ABSTRACT
The monitoring of children in primary care is essential for the identification and articulation of multidisciplinary disease process. This study aimed to characterize the epidemiological profile of children from birth to 12 years-old attended in nursing consultations in a Family Health Unit of Londrina-PR between 2006 and 2008. This was a descriptive quantitative exploratory research, using as data source the medical records. In total, there were 442 appointments, of which 63.8% occurred in the neonatal period, prevalent the assistance in the unit. In relation to identified clinical findings, there was a higher frequency of eating disorders (30.9%), followed by dermatologic (15.9%), gastrointestinal (14.7%) and respiratory (12.9%). 634 professional orientations were recorded during the consultations, 41.8% related to specific clinical findings. As for referrals, 39.4% of children were directed to the pediatrician and 9.3% went directly to hospital because they were severe cases. The systematization of nursing care in child health should still be improved. However, the nursing consultation allows early detection of signs and symptoms of prevalent diseases in pediatric population, providing subsidies to reduce morbidity and mortality from preventable causes through preventive and health promotion.

Keywords: Pediatric Nursing. Primary Health Care. Child Health.

INTRODUCTION
The child care is among the priorities of the World Health Organization (WHO). In Brazil, promotion and prevention programs from the perspective of child health surveillance are being established since the 70s so intensified, looking for more humane care and better quality for the reduction of injuries and, consequently, of deaths from preventable causes (1).

These actions converge with the fourth goal of the Millennium Development Goals proposed by the United Nations (UN) to reduce by two thirds the mortality. For Brazil, the proposal was to achieve the rate of 17.9 deaths per thousand live births by the year 2015, however, four years in advance the country reached the goal with a coefficient of 15.2 in 2011 (2).

The program for monitoring child growth and development is the most comprehensive for child health, and it has been essential to ensure reduction of this index. It has as a premise the comprehensive care through medical and nursing actions that promote diversified, such as evaluation of weight curve, nutritional status and neurodevelopment; coverage; exclusive stimulus for breastfeeding until six months-old and introduction of power subsequent complement food; preventing childhood illness and accidents at home, among others (3).

With the reorganization of healthcare services in primary health care, there was
emphasis on nursing consultation to ensure continuity and systematization of the work process. The nurse started acting grounded in the integration of actions and multidisciplinary way across the health-disease process \(^{(3,4)}\).

Nursing consultation should take place systematically during the baby’s first year of life, starting in the first week after delivery, for monitoring and solving common problems in childhood \(^{(5)}\). However, the lack of job training and municipal services protocols in reference and counterreferende are among the difficulties pointed out by nurses for operationalization of the program \(^{(3,5-6)}\).

Thus, for proper directing actions and to prepare the professional nurses who work in primary care services to health, it is necessary to know the profile of the children care in these services, as well as guidelines and necessary referrals. Accordingly, this study sought to characterize the epidemiological profile of children attended in the nursing consultation in a Family Health Unit (FHU) of Londrina, Paraná.

**METHODOLOGY**

It is a quantitative research, descriptive and transversal, held in a USF located in the northern region of Londrina, Paraná, from May 2006 to May 2008.

The municipality of Londrina is considered one of the most important regional health centers of the state, with a population of approximately 510,000 inhabitants in 2010. The northern region is the most populous city, consisting of 126,305 inhabitants.

The chosen USF acts in the city since 1988 and has three Family Health Teams (FHT) to serve 12,426 inhabitants in the coverage area. It also has important concentration of children and it is the place of action of Residence of Nursing in Child Health at Universidade Estadual de Londrina (UEL). All children are enrolled in the program for monitoring growth and development and they have medical and nursing consultations, interspersed monthly.

According to the Statute of the Child and Adolescent (ECA), the child is aged from zero to 12 years-old. Thus, the population of this research was composed of children in this age who have been met in the nursing consultation by resident nurses.

