

High risk pregnancy referrals adequacy in the Basic Health Services of Sobral, Ceará, Brazil

Adequação dos encaminhamentos de gestações de alto risco na Rede Básica de Atenção à Saúde de Sobral, Ceará, Brasil

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ABSTRACT

Objective: To describe the appropriateness of referrals of high-risk pregnancies in the basic healthcare network of Sobral, in Ceará, Brazil. **Methods:** A descriptive quantitative study. The medical files of 173 pregnant patients referred to the high-risk outpatient clinic of Centro de Especialidades Médicas of Sobral, during the period from July 2006 to April 2007, were analyzed. Variables analyzed were correctness of the referrals, professionals who made them, causes and origins of the referrals, and age bracket of the patients referred. The referrals were divided into "appropriate" and "inappropriate", according to the classification of risk established by the technical manual of the Ministry of Health. **Results:** Of the 173 cases, 102 (59%) were considered appropriate/correct, and 71 (41%) referrals were considered inappropriate/incorrect. The referrals were divided according to the professional class of the referring individuals: physicians or nurses. Of the 173 referrals, 49 (28.3%) were made by physicians, and 124 (71.7%) by nurses. Of the 49 patients referred by physicians, 39 (79.6%) were considered correct. Of the 124 referrals made by nurses, 63 (50.8%) were considered incorrect, revealing a significant difference between the groups ($p < 0.00001$). The most common causes of referrals of pregnant patients were hypertensive syndromes (23.6%), physiological modifications of pregnancy (22.6%), prolonged pregnancy (15.1%), and diabetes (12.3%). **Conclusions:** There was a low rate of appropriate/correct referrals. There is a need for training in the basic healthcare network for quality prenatal care, with special emphasis on referring nurses.

Keywords: Primary health care; Prenatal care; Pregnancy, high-risk

RESUMO

Objetivo: Descrever a adequação dos encaminhamentos de gestações de alto risco na rede básica de atenção à saúde de Sobral, no Ceará, Brasil. **Métodos:** Estudo descritivo, de natureza quantitativa. Foram revisados 173 prontuários de gestantes referenciadas ao ambulatório de alto risco do Centro de Especialidades Médicas de Sobral, no período de Julho de 2006 a Abril de 2007. As variáveis analisadas foram: adequação dos encaminhamentos, profissional que encaminhou, causas e origem dos encaminhamentos e faixa etária das gestantes referenciadas. Os encaminhamentos foram divididos em "adequados" e "inadequados", segundo a classificação de risco estabelecido pelo manual técnico do Ministério da Saúde. **Resultados:** Dos 173, 102 (59%) foram considerados adequados e 71 (41%) encaminhamentos inadequados. Os encaminhamentos foram divididos conforme a classe profissional que referenciou: médicos ou enfermeiros. Dos 173 encaminhamentos, 49 (28,3%) foram por médicos e 124 (71,7%) por enfermeiros. Dos 49 encaminhados por médicos, 39 (79,6%) foram adequados. Dos 124 encaminhamentos por enfermeiros, 63 (50,8%) foram adequados, sendo observada diferença significativa entre os grupos ($p < 0,00001$). As causas mais frequentes de encaminhamentos das gestantes foram: síndromes hipertensivas (23,6%), alterações fisiológicas da gestação (22,6%), gravidez prolongada (15,1%) e diabetes (12,3%). **Conclusões:** Houve baixa adequação de encaminhamentos. Há necessidade de capacitação dos serviços da rede básica para realização de pré-natal com qualidade, com ênfase especial aos referenciadores enfermeiros.

Descritores: Cuidados primários de saúde; Assistência pré-natal; Gravidez de alto risco

Study performed by the Department of Gynecology and Obstetrics of the Medical Course of Sobral at Universidade Federal do Ceará (UFC) and by the Department of Gynecology and Obstetrics of Santa Casa de Misericórdia de Sobral – Sobral (CE), Brazil.

