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10

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Original Article

## The Nursing Care with the Oral Health of Pregnant Women: A Qualitative Study

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### Abstract

**Objective:** To evaluate the knowledge and behaviors of nurses on the oral health of pregnant women. **Material and Methods:** This was a qualitative study, whose data collection was performed with 12 nurses from Belém, Brazil, through questionnaire, with recorded interview applied by a single researcher, according to a semi-structured script composed of five guiding questions, and whose results were analyzed by Content Analysis. **Results:** Four thematic issues were originated: 1) "All have dental caries", referring to the nurse's perception on oral health related to the biological aspect; 2) "We refer", addresses the issue of nursing care and the nurse's responsibility for prenatal care; 3) "I do not know much", reveals the nurse's sometimes limited knowledge about oral health and discusses the breadth of dental care; and 4) "The demand is very large", brings up the view of nurses regarding the difficulties of accessing dental service in SUS. **Conclusion:** Nurses know prenatal protocols and refer patients to dental care, but their perception about dental care during pregnancy is not very comprehensive, which instigates the strengthening of interdisciplinary work.

**Keywords:** Nursing Care; Oral Health; Women's Health; Prenatal Care.

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## Introduction

In Brazil, the number of prenatal consultations per woman in the Unified Health System (SUS) has increased, from 1.2 visits per child in 1995 to an average of 5.4 in 2005, and approximately 5.9 in 2013 [1,2].

Since the 1990s, the Ministry of Health (MS) has defined women's health as a priority for improving reproductive health and reducing maternal and perinatal mortality from preventable causes, such as oral causes [3-5]. Cases of Ludwig's angina in pregnant women and postpartum women reported in literature, in addition to being potentially fatal, resulted in fetal death and acceleration of delivery due to the risk of maternal death [6-10]. That is, they are diseases that generate oral morbidity and directly impact the "maternal mortality" indicator.

Nausea and vomiting, on the other hand, can modify the oral pH, cause enamel erosion, decrease the saliva's buffer capacity and lead to exacerbation of pre-existing caries and gingival affections [11]. Gingivitis affects a large part of pregnant women due to high levels of hormones that increase the permeability of gingival blood vessels and make the region more susceptible to pathogenic microorganisms, especially when there is accumulation of biofilm due to inefficient hygiene [11].

In addition, recent studies have suggested a positive correlation between presence of periodontal disease and risks of preterm birth, low birth weight, miscarriage, fetal death and preeclampsia, which are important public health problems [12,13].

In this context, the national policy advocates in the first prenatal nursing consultation the referral of pregnant woman to at least one dental consultation. However, the coverage in 2014 reached only 38% of the Brazilian population with 24,243 oral health teams throughout Brazil [14].

Therefore, the nurse should have knowledge about oral health during pregnancy and be able to identify cases of vulnerability, thus contributing to the reduction and elimination of risk factors when referring the patient for dental treatment [15].

In view of the above, this research aimed to evaluate nurses' knowledge and behaviors about the oral health of pregnant women.

## Material and Methods

### Ethical Aspects

This research was approved by the Ethics Research Committee of the Health Sciences Institute, Federal University of Pará (Protocol No. 639.909).

### Data Collection

Data collection was performed in March 2014 through a recorded interview applied by a single researcher, according to a semi-structured script composed of five guiding questions: 1) "Are oral problems common in the gestations that you follow? Which are they?"; 2) "How do you believe that oral diseases can be prevented?"; 3) "Tell me about dental treatment in pregnancy. What do you

know about it? Can the pregnant woman do it by herself?"; 4) "Oral problems in pregnancy can cause premature delivery, maternal mortality and pre-eclampsia?"; 5) "When there is a complaint regarding oral health, what is your procedure?"

This script was prepared by researchers specifically for this research. From the answers provided by interviewees to the guiding questions, secondary questions were developed by the researcher so that the nurses' ideas were more explored and thus more content was produced for data analysis.

Twelve nurses of both sexes were selected for convenience working in three Basic Health Units (UBS) and five Family Health Units (ESF), in the D'agua district of Belém.

Interviews were conducted in the nursing offices to guarantee privacy to professionals, who previously signed the Free and Informed Consent Form. Among the 12 interviews performed, the one with the shortest duration occurred in 6 minutes and 58 seconds and the longest in 25 minutes and 10 seconds, with an average of 11 minutes and 37 seconds per interview.