We used as inclusion criteria the attendance of children enrolled in the program of monitoring child’s growth and development (from zero to 18 months-old), evaluated in the pre-consultation with pediatrician and spontaneously seek for professional help. The number of nursing visits made by nurses resident in that period totaled in 442, constituting the study material.

The survey data were obtained from children’s medical records. We also obtained information from the nursing consultations stored in a log book created by resident nurses.

To proceed with the organization of the data we held the classification of the clinical findings on physical examination and child’s medical history, based on the International Classification of Diseases, Tenth Revision (ICD-10). The ages were grouped to: 0 to 27 days-old (neonatal), 28 to 364 days-old (post-neonatal), 1-3 years-old (early childhood) and 4-12 years-old (pre-school and school). This last group was presented in greater range for the lower concentration of care and for better presentation of results.

The softwares Microsoft Office Excel ® and Epi Info ® made possible the electronic processing variables. The results were presented by relative frequency in the form of tables and figures. For statistical analysis of this type of consultation and location of assistance it was used the chi-square test, considering a significance level of 5% \((p <0,05)\).

The research was approved by the Ethics in Research - CEP, of Universidade Estadual de Londrina (Opinion No. 060/07, CAAE. 0042.0.268.000-07) and authorized by the Municipal Health Authority CD/009/07/Gecape.

**RESULTS AND DISCUSSION**

In the three years of study 442 consultations were conducted by the resident nurses, i.e., 160 (36.2%) first consultations and 282 (63.8%) returns. Males corresponded to 52.3% of the assistance.
Both the first medical appointment as the returns were predominantly conducted at USF, totaling 129 (80.6%) and 247 (87.6%), respectively, with \( p = 0.048 \). The neonatal period prevailed in the care of first consultation (160, 63.8%), and the post-neonatal period in returns (282, 63.5%). The higher frequency of first appointment at home occurred in the neonatal period (13, 8.2%), since the returns at home predominated post-neonatal period (16, 5.7%) (Table 1).

**Table 1** - Distribution of type of nursing consultations and place of assistance according to age, Londrina (PR), 2006-2008.

<table>
<thead>
<tr>
<th>Type of consultation</th>
<th>Place of Assistance</th>
<th>Amount p*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USF n %</td>
<td>Home n %</td>
</tr>
<tr>
<td>First Consultation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 a 27 days-old</td>
<td>129 80,6</td>
<td>31 10,4</td>
</tr>
<tr>
<td>28 a 364 days-old</td>
<td>38 23,8</td>
<td>10 6,2</td>
</tr>
<tr>
<td>1 a 3 years-old</td>
<td>2 1,2</td>
<td>7 4,4</td>
</tr>
<tr>
<td>4 a 12 years-old</td>
<td>-</td>
<td>1 0,6</td>
</tr>
<tr>
<td>Returns</td>
<td>247 87,6</td>
<td>35 12,4</td>
</tr>
<tr>
<td>0 a 27 days-old</td>
<td>17 6,0</td>
<td>10 3,5</td>
</tr>
<tr>
<td>28 a 364 days-old</td>
<td>163 57,8</td>
<td>16 5,7</td>
</tr>
<tr>
<td>1 a 3 years-old</td>
<td>54 19,1</td>
<td>5 1,8</td>
</tr>
<tr>
<td>4 a 12 years-old</td>
<td>13 4,6</td>
<td>4 1,5</td>
</tr>
<tr>
<td>Total</td>
<td>376 85,1</td>
<td>66 14,9</td>
</tr>
</tbody>
</table>

*Che-squared Test.

In Londrina the accompanying program of child’s development and growth determines the performance of two nursing appointments in the neonatal period, the first within seven days after delivery, and preferably at home. After assessment, the newborn receives a risk stratification which can be classified as Regular Risk (RR), intermediate risk (IR) and High Risk (HR). The subsequent visits will be determined based on this classification, ranging from 8 to 10 visits in the first year of a child’s life, interspersed by the nurse and doctor, which can be expanded as required by the case.

