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SURVEILLANCE AND STIMULATION OF GROWTH AND CHILD DEVELOPMENT

VIGILÂNCIA E ESTÍMULO DO CRESCIMENTO E DESENVOLVIMENTO INFANTIL

VIGILANCIA Y ESTÍMULO DEL CRECIMIENTO Y DESARROLLO INFANTIL

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ABSTRACT

Objective: to evaluate the actions of surveillance and stimulation, to the growth and development of the child. **Method:** this is a quantitative, cross-sectional study conducted in 40 units of the Family Health Strategy. Data was collected and the descriptive analysis was carried out with the help of Epi Info 7 software. The degree of conformity of the structure and process dimensions was evaluated according to a judgment matrix, and the results were presented in the form of table. **Results:** it was noticed a high frequency of registration of information regarding growth in the Child Health Handbook, except for those related to the Body Mass Index (13.5%); 72.7% of them did not contain data on developmental milestones. The structure dimension was classified as not adequate, demonstrating a compliance degree of only 64%, similar to the process dimension, in which 86% of actions were implemented. **Conclusion:** fragilities were observed following the actions of stimulation and monitoring of child growth and development, denoting that incentives to improve services need to be realized. It is hoped that this information can be used to plan and organize basic care services. **Descriptors:** Growth; Child development; Health promotion; Basic Attention; Family Health Strategy; Evaluation of Health Services.

RESUMO

Objetivo: avaliar as ações de vigilância e estímulo, ao crescimento e desenvolvimento da criança. **Método:** trata-se de um estudo quantitativo, transversal, realizado em 40 unidades da Estratégia Saúde da Família. Realizou-se a coleta de dados e fez-se a análise descritiva com o auxílio do *software Epi Info 7*. Avaliou-se o grau de conformidade das dimensões estrutura e processo segundo uma matriz de julgamento, e apresentaram-se os resultados em forma de tabela. **Resultados:** percebeu-se elevada frequência de registro das informações referentes ao crescimento na Caderneta de Saúde da Criança, com exceção daquelas pertinentes ao Índice de Massa Corporal (13,5%); 72,7% destas não continham dados sobre os marcos do desenvolvimento. Classificou-se a dimensão estrutura como não adequada, ao demonstrar um grau de conformidade de apenas 64%, semelhante à dimensão processo, na qual 86% das ações estavam implementadas. **Conclusão:** observaram-se fragilidades no seguimento das ações de estímulo e vigilância do crescimento e desenvolvimento infantil, denotando que incentivos para a melhoria dos serviços precisam ser realizados. Espera-se que estas informações possam servir para o planejamento e a organização dos serviços de atenção básica. **Descritores:** Crescimento; Desenvolvimento Infantil; Promoção da Saúde; Atenção Básica; Estratégia de Saúde da Família; Avaliação de Serviços de Saúde.

RESUMEN

Objetivo: evaluar las acciones de vigilancia y estímulo, al crecimiento y desarrollo del niño. **Método:** se trata de un estudio cuantitativo, transversal, realizado en 40 unidades de la Estrategia Salud de la Familia. Se realizó la recolección de datos y se hizo el análisis descriptivo con la ayuda del *software Epi Info 7*. Se evaluó el grado de conformidad de las dimensiones estructura y proceso según una matriz de juicio, y se presentaron los resultados en forma de tabla. **Resultados:** se percibió una elevada frecuencia de registro de las informaciones referentes al crecimiento en el Cuaderno de Salud del Niño, con excepción de aquellas pertinentes al Índice de Masa Corporal (13,5%); El 72,7% de ellas no contenían datos sobre los marcos del desarrollo. Se clasificó la dimensión estructura como no adecuada, al demostrar un grado de conformidad de apenas 64%, semejante a la dimensión proceso, en la cual el 86% de las acciones estaban implementadas. **Conclusión:** se observaron fragilidades en el seguimiento de las acciones de estímulo y vigilancia del crecimiento y desarrollo infantil, denotando que incentivos para la mejora de los servicios necesitan ser realizados. Se espera que estas informaciones puedan servir para la planificación y la organización de los servicios de atención básica. **Descritores:** Crecimiento; Desarrollo Infantil; Promoción de la Salud; Atención Primaria de Salud; Estrategia de Salud Familiar; Investigación em Servicios de Salud.