### Data Analysis

The results were qualitatively analyzed according to the method of Content Analysis [16]. Interviews were typed and printed in full, read in a floating and exhaustive way and the essence of speeches was codified and categorized to identify the thematic cores.

From the answers obtained for questions 1 to 5, mentioned above, and from other common points in the speeches of interviewees, five thematic cores were originated: 1) High frequency of oral problems; 2) Oral diseases and the risk for gestation; 3) Broad nursing care; 4) Little knowledge about dental treatment; and 5) Demand and supply.

The thematic cores were originated from the observance of common points in the ideas and speeches of interviewees. Thematic core 3 comes from observing the multiplicity of nurses' roles in the speeches of interviewees. Thematic core 5, about the demand for services, was not an initial subject of discussion in the research, but was included due to the recurrence of the topic in the interviews, since it proved to be an important issue for participants and for the quality of services offered to their patients.

For the protection of identities, each subject was assigned the identification "ENF" followed by numbering from 1 to 12, according to the chronological order of interviews.

### Results

The sample was composed of 11 female and 1 male nurses aged 36-53 years (mean age = 44.80), average of 19 years of practice and 16.83 years of experience in primary care. Thematic cores are presented below:

#### High Frequency of Oral Problems

When asked if oral problems are common in pregnant women attending prenatal consultations, the interviewees showed that oral diseases are prevalent pathologies in the group of pregnant women:

*All have dental caries... and it seems common in Brazil, but for me it is not (ENF2).*

*The main complaint is pain (ENF8).*

*They have dental caries and complain of pain (ENF11).*

*Oral problems identified are only about pain (ENF3).*

### Oral Diseases and Risk for Pregnancy

When asked whether oral problems can cause premature delivery, maternal mortality and preeclampsia, nurses demonstrate that they understand the positive relationship between oral diseases and gestation risks, but not always correctly. The speech of Nurse five addresses the nonobservance of the oral problem as a possible predisposing factor to maternal morbidity and mortality:

*Oral infection can lead to septicemia. A simple inflamed tooth that is not treated will generate septicemia and the patient will die (ENF7).*

*Oral infection can cause generalized infection if not treated, so the complication can become severe (ENF3).*

*I start from the following assumption: dental caries is a wound, it is a solution of continuity, and it is an open door (ENF1).*

*We worry about the urinary tract infection with leucorrhoea, but we do not worry about what is inside the oral cavity (...) this goes unnoticed when there is also a source of infection that can generate other infections and even a serious problem (ENF5).*

### Broad Nursing Care

This thematic core was obtained from the high frequency of reports about the multiplicity of nurses' functions, which includes observing oral issues and the complying with referral protocols. This is clear in the reports, especially regarding the flow of exams and referrals and the operationalization of the reference and counter-reference system, including for the dentist:

*The first consultation includes issues like gynecology, the first menstruation, contraceptive methods ... and also the dental part, what diseases did you have during and before pregnancy, if pregnancy was desired, type of house, how many relatives (...), everything is investigated (ENF10).*

*Because the nurse is actually a psychologist, a nutritionist, a doctor, a dentist [laughs] a brother, the nurse is everything (ENF9).*

*We routinely refer them to treatment, both nutritional and dental (ENF7).*

*We have to be attentive to these signals in order to intervene, refer and try to solve the situation as quickly as possible (ENF 12).*

*At the first consultation, we have all that care to do the cephalo-caudal physical examination to identify the presence of nodules, some changes (ENF3).*

In addition, when questioned about their behavior regarding the complaint of an oral problem, the interviewees ratified the mandatory referral for dental care during prenatal care:

*The Ministry of Health determined to forward all pregnant women to the dentist (ENF2).*

*For all of them [the referral to the dentist, because it is the dentist who will say whether or not she needs treatment because all of them, in the protocol, have to be referred to the dentist regardless of complaints or not (ENF9).*

*I never attended a pregnant woman with dental problems, it is only referred because of the protocol itself, and we forward all (ENF6).*

However, sometimes the network flow is hampered by the logistics of the reference and counter-reference system, as ENF 6 points out:

*Since we work with reference and counter-reference, what happens in health? We have no counter-reference to where it goes. Sometimes, she cannot obtain specialized care, and when she can, there is no information about health problems, if she did some type of treatment (ENF6).*

### Little Knowledge about Dental Treatment

When asked about dental care during pregnancy, most nurses revealed doubts or assumed ignorance.

