterizar los atendimientos realizados por el equipo de enfermería en un Pronto-Socorro Pediátrico. Método: estudio cuantitativo, retrospectivo de carácter descriptivo, con coleta de datos directamente en los registros de atendimientos e procedimientos realizados por el equipo de enfermería en el Pronto-Socorro Pediátrico de un Hospital Escola del sur de Brasil. Los sujetos de investigación fueron los niños de hasta catorce años, cinco meses y veinte días, que buscaron atención en el PS-PED. Para la inserción y análisis estadístico de los datos se empleó el programa Epi-info®, versión 6.4. El proyecto se aprobó por el Comité de Ética en Investigación, sob CAAE n° 0272.0.243.000-11. Resultados: 3% de los atendimientos se caracterizaron como emergencia, en los cuales los más prevalentes fueron politraumatismos, crisis convulsivas y accidentes con cuerpo extraño. Los procedimientos realizados por el equipo de enfermería se caracterizaron como ambulatoriales. Conclusión: la demanda de servicios se caracteriza como ambulatorial, y los accidentes en la infancia fueron prevalentes en las atenciones de emergencia.

Descriptors: Cuidados de Enfermería; Enfermería Pediátrica; Necesidades y Demandas de los Servicios de Salud.

RESUMO

Objetivo: caracterizar os atendimentos realizados pela equipe de enfermagem em um Pronto-Socorro Pediátrico. Método: estudo quantitativo, retrospectivo de caráter descritivo, com coleta de dados diretamente nos registros de atendimentos e procedimentos realizados pela equipe enfermagem no Pronto-Socorro Pediátrico de um Hospital Escola do sul do Brasil. Os sujeitos de pesquisa foram todas as crianças de zero a quatorze anos, cinco meses e vinte e nove dias, que procuraram atendimento no PS-PED. Para a inserção e análise estatística dos dados, foi utilizado o programa Epi info®, versão 6.4. O projeto foi aprovado pelo Comitê de Ética em Pesquisa, sob CAAE nº 0272.0.243.000-11. Resultados: 3% dos atendimentos caracterizaram-se como emergência, dentre os quais os mais prevalentes foram politraumatismos, crises convulsivas e acidentes com corpo estranho. Os procedimentos realizados pela equipe de enfermagem caracterizaram-se como ambulatoriais. Conclusão: a demanda de serviço se caracteriza como ambulatorial, e os acidentes na infância foram prevalentes nos atendimentos de emergência.

Descriptors: Cuidados de Enfermagem; Enfermagem Pediátrica; Necessidades e Demandas dos Serviços de Saúde.

Andrea Moreira Arrué1, Eliane Tatsch Neves2, Fernanda Luiza Buboltz3, Leonardo Bigolin Jantsch4, Bruna Pase Zanon5

ABSTRACT

Objective: to characterize the attendances provided by nursing staff in a Pediatric First-Aid Service. Method: This is a quantitative, retrospective and descriptive study, with data collection directly done in medical charts of attendances and procedures performed by nursing staff in the Pediatric First-Aid Service of a teaching hospital from the Brazilian South. The study subjects were all children from zero to fourteen years, five months and twenty-nine days, which sought care in PED-FAS. For the insertion and statistical analysis of data, we have used the Epi Info® software, version 6.4. The project was approved by the Ethics Research Committee, under CAAE n° 0272.0.243.000-11. Results: 3% of attendances were characterized as an emergency care, among which the most prevalent were: multiple injuries, febrile seizures and accidents caused by foreign bodies. The procedures performed by nursing staff were characterized as outpatient care. Conclusion: The demand for service is characterized as outpatient care, and childhood accidents were prevalent in emergency care. Descriptors: Nursing Care; Pediatric Nursing; Needs and Demand for Health Services.