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INTRODUCTION

It is known that, throughout the historical evolution, the advances of the social policy guidelines have been reflected in the implementation of public health programs and policies, which culminated in the reduction of infant mortality and, consequently, in the improvement of the health care of the kid.¹ Since the creation of the Comprehensive Care Program for Child Health (CCPCH) in the 1980s and the establishment of the National Policy for Integral Care to Childs Health (NPICCH) in 2015, consideration has been given to the actions of surveillance and encouragement of the child's full growth and development, the importance of this strategic axis for the prevention of diseases, the promotion of child health and timely interventions, in cases where possible deviations are identified.¹⁻³

It should be noted that the Child Health Handbook (CHH) constitutes a fundamental tool to be used for this monitoring, from birth to ten years of age, because it enables the registration of information pertinent to this monitoring and favors a higher valuation and appropriation of the instrument by the family and co-responsibility for the health monitoring actions of their children.⁴⁻⁵

Child development is understood as a dynamic process involving a system of expansion of the physical, cognitive, psychological and socioemotional abilities that lead to the increase of competences, autonomy and independence.⁶ It is known that it is in the first years of life where the child presents intense brain activity, due to the interaction between the biological characteristics and experiences, what makes this important period.⁷⁻⁸ In parallel, the growth, expressed by the increase in body size, is also a dynamic and continuous process, occurring from conception to the end of life, having, in childhood, a period of several modifications.⁹

Therefore, it is essential to monitor growth and development (C/D) in childhood, so that there is a longitudinal health prevention and promotion assistance, allowing the early detection of possible changes and, thus, appropriate interventions that minimize risks of morbidity and mortality, favoring an adequate development throughout childhood.⁷⁻⁹ This monitoring is part of the actions inherent to primary care, the entrance door of the UHS, whose nurse member of the multiprofessional team assumes a leading role in the practical development of these activities in the service.⁸⁻⁹

Some studies that analyze this practice in health services in Brazil are highlighted, showing some weaknesses in care, such as the devaluation of developmental assessment, the absence or incompleteness of development records and growth charts, and the lack of effective consolidation growth, which makes the quality of care.^{7,10-2}

It is necessary, in order to verify the adequacy of what is advocated in health policies with actions developed in the scope of primary care, health evaluation and institutionalization of this practice in the routine of services, since there are questions regarding the quality of care child health, the operationalization of practices and actions for the maternal and child group, as well as the scarcity of studies on the subject, as some review studies point out.^{7,13-4}

In view of these considerations, it was necessary to evaluate the third axis of the NPICCH, based on the Donabedian theoretical framework, which considers three basic approaches to quality assessment: structure, process and outcome. It is understood that the process is the most direct route to the quality of care examination, being influenced by the structure for its development; the results reflect the effects of care, and may be an indirect indicator of quality.¹⁵

OBJECTIVE

- To evaluate the actions of surveillance and stimulation, to the growth and development of the child, carried out in Primary Health Care

METHOD

This is a quantitative, descriptive, cross-sectional study using normative evaluation criteria, which consists of "making a judgment about an intervention, comparing the resources employed and their organization (structure), services or goods produced (process) and the results obtained, with existing criteria and standards".¹⁵

This study was carried out in 40 units of the Family Health Strategy (FHS) of the urban area of Caruaru-PE, considered the most populous (356,128 inhabitants) in the interior of the State.¹⁶ At the time of the research project, the city was counted with 64 FHS teams, 45 of which were located in the urban area and 19 in the rural area, according to data provided by the Municipal Health Department.

