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ORIGINAL ARTICLE

SURVEILLANCE OF SYPHILIS IN PREGNANCY, A WHATCHFUL LOOK AT THE REPORTED CASES IN EPIDEMIOLOGICAL SURVEILLANCE

VIGILÂNCIA DA SÍFILIS NA GESTAÇÃO, UM OLHAR ATENTO PARA CASOS NOTIFICADOS NA VIGILÂNCIA EPIDEMIOLÓGICA

VIGILANCIA DE LA SÍFILIS EN EL EMBARAZO, MIRAR HACIA FUERA PARA LOS CASOS REPORTADOS EM LA VIGILÂNCIA EPIDEMIOLÓGICA

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ABSTRACT

***Objective*:** characterize the findings of epidemiological surveillance for syphilis in pregnancy in the period from January 2007 to December 2010 in Mossoró-RN. ***Method*:** a descriptive study with quantitative approach. Data were collected through individual Notification and Identification cards filed at the Epidemiological Surveillance of Mossoró/ RN. These data were exported to SPSS program version 15.0 and analyzed using descriptive statistics, with absolute and percentage frequencies. ***Results*:** data indicated that most cases of the disease were diagnosed as primary clinical classification 43.85%, however many cases were ignored 41.7%. Among the institutions, the Maternity Hospital of the city is the one that notifies the most cases 37,5%, which leads us to believe in underreporting, and that there is a gap in the notification of primary care. 62.5% of the mothers had incomplete primary education, confirming that this is a risk factor. It was also found out that younger mothers are diagnosed in the 3rd quarter and older in the 2nd, which makes it clear the late start of prenatal care for young mothers. ***Conclusion*:** thus, we analyzed the factors that contributed to the growth of cases of syphilis during pregnancy in the city of Mossoró/RN, As well as rethought the role of nursing in prenatal surveillance. ***Descriptors*:** information systems; epidemiological surveillance; nursing.

RESUMO

***Objetivo*:** caracterizar os achados da vigilância epidemiológica sobre a sífilis na gestação no período de janeiro de 2007 a dezembro de 2010, no município de Mossoró/RN. ***Método*:** estudo descritivo com abordagem quantitativa. Os dados foram coletados através das Fichas Individuais de Notificação e Investigação arquivadas na Vigilância Epidemiológica, de Mossoró/RN. Esses dados foram exportados para o programa SPSS versão 15.0 e analisados através de estatística descritiva, com freqüências absolutas e percentuais. ***Resultados*:** os dados indicaram que a maioria dos casos da doença eram diagnósticadas enquanto classificação clínica primária 43,85%, porém muitos casos foram ignorados 41,7%. Dentre as instituições a Maternidade da cidade é quem mais notifica os casos 37,5%, o que leva a acreditar numa subnotificação, e uma lacuna na noificação da atenção básica. 62,5% das gestantes tinham ensino fundamental incompleto, confirmando que esse é um fator de risco. Identificou-se também que as mães mais jovens são diagnosticadas no 3° trimestre e as com mais idade no 2°, o que deixa claro o início tardio do pré-natal pelas mães mais jovens. ***Conclusão*:** assim, analisamos os fatores que contribuíram para o crescimento dos casos de sífilis na gestação na cidade de Mossoró/RN, bem como repensamos o papel da enfermagem na vigilância no pré-natal. ***Descritores*:** sistemas de informações ; vigilância epidemiológica; enfermagem.

RESUMEN

***Objetivo*:** caracterizar los resultados de la vigilancia epidemiológica de la sífilis durante el embarazo entre enero de 2007 diciembre de 2010, la ciudad de Mossoró / RN. **Método:** se realizó un estudio descriptivo con enfoque cuantitativo. Los datos fueron recolectados a través de los registros individuales ante la notificación e investigación de vigilancia, Mossoró / RN. Estos datos fueron exportados a SPSS versión 15.0 y se analizaron mediante estadística descriptiva, con frecuencias absolutas y porcentajes. ***Resultados*:** los datos indicaron que la mayoría de los casos de la enfermedad se diagnostica como la clasificación clínica primaria de 43,85%, pero en muchos casos se redujo un 41,7%. Entre las instituciones de la Maternidad de la ciudad es otra cosa que notifica los casos 37,5%, lo que nos lleva a creer subregistro y noificação una brecha en la atención primaria. 62,5% de las mujeres embarazadas tenían educación primaria incompleta, lo que confirma que este es un factor de riesgo. También se encontró que las madres más jóvenes son diagnosticadas en el 3er trimestre y más de 2 °, lo que pone de manifiesto la aparición tardía de la atención prenatal para las madres jóvenes. ***Conclusión*:** por lo tanto, se analizan los factores que contribuyeron al crecimiento de casos de sífilis en el embarazo en la ciudad de Mossoró/RN, y repensar el papel de la enfermería en la vigilancia prenatal. ***Descriptores*:** sistemas de información; vigilancia; enfermería.