In the present study we noted a significant percentage of first appointment in the first 27 days of life, but it still does not match all of the care as recommended by the Ministry of Health. The precocity of the first consultation is very important because of the highest concentration of injuries in the neonatal period which increases the risk of morbidity and mortality in this period, but they could be avoided with proper care to the mother and son (7). Moreover, the home visits allow the identification of social vulnerability for poor socioeconomic conditions and mapping families at risk, essential strategies to the protection of children's health (3,5,8).

In this research the home visits for consultations was much lower compared to attendances at USF, reflecting the (dis) organization of health care services and the existence of users who prioritize curative practice, without characterizing the care model of the Family Health Strategy (3,9). To readjust this reality it is necessary the existence of physical, material and human resources for health services, and predetermined home care flow directed to mothers who do not adhere to the childcare program (8).

In regard to the clinical findings identified in nursing visit (Table 2), we highlighted the eating problems (177, 30.9%), followed by dermatological (91, 15.9%), gastrointestinal (84, 14.7%) and respiratory problems (74, 12.9%). Specifically the “other” category, the 22 (3.8%) problems encountered, 12 (54.5%) were of social nature, i.e., poor basic sanitation, mothers who use illicit substances and accidents and violence against children.
Table 2 - Distribution of clinical findings identified in the nursing consultation, Londrina (PR), 2006-2008.

<table>
<thead>
<tr>
<th>Clinical findings</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating Problems</td>
<td>177</td>
<td>30,9</td>
</tr>
<tr>
<td>Dermatological Problems</td>
<td>91</td>
<td>15,9</td>
</tr>
<tr>
<td>Gastrointestinal Problems</td>
<td>84</td>
<td>14,7</td>
</tr>
<tr>
<td>Respiratory Problems</td>
<td>74</td>
<td>12,9</td>
</tr>
<tr>
<td>Hematologic Problems</td>
<td>34</td>
<td>5,9</td>
</tr>
<tr>
<td>Congenital Malformations</td>
<td>33</td>
<td>5,8</td>
</tr>
<tr>
<td>Genitourinary Problems</td>
<td>26</td>
<td>4,5</td>
</tr>
<tr>
<td>Neuromotor Problems</td>
<td>11</td>
<td>1,9</td>
</tr>
<tr>
<td>Ophthalmologic Problems</td>
<td>11</td>
<td>1,9</td>
</tr>
<tr>
<td>Endocrine Problems</td>
<td>9</td>
<td>1,6</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>3,8</td>
</tr>
<tr>
<td>Total</td>
<td>725*</td>
<td>100,0</td>
</tr>
</tbody>
</table>

*Multiple clinical findings.

Among the eating problems, those inherent to breastfeeding prevailed (66, 37.2%), highlighting incorrect latch, occurrence of mixed feeding and early weaning. The maintenance of exclusive breastfeeding (EBF) until the sixth month of the child's life, the recommendation of the World Health Organization, is still a challenge in the country. However, between 1999 and 2008 it increased from 30.7 days in the duration of EBF in state capitals and the Federal District (10). The initiation of breastfeeding and its duration have multifactorial influence, making essential the appropriate care to postpartum women to early diagnosis and appropriate management of problems, especially in the first week after birth, a period in which there is greater fragility and maternal adaptation to the demands of the newborn (11).

Eating error or incorrect food introduction in the first year of life amounted 24.2% (43). The phase of replacement of milk by complementary foods usually generates doubts and conflicts between family members. That's when the feeding habits of the child is established, making the monitoring of this process is essential to ensure adequate child nutrition. It is expected that the child receives nutritious foods, avoiding simple carbohydrates like candy, soft drinks, snacks, processed foods, sausages, among others (12).