The study population was composed by nurses from the FHS teams in the urban area of the municipality, as well as by the

caregivers (mother / father or guardian) of children under two years of age assisted by these teams. A population of 4,842 children (<2 years old registered in February 2017 in 43 Family Health teams - eSF) was considered for the sample calculation, since no information was obtained from two of the units), a frequency of 50%, a 4% error and a 95% confidence level, totalizing a sample of 534 child caregivers. Subjects were selected by probabilistic sampling of the simple random type, respecting the proportion of children enrolled in each Family Health Unit.

The inclusion criteria were: nurses of the FHS teams who had been working in these teams for at least six months and caregivers / caregivers of children under two years old registered in the respective units, who were 18 years of age or older. Caregivers/tutors who presented some form of verbal deficiency that made communication impossible.

Data collection was carried out between March and November 2017, using an instrument previously constructed and validated by the authors, with a total of 50 items, distributed in eight components related to the structure dimension (physical installation, resources materials, human resources, norms and routines) and process (clinical evaluation, completion of CHH, promotion of educational activities, reference system and counter-reference). In order to complement the information, a second instrument was also aimed at caregivers, which contained 12 items divided into two components related to socio-demographic data (age, education, occupation, income) and health care of children. The interviews were carried out in the health units, as well as in the caregivers' homes.

The answers were organized in a database created in Microsoft Excel for Windows software, and the descriptive analysis of the data was carried out with the help of the Epi Info program 7. The simple and absolute frequencies of the variables investigated were presented.

The components in the structure and process dimension, considered essential for the proper functioning of the service and for a quality assistance to the children, were valued in the analysis and judgment matrix. It was defined, by consensus, through discussions among researchers, based on official documents of the Ministry of Health (MH).¹⁷⁻⁸

Four components were evaluated in the process dimension: clinical evaluation, CHH completion, promotion of educational activities, reference system and counter-

referral. In the assessment component: monitoring of growth and development, frequency of consultations and active search for children with disabilities. It was evaluated, in the filling component of the CHH, the filling of this instrument during the consultations of Childcare.

In the promotion of educational activities component, it was investigated whether the team promoted educational activities, as a group or individual, on the stimulation of child growth and development and recorded this information in the medical record. It was evaluated, in the reference and counter-referral component, whether the team performed referral of children with C/D deviation to other levels of health care, if the referral was formalized with assurance of care, whether it was difficult to schedule consultations for the reference laboratory and whether there was a reference laboratory.

Each item was evaluated from zero to ten points. It was considered the maximum score of the matrix of 82 points, being 32 points for the dimension structure and 50 points for the process dimension. The score of the process (50) was subdivided into: 20 points for the "clinical evaluation", ten points for "CHH completion", ten points for the promotion of "educational activities" and ten points for the "reference system and counterreference".

Each criterion of the structure and process components was consolidated and classified, according to the degree of conformity, in adequate (90-100% of actions implemented), not adequate (60-89%) and critical (<60%).¹⁹

It should be emphasized that the research project was approved by the Research Ethics Committee of the Centro Universitário Tabosa de Almeida (ASCES-UNITA) under the opinion n.1,806,486 (CAAE: 61258916.3.0000.5203).

RESULTS

The information about the 40 FHSs in the urban area of the municipality was analyzed, which totaled 40 nurses and 503 caregivers of children under two years of age. Three nurses were lost (on occasion, they were on leave and maternity leave) therefore, of 31 caregivers. The sociodemographic characteristics of the caregivers of children under two years of age enrolled in the health units studied are summarized in Table 1. It is reported that the main caregivers were mothers, with a mean age of 29.7 years and average schooling of 8.5 years of schooling and average family income of R\$ 998.74.

Table 1. Sociodemographic characteristics of the caregivers of children under two years of age enrolled in the Family Health Strategies. Caruaru (PE), Brazil, 2017.