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INTRODUCTION

Syphilis is an infection caused by Treponema pallidum, it is transmitted, in most cases, through sexual intercourse, and still today, it is a major public health problem not only in Brazil but worldwide. During pregnancy, this infection brings serious implications for the woman and her fetus; it may induce abortion, intrauterine death, and neonatal death or leave serious anomalies in newborns.[1]

Due to the high incidence rate in Brazil, syphilis during pregnancy became a compulsory notification disease since the publication of Decree MS / SVS 33, signed on July 14, 2005, and through the publication of Decree 542 of 22 December 1986, the notification of congenital syphilis became compulsory, which was already reported in other locations and countries.[2]

After notifications have been established in Brazil, between 1998 and 2006 approximately 36,000 cases of the disease were reported. There was a progressive increase in the reporting of congenital syphilis, and the incidence rose from 1.3 cases per 1,000 live births in 2000 to 1.7 cases per 1,000 live births in 2005.[3]

Among those cases reported in 2005, 79.8% of mothers received prenatal care. Of whom, 53.8% were diagnosed with syphilis during pregnancy and only 13.2% had their partners treated. In 2005 it was identified a mortality rate of 2 deaths per 100,000 children younger than 1 year, a result that reflects an insufficient control of this disease in Brazil.[1]

In the state of Rio Grande do Norte 131 cases of syphilis in pregnancy were confirmed. In Mossoró/RN, until the month of August 2010, 21 cases of syphilis during pregnancy were reported by the Epidemiological Surveillance.[4]

Even with the policies and programs implemented by the Ministry of Health, and advances in early diagnosis, treatment and care during prenatal, it has been observed the resurgence of syphilis among the general population, during pregnancy and, in particular, the resurgence of cases of congenital syphilis.[5]

Therefore, this study was carried out based on the following guiding question: What are the findings of epidemiological surveillance for syphilis during pregnancy in the period from January 2007 to December 2010 in Mossoró/RN?

Interest in the theme came from discussions within the subject Women's Health during undergraduation. During the discussions we studied about several Sexually Transmitted Diseases - STDs. Among them, syphilis during pregnancy, in which an incidence of cases in the Basic Health Units of Mossoró can be observed.

Given the highlighted issue, we emphasized as objective of this study: Characterize the findings of epidemiological surveillance for syphilis during pregnancy from January 2007 to December 2010 in Mossoró/RN.

Considering that the nurse is one of the professionals responsible for identifying cases of syphilis during pregnancy, we can stated that the proposed study is of great relevance to academic community, health institutions and society in general, because it will provide information on the characterization of disease in women from Mossoró/RN. In addition, after discussions it can be evidenced the need for continued surveillance of syphilis in pregnancy because this disease brings countless problems to the fetus and the family that awaits. With the broadening and reinforcement of the surveillance during the prenatal period we characterize as benefit the reduction of cases of congenital syphilis, preventing, this way, the various mishaps which surround the birth of an infected newborn.