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INTRODUCTION

Prenatal care has merited an increasing and special place in maternal-child healthcare, which remains a field of intense concern in the history of public health. In Brazil, the persistence of disturbing rates of significant health indicators, such as coefficients of maternal and perinatal mortality, has motivated the appearance of a range of public policies that focus on the pregnancy-puerperal cycle⁽¹⁾.

Prenatal assistance should not be restricted to clinical-obstetric actions, but should include health education actions in the routine of holistic care, such as anthropological, social, economic and cultural aspects, which should be well-known by the professionals who care for pregnant women, seeking to understand them within the context in which they live, act, and react⁽²⁾.

A high-risk gestation is understood as that one in which the life or health of the mother and/or fetus has a higher risk than average of being affected by complications of gestation⁽³⁾.

The identification of high and low-risk individuals leads healthcare teams to use discriminating instruments in the process of adequately recommending, generating, and furnishing healthcare. In general, the needs of the low-risk groups are resolved with simple procedures in primary care. The needs of the high-risk groups generally need more specialized techniques. Even if some of these cases may be solved in primary care, others require secondary and tertiary care, with sophisticated health teams and technology. In the group of high-risk gestations, in which even the label may be a stress factor, mutual repercussions may be identified between the illness and the pregnancy⁽³⁾.

One should remember that throughout the entire pregnancy, complications may occur that make a normal gestation become one of risk. Therefore, during the full prenatal period, "risk assessments" of the patients should be carried out in order to identify and refer them to specialized care units⁽³⁻⁴⁾.

Detection of any risk would imply specialized attention, with examination/evaluation and additional follow-up and, if necessary, referral from a basic care unit to a more complex healthcare unit. We point out that the risk and need for referrals to more specialized centers should be constantly assessed. In the absence of risk, prenatal accompaniment should follow the recommendations for basic prenatal care⁽⁵⁾.

Centro de Especialidades Médicas (CEM) of Sobral, a public institution, is a reference center that receives referrals of pregnant patients from Sobral and all surrounding districts (rural region). Screening of high-risk pregnant women is carried out at the

basic healthcare unit, where they are first seen. This project was motivated by the fact that possibly many of the patients, initially classified as high-risk, probably, were not, in fact, high-risk and thus did not need the referral.

OBJECTIVE

To analyze the appropriateness of referrals of pregnant women from the basic healthcare network, by confronting the referral card and the diagnosis made at the high-risk prenatal outpatient clinic of the CEM of Sobral, in Ceará, Brazil.

METHODS

Type of study

This is a cross-sectional descriptive study, characterized by the desire in understanding a situation or describing determined circumstances.

Site of study

The study was conducted at the high-risk outpatient clinic of the CEM of Sobral. The unit is located in the center of the city of Sobral, where it receives referrals from the majority of medical specialties of the municipality (secondary care center of the county), including the high-risk prenatal patients referred by the basic healthcare units.

Data collection

The data were collected directly from the 173 medical files of pregnant patients referred to the high-risk outpatient clinic, during the period from July 2006 to April 2007. The data were analyzed by means of a questionnaire with the following variables: professional who made the referral, appropriateness/correctness, origin and motive for the referral, and age bracket of the pregnant women referred.

Patients were considered high-risk when they satisfied one of the criteria of risk during pregnancy (Tedesco, 1999, modified)⁽⁶⁾. It is important to point out that the person's occupation, dependence on licit or illicit drugs, individual characteristics, and unfavorable social-demographic conditions were not considered, since this information was not available in the medical files.

Excluded were 57 incomplete medical files, or those that did not contain the reason for the referral or the name of the referring professional.

Data analysis

The referral was considered appropriate/correct if the motive for the patient's referral fit the definition of high-risk, as per Tedesco, 1999, modified⁽⁶⁾, with confirmation at the reference outpatient clinic. The referrals were considered incorrect if the reason for the referral did not fit the definition of a high-risk pregnancy, or if it had not been confirmed by the center of greater complexity.

The data were processed with the use of Microsoft Office® Excel software, presented in the form of tables and graphics. For data analysis, we used the χ^2 or Fisher's test, when applicable, with the Epi-info 6.0 program, wherein the variable was considered significant if $p < 0.05$.