Variables	n	%
Children		
Age (months)		
< 12	293	58.2
12 to 23	210	41.8
Caregivers		
Education (years)		
< 8	182	36.1
≥ 8	321	63.9
Paid work		
Yes	106	21.0
No	397	79.0
Family income (MW)		
0 to < 1	194	38.5
1 to < 2	226	45.0
≥ 2	83	16.5
Welfare		
Yes	210	41.27
No	293	58.2
MW - Minimum wage (1MW = R\$ 937,00)		

Table 2 shows the information regarding the assessment of health care performed by the caregivers and based on the CHH's observation. It was found that, although most of the children had CHH (446), about 11.3% still had previous versions of the child's card, which only had the weight and age, curve and

space reserved for the registration of vaccines. Most of the caregivers reported that the professionals performed physical examination and assessment of the anthropometric measures of the children during the consultations, as well as the receipt of guidelines on C/D.

Table 2. Evaluation of health care referred to by the caregivers of children under two enrolled in the Family Health Strategies and from the observation of the Child Health Handbook. Caruaru (PE), Brazil, 2017.

Variables	n	%
Has the Child Health Handbook (CHH) *	446	88.6
Frequency in which the child is taken to Childcare		
Monthly	360	71.6
Bimonthly	50	9.9
Trimestrally	46	9.1
Semestrally	23	4.6
Annually	21	4.2
Child does not go to Childcare	03	0.6
FHS work process		
The team performs physical examination and anthropometric measurements of children	486	96.6
Received guidance on your child's growth	389	77.3
Received guidance on your child's development	375	74.5
Record in the Cephalic perimeter x Age Curve in CHH	387	76.9
Record in the Weight x Age Curve in CHH	402	79.9
Record in the Length x Age Curve in CHH	382	75.9
Record in the BMI x Age curve in CHH	68	13.5
Record of Anthropometric Measurements at CHH	360	71.5
Record of development milestones in CHH	80	15.9

* The information on the C / D records were considered from the total CHH (n=446)

It was observed, in the observation of CHH, that the records regarding weight, length and cephalic perimeter were present in most of them. However, in the case of the Body Mass Index (BMI) and age curve, it was verified that in 75.1% of the passbooks, there was no record of this information. It should be noted that approximately 73% did not contain data on developmental milestones.

It can be observed that, in relation to nurses, the mean age was 38.1 years, with a training time of approximately 12 years, and 45% reported having a specialization in the

area of Family Health. It was verified that approximately 55% of the nurses had received training for the execution of stimulation and surveillance actions of infant C / D.

It was noticed that, in terms of the structure of the services (table 3), based on the information provided by the nurses, that all the units had a doctor's or nursing office, however, only 62.5% had an area/room for conducting educational activities. Equipment was available to measure infant growth in most of the units, however, in 32.5% there was unavailability of CHH.

Table 3. Percentages of data related to the structural dimensions of Family Health Strategies. Caruaru (PE), Brazil, 2017.

Variables	n	%
Physical installation		
Medical and Nursing Office	39	97,5
Area/room for conducting educational activities	25	62,5
Waiting area / waiting room for clients	40	100
Place for dispensing medication	40	100
Medication storage room	36	90,0
Location for files and records	35	87,5
Basic Nursing care Room	36	90,0
Vaccine room	40	100
Odontological office	31	77,5
Multiprofessional reception room for spontaneous demand	23	57,5
Room of collective activities for the Basic Care professionals	23	57,5
Collective inhalation room	23	57,5
Material resources		
Ferrous sulfate syrup	35	87,5
Megadoses of Vitamin A	21	52,5
The quantity of medication meets FHU demand	18	45,0
Frequency of lacking medications in the last six months		
They end at the beginning of the period	5	12,5
They end in the middle of the period	11	27,5
They end near the end of the period	6	15,0
Not applicable	18	45,0
Educational material on healthy child growth and development	25	62,5
Electronic or mechanical scales	39	97,5
Measuring tape	40	100
Anthropometer	34	85,0
Child Health Handbook	27	67,5
Human Resources		
Training of the FHS to carry out the actions of stimulation and monitoring of child growth and development	22	55,0
Conducting the introductory course on Family Health by the nurse	25	62,5
Carrying out the specialization course in Family Health by the nurse	18	45,0
FH team in compliance with minimum team presence	21	52,5
FH team with a sufficient number of community health agents (CHA) for 100% of the population	18	45,0
Nurse fulfilling a workload of 40 hours per week	39	97,5
Rules and Routines		
Access to the Child Growth and Development Monitoring Handbook	31	77,5
Access to the Basic Care Handbook n. 33 on Child Health: Growth and Development	29	72,5
Uses the Child Health Handbook in Childcare conduits	40	100
Apply for biochemical exams	36	90,0
Registers preventive maintenance of scales	26	65,0
It records the group educational activities developed by the FHS team	40	100