METHOD

In order to achieve the delineated objective, this study is descriptive with quantitative approach. It is a descriptive study, because it is the one that describes the characteristics of a given population or phenomenon, or the establishment of relationships between obtained variable.[6] The quantitative method is characterized by the use of quantification in both methods of gathering information and in their treatment by means of statistical techniques, from the simplest such as a percentage, average, standard deviation, to the most complex such as the coefficient of correlation, regression analysis, etc.[7]

The information was collected through Sistema de Informação de Agravos de Notificação – SINAN, which is supplied mainly by reporting and investigation of cases of diseases and disorders present in the national list of diseases of compulsory notification (ordinance GM/MS No. 2325 of December 8, 2003), however it is allowed to states and municipalities to insert other important health problems in their region.[8]

Besides the Individual Notification Form (Ficha Individual de Notificação - FIN) and the Negative Reporting, SINAN makes available an Individual Investigation Form (Ficha individual de Investigação - FII), an investigative roadmap that allows the identification of the source of infection and describes the mechanisms of disease transmission.[8]

The inclusion criteria took into account only the women affected with syphilis during pregnancy, registered in SINAN, observing the incidence in the city of Mossoró-RN from January 2007 to December 2010. The criterion for choosing this period was defined due to the observation of increased rates of notifications of syphilis in pregnancy for Epidemiological Surveillance of this city in that period.

After selecting data according to the inclusion criteria, the collection was performed by Individual Notification and Investigation Forms filed in the Epidemiological Surveillance, in Mossoró-RN. The investigated Quantitative variables were: prevalence, age, gestational age, clinical classification, educational level, neighborhood and notifying unit.

Data were typed into a database program Excel 2007 and were exported to the Statistical Package for Social Sciences - SPSS version 15.0, having as type of analysis the descriptive statistics, with absolute frequencies and percentages. The data were disposed in tables and graphs and analyzed under the light of theoretical framework about the subject matter.

RESULTS

Table 1. Clinical classification of syphilis in pregnancy in the period from 2007 to 2010 in Mossoró.

Year	Clinical Classification							
	Primary		Secondary		Tertiary		Ignored	
	n	%	n	%	n	%	n	%
2007	1	2,1	0	0	0	0	2	4,2
2008	1	2,1	0	0	0	0	0	0
2009	8	16,7	3	6,3	0	0	10	20,8
2010	11	22,9	3	6,3	1	2,1	8	16,7
Total	21	43,8	6	12,5	1	2,1	20	41,7

Source: Sinan, 2011.

Table 2. Health Units that reported the most per year

Health Unit	Year									
	2007		2008		2009		2010		Total	
	n	%	n	%	n	%	n	%	n	%
CAIC	0	0,0	0	0,0	2	4,2	0	0,0	2	4,2
CSDR	0	0,0	0	0,0	7	14,6	11	22,9	18	37,5
UBS Antonio Camilo	1	2,1	0	0,0	0	0,0	0	0,0	1	2,1
UBS CID S. Duarte	1	2,1	1	2,1	1	2,1	1	2,1	4	8,3
UBS Dr Chico Costa	0	0,0	0	0,0	0	0,0	1	2,1	1	2,1
UBS Dr Chico Porto	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS Dr Joaquim Saldanha	0	0,0	0	0,0	2	4,2	0	0,0	2	4,2
UBS Dr José Fernandes	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS Dr José Holanda	0	0,0	0	0,0	0	0,0	2	4,2	2	4,2
UBS Dr Luis Escolástico	0	0,0	0	0,0	0	0,0	2	4,2	2	4,2
UBS Dr Sueldo Câmara	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS DR. Antonio Soares Jr	1	2,1	0	0,0	1	2,1	2	4,2	4	8,3
UBS Dulclecio Antonio	0	0,0	0	0,0	0	0,0	1	2,1	1	2,1
UBS Epitácio Costa	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS FCº. M. Silva	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS Marcos Raimundo	0	0,0	0	0,0	0	0,0	1	2,1	1	2,1
UBS Mª. Neide Silva	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS Mª. S. Costa	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
UBS Sinharinha Borges	0	0,0	0	0,0	0	0,0	1	2,1	1	2,1
UBS Ver. Lahyre Rosado	0	0,0	0	0,0	1	2,1	0	0,0	1	2,1
Vigilância à Saúde	0	0,0	0	0,0	0		1	2,1	1	2,1
Total	3	6,3	1	2,1	21	43,8	23	47,9	48	100,0

Source: SINAN, 2011.