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Demand of a pediatric first-aid service...
Health services should be organized with a view of assuring broad access and full coverage to the population in their care levels: primary, secondary and tertiary, according to the type of care and complexity of service. Nevertheless, the tight supply of services in the primary care makes people seek care in the emergency room and the first-aid post, since they believe that it is a more agile and concentrated way to get care.¹

The Statute of the Child and Adolescent² and the Unified Health System³, based on the Brazilian Constitution⁴, assure an integral care to the child's health and guarantee universal and equal access to the health actions and services. Although the child care actions have, over the years, sought care change, focusing on integral care, this latter is still far from being a national reality.

As a consequence of this scenario, most of the care provided in first-aid posts for children, especially in those cases arising from accidental causes, could be avoided by adopting preventive measures. ⁵ In this context, studying the causes and circumstances of these injuries against the child population becomes essential for developing strategies for promotion and prevention of such events.

The Pediatric First-Aid Service is an emergency unit and, therefore, should serve patients who require immediate treatment. In this service, the clinical pictures are classified according to the situation and correspond to the unexpected occurrence of health hazard, with or without potential risk to life, whose patient requires immediate medical care.⁶ In a pediatric first-aid service from the Brazilian South, in 2010, of the attendances conducted at this service, only 4% were characterized as urgent and emergency care, while 96% were outpatient care. ⁷ This outcome demonstrates a distortion of the first-aid service role that, instead of being allocated to meet emergencies, is sought to meet primary care level demands.

The lack of implementation of public policies, low problem-solving ability and offered quality in the services, coupled with the difficulty of changing cultural habits and beliefs of the population have led the user to seek medical care where there is an open door. ⁸ Thus, the health staff in of the first-aid service must be able to assess and identify health hazards of patients at risk situations.

The nurse, as a team leader, is faced with several challenges to the management of care at the emergency service; hence, in addition to technical and scientific knowledge, this practitioner must have ability to organize the work environment, by adapting it to the care conditions available to the quantity and severity of patients' clinical pictures.⁹

Based on the foregoing, we have questioned: what are the types of urgent and emergency attendances and procedures performed by nursing staff in a pediatric emergency department? So, this study aims to characterize the demand for consultations and procedures performed by nursing staff in a Pediatric First-Aid Service.

**METHOD**

This is a quantitative, retrospective and descriptive study, with data collection directly done in medical charts of attendances and procedures performed by nursing staff. We will approach in this study only the procedures held in patients who did not remain admitted in the unit, as well as emergency attendances.

These care actions are provided in the room of external procedures and in the emergency room of the Pediatric First-Aid Service (PED-FAS). Data were collected through an own research form, from the records of the notepad of the nursing staff from the aforementioned unit.

The study was conducted in the Pediatric First-Aid Service of a teaching hospital from the Brazilian South. It is a service, accredited by the Unified Health System, which is reference in health care. The PED-FAS receives a great demand of children from the entire central region of the Rio Grande do Sul, which come to carry out their health treatment.

The unit has external service, through which medical consultation is performed and, consequently, the need for admission is stated. The health care team consists of one on-duty doctor, pediatric residents, medicine students, one nurse and two nursing technicians per shift. The health service operates 24 hours a day.

The execution of the procedures in the external area and in the emergency room is conducted by nursing and medical staff of the unit in question. The attendance is provided to children aged from zero to fourteen years, five months and twenty-nine days.

The study subjects were all children aged from zero to fourteen years, five months and twenty-nine days that sought treatment at PED-FAS, and were served by medical and nursing staff of the unit, in the room of

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**INTRODUCTION**

Health services should be organized with a view of assuring broad access and full coverage to the population in their care levels: primary, secondary and tertiary, according to the type of care and complexity of service. Nevertheless, the tight supply of services in the primary care makes people seek care in the emergency room and the first-aid post, since they believe that it is a more agile and concentrated way to get care.¹

The Statute of the Child and Adolescent² and the Unified Health System³, based on the Brazilian Constitution⁴, assure an integral care to the child's health and guarantee universal and equal access to the health actions and services. Although the child care actions have, over the years, sought care change, focusing on integral care, this latter is still far from being a national reality.