In relation to skin problems, the dermatitis contact in the diaper area prevailed (38, 41.7%). Approximately 80.0% of dermatitis are caused by irritation (soaps, detergents, emollients, feces and urine), although it is associated to allergic etiology. The inflammation is caused by direct tissue damage after repeated or prolonged contact with these substances, mainly by the continued use of diapers (13). Its diagnosis and treatment should be rapidly established to prevent fungal or bacterial complications.

Colic was responsible for 48.8% (41) of gastrointestinal problems. This injury is defined as the Wessel’s “rule of three”, or crying lasting for at least 3 hours per day, for at least 3 days a week, for at least three weeks during the first 3 or 4 months. The baby with colic may present excessive crying, and loud yelling, irritability and anxiety attacks, flushing, bending the legs, arching the back, fists clenched, elimination of flatus, abdomen rigid and difficult to calm down (14).

These episodes may occur at any time of day and they are considered a risk factor for early weaning, even though it would be temporary, to cause distress in the child and caregivers by inconsolable, unexplained and unrelenting crying. Feelings of frustration and
parents’ concern, in addition to physical exhaustion, predispose to the introduction of milk formula for misinterpretation of famine, or soothing teas for pain relief (14). To control infant colic, the healthcare professionals should follow these recommendations: to exam the child trying to eliminate possible physiological problems; to exclude causes of crying, such as hunger and cold; to include issues relating to the child's diet, signs of reflux patterns sleep, bowel and urinary elimination; to affirm the parents’ efforts to care for their baby and to recognize the poor and helpless feeling they can feel when they see their baby so distressed; to reduce or eliminate the allergens that may be being offered to the child directly or indirectly; and to encourage parents to seek support from family members to help in baby care so they can rest (14).

As for the respiratory system, respiratory infections or the common cold totaled 55.4% (41). Lung problems often occur frequently in children, creating great impact on morbidity and mortality from this cause. The child has anatomical and functional peculiarities which favor rapid emergence of serious complications by impaired alveolar ventilation. It is necessary that the nurse is able to recognize the early signs of respiratory failure for intervention and referrals to centers of reference in time. Some of these signs are: tachycardia, tachypnea, changes in blood pressure, dyspnea with heavy use of accessory muscles, numbness, grunting, cyanosis or pallor, and slowed peripheral perfusion (15).

According to Figure 1 we recorded 634 guidelines during nursing visits, average of 1.4 guidelines/care, of which 41.8% were related to clinical findings, 30.9% to the developmental and prevention of accidents and 18.6% of breastfeeding especially to management.

From the clinical findings and anamnesis, the nurses must plan prescriptive actions and evaluate them in terms of effectiveness and efficiency, establishing necessary returns according to the peculiarities of the child and family (16). In the health care, the assistance of children demand investment for vocational training for the diversity of biopsychosocial disorders and conditions according to age (neonatal, post-neonatal, infant, preschool and school age), generating range of guidelines to meet the specificity of each step of the children’s development and growth.

![Figure 1](image1.png)

**Figure 1.** Guidelines performed in clinical nursing, Londrina (PR), 2006-2008.

From the 335 referrals made after the nursing consultation (Figure 2), 132 (39.4%) were for pediatricians, 93 (27.8%) for vaccines updating and 65 (19.4%) for dental follow. The referral hospital corresponded 9.3% (31) of the cases to be considered serious and in need of urgent care. The category "other services" (14, 4.2%) was directed to Londinense Institute of Deaf Education - Instituto Londinense de Educação de Surdos (ILES), which performs "OAE test", to the Reference Center for Immunobiology Special (CREATE), and to the professionals of speech therapy, psychology, and pediatric surgery.

![Figure 2](image2.png)

**Figure 2 - Distribution of referrals made after nursing consultation, Londrina (PR), 2006-2008.**

The attendances at USF were expanded after investing in hiring other professionals such as psychologists, dentists, nutritionists, physical
therapists, pharmacists and physical educators, providing multidisciplinary and interdisciplinary actions for qualification of preventive care and health promotion (17). However, the pediatrician still focuses in the majority of referrals, being the professional that merges the routine visits with the nurse, and also for his curative resoluteness. The dentists were emphasized for initiating systematic monitoring of children to promote oral health from birth to 12 years-old.