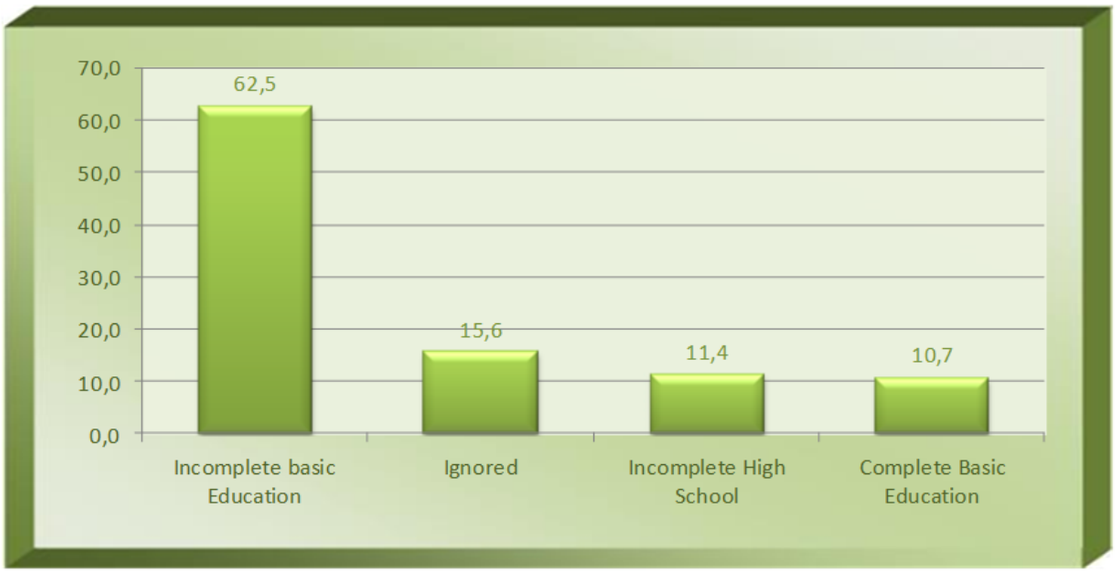

Figure 1. Educational level of pregnant women reported with syphilis in the period from 2007 to 2010 in Mossoró. SINAN, 2011

Table 3. Age group per trimester of pregnancy

Age	Trimester of pregnancy						Total	
	1° trimester		2° trimester		3° trimester			
	n	%	n	%	n	%	n	%
Up to 25 years old.	1	2,1	11	22,9	16	33,3	28	58,3
More than 25 years old,	3	6,3	9	18,8	8	16,7	20	41,7
Total	4	8,3	20	41,7	24	50,0	48	100,0

Source: SINAN, 2011.

Table 4. Age and time between diagnosis and notification

Age	Time between diagnosis and notification				Total	
	Up to 26 days		Bigger than 26 days			
	N	%	N	%	N	%
Up to 25 years old	20	41,7	8	16,7	28	58,3
Older than 25 years old	15	31,3	5	10,4	20	41,7
Total	35	72,9	13	27,1	48	100,0

DISCUSSION

The clinical classification of syphilis characterizes definitive aspects towards the treatment of the disease. In table 1 we can observe the incidence of the disease in its clinical classifications in the period from 2007 to 2010. In this table we can see that the diagnosis of syphilis in pregnant women with primary clinical classification was the most prevalent and the year 2010 with 22.9% is noteworthy. This information indicates a positive sign in the prospect of the disease's early diagnosis, but it is still necessary to expand surveillance in prenatal care, to improve these rates.

Thus, it is worth emphasizing the importance of surveillance for early detection of the disease, appropriate treatment for the elimination of congenital syphilis (CS), because mothers might be treated at any instance of the disease; however the fetus might assume irreversible consequences. The most consistent action for controlling congenital syphilis is on ensuring a broad and quality prenatal care, early diagnosis and treatment in a timely manner.[9]

The same author reports that when syphilis in pregnant women is not treated or is inadequately treated, it can cause miscarriage, prematurity and stillbirth. When there is infection of the fetus from not treated mothers, in approximately 40% of cases, miscarriage, stillbirth or perinatal death occurs.[9]

The table also shows the high prevalence of cases with unknown classification. Within the absolute value of all the studied years, the ignored percentage is 41.7% and it is an exorbitant amount that has as main consequence the difficulty in choosing the treatment, increasing the chances of vertical transmission of the disease and thus, increasing the incidence of congenital

syphilis. Among the evaluated years, the one which had the highest rate was 2009 with an incidence of 20.8% ignored cases.