As a consequence of this scenario, most of the care provided in first-aid posts for children, especially in those cases arising from accidental causes, could be avoided by adopting preventive measures. ⁵ In this context, studying the causes and circumstances of these injuries against the child population becomes essential for developing strategies for promotion and prevention of such events.

The Pediatric First-Aid Service is an emergency unit and, therefore, should serve patients who require immediate treatment. In this service, the clinical pictures are classified according to the situation and correspond to the unexpected occurrence of health hazard, with or without potential risk to life, whose patient requires immediate medical care.⁶ In a pediatric first-aid service from the Brazilian South, in 2010, of the attendances conducted at this service, only 4% were characterized as urgent and emergency care, while 96% were outpatient care. ⁷ This outcome demonstrates a distortion of the first-aid service role that, instead of being allocated to meet emergencies, is sought to meet primary care level demands.

The lack of implementation of public policies, low problem-solving ability and offered quality in the services, coupled with the difficulty of changing cultural habits and beliefs of the population have led the user to seek medical care where there is an open door. ⁸ Thus, the health staff in of the first-aid service must be able to assess and identify health hazards of patients at risk situations.

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The study subjects were all children aged from zero to fourteen years, five months and twenty-nine days that sought treatment at PED-FAS, and were served by medical and nursing staff of the unit, in the room of
external procedures and in the emergency room during from January 1st, 2011 to December 31st 2011, cited in the book of records of procedures of the unit.

For inserting the data, we have used the Epi Info® software, version 6.4, with dual independent typing. After checking for errors and inconsistencies, there was a statistical analysis in the same software. The ethical aspects and confidentiality of the study were guarded. The project was submitted to the Ethics Research Committee of the institution, under CAAE nº 0272.0.243.000-11.

RESULTS

Figure 1. The most prevalent emergency attendances conducted by nursing staff of the Pediatric First-Aid Service, in the year 2011. RS, Brazil. 2012. (N=84).

Figure 1 shows that the prevalence of emergency attendances occurred for multiple injuries, febrile seizures and accidents caused by foreign body. By associating the results, it was found that accidents in the childhood correspond to an increased rate. Furthermore, the majority of these accidents are avoidable.

In total, there were 84 emergency attendances rendered in the PED-FAS, in the year 2011.

Concerning the external procedures performed by nursing staff, they are presented in Figure 2:
Figure 2. The most prevalent external procedures performed by nursing staff of the Pediatric First Aid Service, in the year 2011. RS, Brazil. 2012. (N=3200).

According to Figure 2, it should be realized that medication management is a prevalent procedure, being that the intramuscular, oral and inhaling ways have greater incidence, respectively.

The Pediatric First-Aid Service team performed 2,917 attendances in the year 2011, and 3,200 procedures were accounted in this period. It is should be emphasized that among the attendances conducted in 2011, only 84 (3%) were characterized as emergencies, requiring appropriate technical and technological support.

Thus, other procedures could be performed and assisted in basic health units, i.e., in primary health care, thus reducing the demand for attendances in first-aid posts, with a view to reducing the overcrowding in these services.

Table 1 shows the main demands which are monthly distributed:

<table>
<thead>
<tr>
<th>Months</th>
<th>Medication Management</th>
<th>Intravenous Hydration</th>
<th>Airways Aspiration</th>
<th>Laboratory Tests Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>227</td>
<td>43</td>
<td>02</td>
<td>13</td>
</tr>
<tr>
<td>February</td>
<td>158</td>
<td>26</td>
<td>01</td>
<td>13</td>
</tr>
<tr>
<td>March</td>
<td>162</td>
<td>21</td>
<td>02</td>
<td>08</td>
</tr>
<tr>
<td>April</td>
<td>170</td>
<td>13</td>
<td>02</td>
<td>04</td>
</tr>
<tr>
<td>May</td>
<td>248</td>
<td>16</td>
<td>08</td>
<td>08</td>
</tr>
<tr>
<td>June</td>
<td>302</td>
<td>15</td>
<td>08</td>
<td>05</td>
</tr>
<tr>
<td>July</td>
<td>171</td>
<td>08</td>
<td>24</td>
<td>04</td>
</tr>
<tr>
<td>August</td>
<td>150</td>
<td>03</td>
<td>24</td>
<td>06</td>
</tr>
<tr>
<td>September</td>
<td>193</td>
<td>14</td>
<td>06</td>
<td>09</td>
</tr>
<tr>
<td>October</td>
<td>214</td>
<td>21</td>
<td>14</td>
<td>07</td>
</tr>
<tr>
<td>November</td>
<td>220</td>
<td>39</td>
<td>00</td>
<td>05</td>
</tr>
<tr>
<td>December</td>
<td>277</td>
<td>60</td>
<td>08</td>
<td>08</td>
</tr>
<tr>
<td>Total</td>
<td>2492</td>
<td>279</td>
<td>133</td>
<td>90</td>
</tr>
</tbody>
</table>

It is should be highlighted that in the study location, the seasons are well defined, with very low temperature characteristics in winter and pretty higher in summer. The cold season corresponds to the period from June to September, by showing the procedures related to the respiratory diseases. However, in the months from December to March, there is a high demand for intravenous hydration, being that this treatment is related to clinical pictures of dehydration.

DISCUSSION

The emergency unit is characterized by high demand for attendances, derived from clinical and / or traumatic clinical pictures of different complexities. Within the PED-FAS under study, such a demand was prevalent in the item “childhood accidents”. Among the accidents that most affect children, it should be highlighted the falls, followed by accidents, such as: injuries, bruising, trampling, burn, poisoning, among others. The matter of childhood accidents can be considered as old as human existence, and is directly related to the causes of child morbidity and mortality. It is estimated that approximately 800,000 children annually are victims of fatal accidents across the world, being that, in Brazil, accidents are the leading cause of mortality among children aged from five to nineteen years.

A great tool for reducing childhood accidents consists in health education. The
health professional, especially the nursing professional, who manages the care, becomes a relevant subject before the preventive measures against the childhood accidents. It is up to him/her to organize and systematize health education meetings on this issue from the cultural context/local, thus creating prevention strategies.

Therefore, knowing the risk factors is essential so that nursing can act more efficiently, by providing opportunities for health education strategies that lead to the prevention of accidents and the promotion of child health. Knowledge of nature, as well as the exposure and risk factors to childhood accidents is essential to the effectiveness of promotion and prevention, i.e., “prevention is the easiest way to ‘treat’ an accident”.10,11

The main emergencies attended in the unit under study were: multiple injuries, injuries caused by foreign body, traumatic brain injury (TBI), injuries caused by pets, needlestick injuries, burn, and exogenous poisoning. It should be noted that approximately 3% of these attendances were characterized as emergencies. In a similar study conducted in outpatient attendance medical charts and records of an emergency unit, the main associated morbidities were injuries and other external causes, being that the emergency demand accounted for 5% of patients.12 These data corroborate the results found in this survey.

The multiple traumas were the leading cause of emergency attendance in the PED-FAS, and traumatic brain injury is also part of the statistics of childhood accidents attended at the aforementioned unit. It should be highlighted the scarcity of papers in the literature studying the matter of multiple injuries in childhood and adolescence.13 A study conducted in a general hospital of São Paulo showed that the mortality rate in children and adolescents was of 2.74%, being that the traumatic brain injury accounted for 80% of mortality and mistreatment for 40% of deaths.14

Of the total emergency attendances conducted in the PED-FAS, in 2010, two patients died of cardiopulmonary arrest (CPA). The CPA epidemiology in children, unlike adults, is related to traumatic and respiratory motivations. According to the proportion of death causes in children under ten years old, in Rio Grande do Sul state, the external causes correspond to 10% of cases.15

Among the procedures held by nursing staff in the Pediatric First-Aid Service, it should be stood out medication management by intramuscular, intravenous and oral ways. Intramuscular and intravenous are prone to complications related to the technique, being that this task requires special care, ranging from hand washing, before preparing the medication, until the management itself, which should be conducted by trained professionals.