In the analysis of the components of the process dimension (Table 4), the nurses claimed to follow up the infant C / D by using the CHH, perform an active search of the missing cases, and refer, when necessary, the children with deviation in C / D for services of greater complexity. This referral was formalized for the reference, with guarantee

of care, in almost 93% of the cases, but, not always, the children were referred to the Family Health Support Centers (FHSC), since some did not have this support matrix. It was inferred that the frequency of child-care consultations in children under one year was predominantly monthly.

Table 4. Percentages of data related to the process dimensions of Family Health Strategies. Caruaru (PE), Brazil, 2017.

Variables	n	%
Clinical Evaluation		
Follows the growth and development of children	40	100
Frequency of follow-up of children <1 years		
Monthly	39	97.5
Bimonthly	01	2.5
Frequency of follow-up of children <2 years		
Monthly	03	7.5
Bimonthly	12	30.0
Trimestrally	13	32.5
Semestrally	10	25.0
Does not follow-up	02	5.0
Performs active search for missing children	40	100
Completion of the Child Health Handbook		
Fill in the Child Health Handbook	40	100
Promotion of educational activities		
Promotes educational activities on infant C / D stimulation	34	85.0
System of reference and counter-reference		
It performs referrals of children with C / D deviation to a more complex level	40	100
Conducts routing of children with C / D bypass to the FHSC	33	82.5
Referral to the reference is formalized with assurance of care	37	92.5
It is difficult to mark the consultation of children with deviation in the C / D for the reference professional	10	25.0
The team has a reference laboratory for carrying out exams	37	92.5

The structure dimension was classified as not adequate, while demonstrating a degree of compliance of only 64%; similarly, the process dimension, since 86% of the actions were implemented.

DISCUSSION

It was evidenced, through the results of this research, that the caregivers had a level of schooling compatible with the national average ²⁰ and family income above the average presented for the State of Pernambuco, but below the national average.²¹ Based on this data, important information is provided to support the behavior of health professionals towards children and their families.¹²

It was noted that the frequency with which the children performed the Child Care consultations was in accordance with the recommendation of the MH, which recommends seven routine visits in the first year of life, besides two consultations in the

second year, ¹⁷ when they are at greater risk and require periodic consultations. After this age group, the preventive consultations are progressively restricted to questions related to possible health problems.²²

It was alleged that most caregivers received guidance about their child's C / D, in addition to referring to physical examination and anthropometric measurements by the team. They constitute ways of caring for and giving continuity to care for the participation and involvement of the caregiver in this process of stimulating C / D and for providing information about the child's health conditions.²²

It should be noted that, although most of the children had CHH, they were not adequately fulfilled, especially with regard to the BMI curve for age and the recording of developmental milestones. The constant evaluation and the use of the BMI curve from the birth of the child is recommended, since it is possible to indicate and follow the adiposity

index and, therefore, of possible nutritional changes at an early stage, if properly evaluated and recorded.^{11,22-3}

A systematic review study evaluating the CHH's completion by health professionals in Brazil shows that no records were included in the BMI chart for age by the authors of the papers included in the review.²² It was pointed out, in another review study, the difficulty, on the part of the professionals, in handling the CHH, mainly with respect to the reference curves represented in z scores and the BMI chart, which could justify, in part, the low percentage of completion of said graph.²⁴