*Well ... the dental treatment ... I do not know much about it. What we do is to forward (ENF5).*

*I have no knowledge (...) In terms of pathology, I do not know much about dental problems in pregnancy (ENF8).*

*I think that there is a period when she can or cannot treat her teeth (ENF9).*

One issue highlighted by one of the interviewees was the influence of the multiprofessional team on oral health knowledge:

*Look, I can tell you that I do not have much knowledge about it [dental care in pregnancy] because I've never worked with a team that had a dental care team. Because when there is a dental care team, it is also part of the staff, so we need to know what the dental protocols are (ENF1).*

The belief in the restriction of dental procedures was also widely addressed:

*It seems to me that their fear is a cultural issue due to the anesthesia and they think they cannot and we say that it is alright...that they can do the procedures (ENF11).*

*Look ... I think it depends on this anesthetic issue ... (ENF10).*

*Yes, there is still that taboo with regard to tooth extraction, right? Then we forward them to the dentist (ENF2).*

*In the first months of pregnancy we cannot do it. She cannot extract any tooth... doing deep channel treatment (ENF7).*

*I think an extraction, right? I believe that only extraction ... and also filling, which takes anesthesia right? In case, it is the anesthesia, the problem is the anesthesia or not? I do not know. The other ... guidelines ... I think fluoride ... these things she can do (ENF9).*

*Look, the information I have is the issue of anesthesia (...) She cannot use any medication, she cannot use an anesthetic procedure because everything goes to the transplacental barrier ... and can affect the baby (ENF12).*

When questioned about how they believe the prevention of oral diseases occurs, the statements demonstrate the valuation of health education, which reinforces the nurse's educator and caregiver role.

*We have a very serious problem regarding oral health. First, it is a community that did not have any guideline regarding the issue of how to care. And there is another aspect that there are people who do not use toothbrush, ... sometimes the brush is communal. Flossing is a practice they also do not adhere ... Then, we seek to correct through our guidance (ENF5).*

*Look, good diet, good brushing, is even utopian, but at least go to the dentist once a year [laughs] (ENF12).*

*Regarding lectures and guidelines, I talk a lot with health agents about this so that they can take it to their area (ENF1).*

### Demand and Supply

Despite the lack of specific questioning about the demand and practice of dental care in the city, this theme was recurrent in the interviewees' speeches. Access to dental care during pregnancy is full of barriers, including lack of information and access to health services, as reproduced below:

*They hardly search for dental services because they complain about the issue that they did not have the dentist, which was scheduled to occur far ahead. The delayed care makes them quit very easily (ENF5). We have some vacancies reserved for pregnant women in which we, in the prenatal consultation, evaluate and forward, but when they get there, there is no material. Therefore, the consultation is not scheduled because there is the dentist but there is no material (...) It is not easy to get an appointment with a dentist at the SUS ... Because when there is no professional, there is no material and when there is the dentist and the material, there is no vacancy. The demand is very large (ENF12).*

*I will not tell you that it is guaranteed that all will have their consultation because it is a very big demand, right, so there is a very repressed demand in Dentistry (ENF10).*

*What was routine, passing by the doctor, the nurse, the dentist, is no longer occurring (ENF2).*

From the speeches analyzed, it was observed that nurses believe that it is necessary to expand the offer of dental care services and the presence of dentists in health teams:

*We do not have dentists in the team, so we do not have in the region where we work no near unit. In order to do it, they [patients] have to move far to be able to go to the nearest unit, which is our reference. Then she ends up by giving up (ENF5).*

*There is no dentist in our team. Then we just send them to do prevention. They receive [dental care], but it is once during the prenatal care, due to this issue of referral. If we had the service here, I think the service would be better, right? (ENF6).*

*It has a little delay. It is not fast, because they will have to go to another unit, take buses, and the strategy had to have the Dentistry service (ENF6).*

## Discussion

The National Policy for Integral Care to Women's Health states that the health network must be capable of providing women's care both to promotion issues and to the resolution of health needs and control of the most prevalent pathologies [17]. The nurses' speeches revealed high frequency of complaints about oral diseases in the population of pregnant women.

Some of these speeches; however, showed lack of comprehension regarding the concept of "oral health" or "oral problems", as some professionals define oral health as a morphological alteration, the difference between normal and pathological, which normally is materialized through the visual identification of dental caries or the symptomatology complaint (toothache).

This perception differs from the concept of Oral Health advocated by the World Health Organization (WHO), because it emphasizes that oral health is more than having healthy teeth: it corresponds to the set of actions such as talking, chewing, swallowing, smiling, kissing; that is, biological and psychological conditions that enable the individual to perform physiological functions and that, due to the aesthetic dimension of the region, allow the individual to socially relate without embarrassment and preserve self-esteem [18].