Medication management is a procedure that can be performed by some health professionals, however, such practice is already part of everyday life of nursing staff. For performing this procedure, it is necessary that nurses and their team have full knowledge of pharmacology related to the drug type, action mechanism, excretion, activities in organic systems; besides the knowledge of semiology and semio-technical, and clinical assessment of the general status of the patient.16

Moreover, medication management requires from the health professional knowledge and attention at the time of preparation and management, with a view of avoiding errors that can cause sequelae in patients. Humans are fallible and, therefore, errors are often found in health care, we cannot eliminate them, but we can minimize or prevent them.17

It should be emphasized that this practice requires technical knowledge, but, above all, scientific skill. Since the nursing staff is responsible for the management, storage, preparation and scheduling of these medications.

Furthermore, this study has demonstrated the importance in the procedure of airways aspiration, which is much more frequent in the winter months at the geographical region under study. The procedure of airways aspiration is part of the respiratory infections treatment, from the most severe cases, such as pneumonia, to lighter cases, as colds.

It is possible to cite the low temperatures as a triggering factor of respiratory diseases that are predominant in the Brazilian South. In the Rio Grande do Sul state, the acute respiratory diseases have significant seasonal variations which range from 8.2%, in summer, to 30.6%, in winter.18

According to DATASUS data, in the period from 1998 to 2007, it was found a heterogeneous distribution of morbidity among the Brazilian regions, being that the respiratory diseases prevailed as the leading cause of admission in children aged from zero to four years, and the averages of admission for this pathology are higher in the Brazilian South.19
The respiratory diseases in childhood consist in an important public health problem, by generating high demand for attendances in pediatric services. They are the most common infections in childhood. The pre-school infant has an average of six to eight respiratory infections a year, such infections, usually, are mild and self-limited.23

In this context, the current study showed that the major procedures performed in the PED-FAS are characterized as outpatient care, since the medication management, airways aspiration, examination collection and bandage conduction or change are procedures that could be held in the primary care. Nonetheless, the health units should act as a gateway.

Furthermore, to ensure the full access, it is necessary to make change operations in the production of care, from the outpatient unit network to the hospital network, by integrating all available resources in the health system through flows singularly directed and guided by the patient's therapeutic project.24

The care provided to child in health services is still flawed and fragmented. This aspect is reinforced when practitioners focus their attention on technical shares, leaving aside the relational aspects and the family-centered care.25

Therefore, it is highlighted that nursing actions are not just restricted to technical procedures, but should encompass the humanized care provided to the hospitalized child and its caregiver family member. The nursing professionals are the ones who stay longer next to the person who searched for attendance, and must provide assistance in line with the subjectivity.26

CONCLUSION

The demand of the Pediatric First-Aid Service was characterized as outpatient care, representing 97%, and emergency care accounted for only 3%. Hence, there is a distortion of the main objective of the Pediatric First-Aid Service. As a strategy to change this reality, it becomes necessary that public policies are implemented, in a more effective and efficient form, in order to guarantee a greater fluidity in the user autonomy and attendance, as well as greater problem-solving capability and responsibility from the health managers.

In addition, grounded on this study, we have concluded that the emergency attendances related to the childhood accidents were prevalent. The multiple trauma, foreign body intake and exogenic poisoning are examples of accidents arising from avoidable causes, which require preventive measures by caregivers of these children. The nursing team has a key role in the promotion and prevention of risk factors related to these accidents, and should provide a single family-centered care, mediated by the health education actions.

It is worth noting that this study did not aim to analyze the social and subjective dimension of the expressive outpatient unit demand. Accordingly, it is suggested that further researches are developed, in order to describe the sociocultural factors that may be interfering with the demand for attendance in the Pediatric First-Aid Service.

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