Ethical aspects

The analysis of the data collected was made using information from a secondary source, and therefore did not involve direct contact with the patients; hence, there was no need for identification. As the faithful guardian of patient information, the physician in charge of the CEM high-risk outpatient clinic was asked to authorize the use of the information for this purpose. The project was also approved by the Ethics in Research Committee of the Secretariat of Health and Social Action of the County of Sobral.

RESULTS

One hundred and seventy-three medical patient files were evaluated, which corresponded to the pregnant women referred who came to the High-Risk Gestation Outpatient Clinic of the Center of Medical Specialties of Sobral. According to the age range (Table 1), the pregnant women were separated into three groups: up to 17 years of age (19.3%); from 18 to 34 years of age (69.9%); and 35 years of age or more (10.8%). The greatest frequency (59.4%) of incorrect referrals was seen in pregnant patients with ages equal to or less than 17 years, with a significant difference relative to the other age brackets ($p < 0.001$).

Table 1. Appropriateness of referrals according to distribution of pregnant women per age group

Age group (years)	Assessment		Total n (%)	p value *
	Correct n (%)	Incorrect n (%)		
< 17	14 (40.6)	19 (59.4)	33 (19.1)	p < 0.001
18 - 34	71 (60.3)	49 (39.7)	120 (69.4)	
> 35	17 (88.9)	03 (11.1)	20 (11.5)	
Total	102 (58.9)	71 (41.1)	173 (100)	

* $p \leq 0.05$ is considered significant.

Of the referrals made, 138 (79.8%) came from the urban area of Sobral and 35 (20.2%), from the rural area, districts of Sobral (Table 2). It was observed that the patients coming from the main center (urban zone) showed a statistically greater frequency of incorrect referrals (44.2%) against 28.6% of those provenient from the rural zone ($p = 0.02$), as seen in Table 2. Of the 173 cases, 102 (59%) were considered correct and 71 (41%) incorrect referrals.

Table 2. Appropriateness of referrals according to distribution of pregnant women per origin

Origin	Assessment		Total n (%)	p value*
	Correct n (%)	Incorrect n (%)		
Urban area	77 (55.8)	61 (44.2)	138 (79.8)	p = 0.02
Rural area	25 (71.4)	10 (28.6)	35 (20.2)	
Total	102 (58.4)	71 (41.1)	173 (100)	

* $p \leq 0.05$ is considered significant.

The referrals were divided according to the professional class of the individual who referred them: physicians or nurses (Table 3). Of the 173 referrals, 49 (28.3%) were made by physicians and 124 (71.7%) by nurses. Of the 49 referred by physicians, 39 (79.6%) were correct, and 10 (20.4%), incorrect. Of the 124 referrals made by nurses, 63 (50.8%) were considered correct while 61 (49.2%) were considered incorrect, and a significant difference was observed between the groups of physicians and nurses ($p < 0.001$).

Table 3. Appropriateness of referrals per professionals

Professional	Assessment		Total n (%)	p value*
	Correct n (%)	Incorrect n (%)		
Physician	39 (79.6)	10 (20.4)	49 (28.3)	p < 0.0001
Nurse	63 (50.8)	61 (49.2)	124 (71.7)	
Total	102 (59.0)	71 (41.0)	173 (100)	

* $p \leq 0.05$ is considered significant.

The most frequent causes for referrals of pregnant patients were hypertensive syndromes (23.6%), physiological changes in gestation (22.6%), prolonged pregnancy (15.1%) and diabetes (12.3%) (Table 4). The cases of hypertension included prior systemic arterial hypertension and variations of the gestation-specific hypertensive disease.

The most frequent cases were analyzed in reference to each professional class. The primary causes of referrals made by nurses, in descending order, were physiological changes of pregnancy (24.3%), hypertensive syndromes (21.8%), prolonged pregnancy (17.9%), and diabetes (11.5%). By the analysis of the causes for referrals by physicians, it was identified: hypertensive syndromes

(28.6%), physiological changes in pregnancy (17.8%), diabetes (14.3%), prolonged pregnancy (7.2%), and malformations (7.1%), as seen in Table 4.