The hospital referral happens when it is detected a risk to children's health and there is a pediatrician in attendance in the USF. In such cases, they call the Service of Emergency Medical Care (Serviço de Atendimento Médico de Urgência - SAMU) for children with more severe problem or they send her to a referral hospital, by application-specific. After the service, the child returns to USF to continue the monitoring done by the health care team, as well as specialized services when pre-established.

Thus, to ensure the offering of integrated network care it is necessary to organize the work process among community health agent, family health teams, support teams, USF, specialized and emergency services, complementary actions as pharmaceutical and diagnostic support and hospital care, as well as intersectoral action involving the child and his family (4,17,18).

In this context, the nursing consultation has become an indispensable tool for monitoring the growth and development of the child and should be expanded and increasingly valued for the implementation of measures that contribute to the promotion, prevention, protection, recovery and rehabilitation of the individual, family and community, reducing infant diseases (16,18,19). Furthermore, the strengthening of public services as the physical resources, human and material is essential for greater program coverage and adequate concentration of consultations, especially among mothers who consider this monitoring unnecessary in the absence of the child's illness (20).

CONCLUSION

In this research, the nursing consultations were conducted predominantly in the USF, which highlights the need for reorganizing the work process to expand home visits during their first week of life. It was also possible to identify common health problems in the child population that can be effectively minimized by actions directed to primary care through systematic monitoring. The multidisciplinary work can be verified by the referrals made to other professionals and specialist services provided by the municipal health service. On the other hand, it is necessary to evaluate access and adherence to the program and the impact of actions and nursing interventions.
CONSULTA DE ENFERMERÍA: ASPECTOS EPIDEMIOLÓGICOS DE LOS NIÑOS ACOMPAÑADOS EN LA ATENCIÓN PRIMARIA DE SALUD

RESUMEN
El acompañamiento de niños en la atención primaria a la salud es imprescindible para la identificación y articulación multiprofesional del proceso salud-enfermedad. Este estudio buscó caracterizar el perfil epidemiológico de niños de cero a 12 años atendidos en las consultas de enfermería en la Unidad de Salud de la Familia, Londrina-PR, entre 2006 y 2008. Se trató de una investigación cuantitativa, descriptiva y exploratoria, utilizando como fuente de datos los historiales médicos. En total, fueron realizadas 442 consultas, de las cuales 63,8% ocurrieron en el período neonatal, mediante el atendimiento en la unidad. En relación a los hallazgos utilizando como fuente de datos los historiales médicos. En total, fueron realizadas 442 consultas, de las cuales 63,8% ocurrieron en el período neonatal, mediante el atendimiento en la unidad. En relación a los hallazgos clínicos, se observó una mayor frecuencia de problemas alimentarios (30,9%), seguida de los dermatológicos (15,9%), gastrointestinales (14,7%) y respiratorios (12,9%). Se registraron 634 orientaciones en el transcurso de las consultas, siendo 41,8% relacionadas a las especificidades de los hallazgos clínicos. En cuanto a los encaminamientos, 39,4% de los niños fueron dirigidos a la pediatría y 9,3% directamente al hospital por tratarse de casos graves. La sistematización de la asistencia de enfermería en la salud infantil aún debe perfeccionarse. Sin embargo, la consulta de enfermería permite la detección precoz de los indicios y síntomas de las enfermedades prevalentes en la población pediátrica, proporcionando contribuciones para la reducción de la morbilidad por causas evitables mediante acciones preventivas y de promoción de la salud.

Palabras clave: Enfermería Pediátrica; Atención Primaria a la Salud; Salud del niño.

REFERENCES

**Corresponding author:** Priscila Santa de Moraes. Rua João Borges, 123, CEP: 86063-290, Jd. Tokio, Londrina-PR, Brasil.

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