The low frequency of these registries is emphasized, as far as development milestones are concerned. The findings of a study carried out in Cuiabá - MT, in which there was no annotation of this indicator in most of the analyzed handbooks were corroborate.¹⁰ It is noted that the adequate completion of the passbooks can not be seen only as an administrative part, but as a tool to promote children's health, which may reflect in the quality of the assistance provided and constitutes an important information vehicle among the professionals, in addition to providing continuous care.^{10,22-3,25}

The inadequate structure dimension was demonstrated. It was verified that a considerable number of units did not have adequate environments for the development of educational activities, reception of spontaneous demand, room for collective activities for professionals, collective inhalation room. Missing drugs and, in some units, educational material on C / D, anthropometer and CHH.

It was pointed out, in a literature review, a lack of structure and improvisation in the physical facilities, which compromise the performance of services and may have a negative impact on the monitoring of children.²² It is necessary, for vigilance and stimulus actions to become viable, that there be adequate physical space and equipment properly maintained and calibrated.^{11,25} Thus, the structure and material resources are the means for the realization of such actions by health professionals.

It was observed a high percentage of nurses who did not have specialization in Family Health, even though they did the introductory course. There was a good portion of the teams incomplete, besides not being able to perform the actions directed to the children's audience. Due to the lack of professional qualification, the development of the recommended actions can be compromised²⁶ and this should be a priority political action in

the FHS.²⁵ Qualification of the entire team to perform this service is required, and a differentiated profile capable of developing skills in addition to techniques, either through permanent and / or continuing education, in order to have a co-responsibility with the user, meeting their demands.²⁷

MH standards and protocols were present in more than half of the units, and these are important for the systematization and optimization of assistance, support in case of doubts, as well as material for training. It is possible to contribute, through the access and adequate use of protocols, to the follow-up and identification of possible changes in the C / D process, making appropriate conduits possible in order to favor an adequate development throughout childhood, reflecting positively throughout life.^{9,11-2,25}

It is added, with respect to the process, that there are some characteristics that are required for the effectiveness of the practice to be achieved, such as the measurement of anthropometric measures of the child, besides the use of instruments of records, among them, the medical record and the CHH, these tools are essential for monitoring the population.²⁶

It is considered that an evaluation followed by a good interpretation of data during a Child Care consultation may allow the identification of some type of deviation in the C / D that may impose a higher risk of morbidity and mortality, leaving the team on alert and allowing the taking timely decision-making.²⁶ In this study, most of the children, when there is some kind of deviation, were referred to FHSC or other levels of attention (mean and high complexities), and this converges with respect to integrality and intersectoriality used to guarantee the because actions undertaken are not the responsibility of a single sector, it is necessary to articulate the others.⁹

It is observed that the results in this study should be viewed with caution, since the elaboration of the trial matrix did not count on the participation of a representative of the municipal health department, which could analyze if the items included in this matrix were of according to the proposals of the line of health care of the child in the municipality, regarding the actions of surveillance and encouragement of C / D.

It should be emphasized that, although the study included only nurses, any health care provider who provides care to the child is also responsible for guiding children's growth and development and for recording such information in the CHH. In spite of these

limitations, it can be seen that these results can bring important contributions to professionals and managers of Basic Health Care for the planning of actions and the organization of services.

CONCLUSION

Based on the results, the findings were based on the lack of records and the correct completion of the CHH, showing that most professionals do not evaluate all the milestones considered essential for C / D surveillance of children's health.

It can be observed that the follow-up, followed by the recommended way, acts as a health promotion device, and it is necessary to strengthen and exercise actions that aim at improvements in the services that participated in the research.

It is considered that a good structure and the availability of equipment and supplies are essential for the provision of quality assistance to the child, and this enables the professionals to carry out their activities, based on the follow-up and implementation of the current public policies. It is hoped that this information can be used to plan and organize basic care services.

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