In an attempt to reverse this situation, the Ministry of Health proposed a project for the elimination of congenital syphilis by the year 2000. Among its objectives, we highlight the one which intends to prevent or stop the transmission of acquired maternal syphilis to her conceptus, since an appropriate treatment of pregnant women with syphilis during prenatal care, brings two benefits: besides treating the woman, it creates a protective/therapeutic effect to the fetus.[2]

The mandatory notification is an instrument of registry that aims to identify specific diseases that require rapid intervention, and syphilis in pregnancy is one of them. Table 2 presents the health institutions and the number of notifications of syphilis in pregnancy in the city of Mossoró/RN.

The health institutions who had the highest rate of notification of syphilis in pregnancy were: Casa de Saúde Dix-Sept Rosado (CSDR) with 37.5% and the Basic Health Units (BHU) Cid Salém Duarte e Dr. Antonio Soares Junior with 8.3% respectively.

The CSDR had the greatest number of reported cases, because it is a reference maternity in obstetrics for patients from Mossoró and Western and high-western region of Rio Grande do Norte state. According to the Ministry of Health, the triad-surveillance-assistance-prevention, basis of most Public Health programs, contributes to strengthen the thesis that the surveillance of syphilis in pregnancy is one of the possibilities of solving this problem. Interventions - laboratory screening and treatment - allow the prevention of the case of CS and are enthroned on prenatal care.[2]

The high incidence in CSDR highlights several factors to be discussed. As it is a reference maternity institution in the region, the great reporting can demonstrate that many women are only diagnosed when they entry into the institution to give birth, which greatly increases the risk of vertical transmission. As the number of notifications in the CSDR is very high compared to those of BHUs, it can be observed that there is underreporting in primary care and another identified problem is that when these women have their children, the disease is no longer reported as syphilis during pregnancy and starts being notified as CS.

This accumulation of notifications in CSDR makes clear the gap in the achievement of mandatory reporting of syphilis in pregnancy during prenatal, which should be identified in the first or the third quarter of pregnancy, since those are the moments when the VDRL test is performed. This gap may be related to a deficiency of service in the agility of receiving the physical examinations, or of professionals for not notifying.

The other institutions that come with increased rates of notification are BHUs that are located in the suburbs of Mossoró, these neighborhoods are populated, where the population is poorly informed and oriented, with low education, high level of prostitution, early pregnancy and diagnosis of Sexually Transmitted Diseases - STDs.

The above factors are risky ones and they predispose people to vulnerability to contamination of STDs, the concept of vulnerability brings an expanded and reflective perception, identifying the reasons for the transmission ranging from organic susceptibilities to how health programs are structured passing through behavioral, cultural, economic and political aspects.[10]

Campos reinforces that risk behaviors associated to contamination by STD/HIV, are related to early age of sexual initiation, anal sex, use of drugs and alcohol and/or sexual partner who are users, multiple sexual partners or partner with multiple partners, abusive sexual intercourse, previous STD and low education.[9]

Thus, syphilis is an STD that is easy to control due to the existence of laboratory tests for diagnosis, effective, available and low cost treatment, although it is still seen a resurgence of the disease in recent years.

Figure 1 shows that among the pregnant women reported, in relation to schooling, there is a prevalence of incomplete elementary education with 62.5%, showing a low level of education, this way, the interaction between the professional and the pregnant woman becomes more difficult, requiring an improved approach, so that the situation can be understood as easily as possible.

The Ministry of Health considers the low level of education as an obstetric risk factor that requires attention from the health professional, because this situation complicates the receiving of orientations which aim to minimize the risks to maternal and fetal health.[11]

The level of education can be used as an indicator of quality of life, allowing the

mother a better understanding of events such as the changes in her body during pregnancy, episodes that should be considered normal or not, helping the health professional who is conducting her prenatal care, to identify and promptly treat the intercurrences of pregnancy.

Congenital syphilis as well as STDs in general, is more prevalent in women with low socioeconomic status, who are young and with histories of previous pregnancies and abortions. Therefore, we note that Table 3 shows a higher incidence of syphilis in pregnant woman aged up to 25 years old, in which 33.3% of cases were reported in the third trimester of pregnancy, indicating delayed diagnosis and increased risk for congenital syphilis.