Table 4. Appropriateness according to professional group and causes that motivated referrals

Causes	Nurses (%)	Physicians (%)
Hypertensive syndrome	21.8	28.6
Physiological changes	24.3	17.8
Prolonged pregnancy	17.9	7.2
Diabetes	11.5	14.3
Malformations	0.0	7.1
Others	24.5	25.0
Total	100	100

DISCUSSION

Analyzing the total number of referrals, there was a greater proportion of appropriate/correct (59%) versus inappropriate/incorrect (41%) referrals. This result demonstrates inferiority in adaptation relative to some isolated studies conducted in Brazil that produced rates of 24.5% of incorrect referrals⁽²⁾. The large number of referrals provenient from nurses, possibly due to the lack of prior analysis by physicians, owing to a difficulty in communication or the absence of the professional at that unit, may have contributed to this greater number of incorrect referrals.

The referrals referenced by physicians proved a significant level of correctness; almost 80% of the medical files of pregnant patients were referred by these professionals. This was not the case when compared to the referral made by the nurses, which reached a rate of correct referrals of a little more than half the number of cases (50.8%). This shows the importance of the physician in decisions regarding referrals. It also raises the question as to the need for better capacitated nursing professionals in our region, since the main causes for incorrectness were physiological changes of gestation, evidencing their difficulty in differentiating events proper of pregnancy from those adverse events that complicate it. As it was made evident in data from literature, these issues point to the need for greater multiprofessional participation, in order to afford improvements in conceptualizing, defining parameters, establishing procedures, and foreseeing preventive measures for high-risk pregnancies⁽⁷⁾.

The greatest frequency (59.4%) of incorrect referrals was seen in pregnant women with ages equal to or less than 17 years, with a significant difference relative to the other age brackets ($p < 0.001$), showing agreement with the findings of Buchabqui, Capp e Ferreira⁽³⁾, which could be related to poor prenatal

compliance on the part of adolescents, causing greater concern for the healthcare teams of the basic units. In Brazil, as in many other countries, the growing rate of teenage pregnancies represents a social and public health problem due to biological, psychological, and social repercussions that may be involved with this age group. The phenomenon is seen especially, but not exclusively, in the lower income population, because of unfavorable living conditions, lack of knowledge as to the function of one's own body, lack of affective support from the families, search for identity, lack of adequate sexual education programs, lack of access to birth control methods, and treatment of this issue by the media⁽⁸⁻⁹⁾. According to Majoko et al.⁽¹⁰⁾, a higher age alone does not constitute a motive for referral, since this would result in a group with a risk too great to reference.

Analyzing the origin of the patients in two groups, from the urban and rural zones, respectively, a significant difference is observed as to where the patient comes from: patients coming from the interior had a higher frequency of correct referrals ($p = 0.02$). The true number of referrals from the interior may, in fact, be higher, since there is the possibility that many of the pregnant women referred did not go to the more complex institution. This may be due to situations in which large distances had to be covered⁽¹¹⁾, or to factors such as long waiting periods and lack of belief in the need for a referral⁽¹²⁾, or to geographical, cultural, social-economic, and medical-administrative factors⁽¹³⁾.

The hypertensive syndrome (23.6%) and the physiological changes of pregnancy (22.6%) were the most frequent isolated causes of referrals. Similar to findings in literature, hypertension is the greatest complications identified in the prenatal period, with or without its gestational variations^(3,5,7,8,14). Diabetes was a common cause for referrals (12.3%), as was also made evident in literature^(3,5,7).

There is a need for better training in the basic healthcare network for quality prenatal healthcare to be offered, as we noted a high number of inappropriate referrals. Special emphasis should be given to referring nurses who have had almost half of their referrals considered inappropriate, most of them made for physiological events of gestation. Investments in general and permanent professional training will reduce the need for referrals, since it will result in general practice physicians and nurses with greater professional experience. Use of Programa de Saúde da Família (PSF) strategy's within the new public healthcare policies will allow an improvement in the low diagnostic sensitivity in referrals.

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