Table 3 also shows that 50% of the reported women had late diagnosis, contrasting with what is recommended by the Ministry of Health, since among the aggravating factors for the diagnosis of syphilis is the late beginning of prenatal care which should be started as early as possible, preferably in the first trimester of pregnancy, when it is important to request serologic testing (VDRL) in the first consultation and 30Th week of pregnancy, and the implementation of adequate treatment for VDRL positive pregnant woman and her sexual partner.[1]

As the biggest part of these mothers is young, late diagnosis can be related to low education, for it contributes to these women to have little information about prenatal and the care that should be taken during pregnancy, especially facing a diagnosis of syphilis.

Due to these factors, the diagnosis comes in the most complicated period: the third quarter, because the later the disease is diagnosed the bigger is the chance of vertical transmission and the greater the chances of aggravation in the clinical case, resulting from abortion, to birth of asymptomatic children.

Notification of cases of syphilis in pregnancy is important so that there is a quantitative control of cases. Through this control, the financial support is transferred to the institutions in order to carry out the treatment. It is important that reporting is made and treatment started as soon as there is a positive diagnosis.

Table 4 shows that 72.9% of cases are diagnosed and they have the notification made in up to 26 days. This time can be decreased, as the notification does not require much time from the professional, It is simple to be done, showing a gap in services that need to be revised so that the system of information on the disease is organized.

Even so, underreporting of congenital syphilis in the country is high, if considered the data related to the subject evaluable in the national literature that indicates the high magnitude of the problem in our midst. The increased incidence of congenital syphilis in recent years is much due to local, regional and national efforts for qualification and encouragement to reporting of diagnosed cases. It is important to highlight this grievance as an indicator of quality of prenatal care, since its control is feasible, provided that the infected woman is diagnosed and properly treated before or during pregnancy.[1]

Thus it is important to emphasize that primary care during the prenatal period is essential to maternal and infant health. It is then when activities related to health promotion and prevention should be carried out, aiming to identify risks to the mother and fetus.

CONCLUDING CONSIDERATIONS

The results of this study reflect the quantitative surveillance of cases of syphilis in pregnancy conducted between 2007 and 2010, in Mossoró-RN. Thus, the highest number of reported cases of syphilis in pregnancy occurred in 2010 with 22.9% with prevalence at CSDR 37.5% and in BHU Salém Duarte an Dr. Antônio Soares Júnior whith 8.3% respectively.

With respect to age, the study showed a higher incidence in pregnant women up to 25 years of age 58.3%; in terms of schooling data showed 62.5% of pregnant women with incomplete primary education.

When it comes to diagnosis, it is observed that most cases (33.3%) are diagnosed late, in the third trimester, and it takes 26 days between diagnosis and notification in 72.9% of cases.

Given the analysis performed on the findings of the Epidemiological Surveillance, it was observed that the policies advocated by the MH have not been carried out as recommended, occurring failures in the care for pregnant women who perform prenatal in Primary Care.

The use of information derived from epidemiological surveillance may benefit other components of the programmatic actions of primary care on maternal-infant group, especially if this surveillance expands

to other preventable diseases. Thus, we propose sentinel assistance for surveillance of syphilis in pregnancy, in order to decrease rates of vertical transmission and neonatal preventable deaths.

Basic health care should constitute in a space of reception and completeness of nursing actions, aiming at the promotion, protection and restoration of health of the subjects. In addition to developing educational activities that increase the level of knowledge among patients and community, enabling the expansion of a network care designed to promote health as a way of producing life.

However, we understand the importance of surveillance of syphilis in pregnancy, through a wide and qualified assistance of nursing in prenatal care, By means of early diagnosis and timely treatment, as a way of preventing and reducing the transmission of acquired and congenital syphilis.

With this work, we analyze the factors that contributed to the growth of cases of syphilis in pregnancy and congenital syphilis in the city of Mossoró/RN, as well as rethought the role of nursing in prenatal care surveillance. With the results, we can think about the effectiveness of policies and government programs in the city of Mossoró and throughout the country.

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