It is possible to perceive that some of the interviewed nurses understand this relationship well and the integration of knowledge is fundamental in prenatal care, since professionals who make up the health team must adopt a multidisciplinary attitude to promote health actions not only as a strategy for intervention during diseases, but also for prevention and control [19].



In this sense, it is imperative to disseminate oral health concepts to all professionals in order to qualify and sensitize health teams about the benefits of the communication process between different areas to contribute to the autonomy and engagement of people in the preservation of good health habits [17,19].

In this context, nursing in primary care is important as it guarantees the extension of prenatal coverage, since the nurse is generally responsible for the first prenatal visit and for the monitoring of pregnancy in SUS [20]. As one of the duties of nurses, advocated by the Ministry of Health, is to identify risk factors or cases of vulnerability, such as some oral pathologies and to provide pregnant women with information about signs of risk and assistance in each case, there is need for dental care cited in thematic core two [15].

However, sometimes, the network flow is hampered by the logistics of the reference and counter-reference system, according to the results of this thematic core. After all, the failure of the counter-reference interrupts the care during the pregnancy-puerperal period, because the service loses contact with the pregnant woman, who, in turn, lacks the necessary attention. Some authors reported that one of the main problems for real optimization of the system is the lack of written records coming from reference services [21]. On the other hand, effective practice results in faster care, avoids repeated actions at different levels of care, and minimizes the risk of gaps [21].

Historically, dentistry practices were developed mainly between four walls and reduced to the performance of the dentist and his dental apparatus [22]. Perhaps because of this history, most nurses revealed doubts about dental care during pregnancy.

The speeches of some interviewees presented reductionist character of dental prenatal care, which is not limited to curative procedures, extractions or procedures that require anesthesia. On the contrary, several other questions are also analyzed during pregnancy.

A previous study showed that future oral problems of the infant can be prevented with prenatal dentistry, since the pregnant woman receives information about the importance of breastfeeding for the development of the stomatognathic system and about deleterious sucking habits that can generate incorrect biting, swallowing, breathing and phonation patterns [23].

Therefore, according to the Ministry of Health, dentists should verify the filling of the pregnant woman's card; request exams; evaluate the general and oral status of the pregnant woman; identify risk factors; refer high-risk pregnant women to the referral service; develop educational activities and guidelines on the importance of prenatal care, breastfeeding, vaccination, healthy eating, hygiene habits, among others [15]. In this way, the dental practice is of a greater magnitude than that predicted by interviewees.

Some interviewees are unaware that curative dental treatment can (and should) be ruled by appropriate procedures and medication for each trimester. The first trimester is a period of special care with medications and x-rays, but very appropriate for biofilm control; the second trimester is the most suitable for treatment; and the third is the period of greatest discomfort in the dental chair and the higher occurrence of hypertension and anemia, and the professional should evaluate the



characteristics of each individual patient [11,22]. Tooth extraction and surgery are not contraindicated - but the possibility of carrying out such procedures after delivery should be evaluated - and anesthesia is not prohibitive, provided that the correct substance is used, such as lidocaine-based anesthesia [11,22].

Regarding prevention, speeches of thematic core 3 demonstrate the valuation of health education, which shows that nurses are potential partners for the exchange of knowledge and the development of interdisciplinary actions.

The reports presented in thematic core four are in accordance with some authors discuss regarding free access of the population to health services still be a challenge in SUS [24], mainly due to the repressed demand, the distances between homes and health units, the precariousness of services and the obstacles of the reference and counter-reference system in almost all Brazilian territory, which is linked to geographic and socio-organizational characteristics - availability, and quality of consultations, equipment, availability of medications, schedules and professionals [17,24].

It is the Ministry of Health protocol to refer all pregnant women to the dentist, as the interviewees know and ratify [15]. However, access to dental care during pregnancy is full of barriers, including lack of information and access to health services. The "Always Vacant for Pregnant and Babies" regulation system often encounters the system's difficulties in absorbing them, mainly due to the huge demand for dental services, which generates long queues and a long interval between consultation scheduling and the date of care, according to speeches of nurses in the last thematic core.

The high rate of suppressed demand for dental services is probably due to the high occurrence of curative needs explained by the healthcare debt that the population has undergone throughout history, as well as the low coverage of oral health teams, health promotion and education. That is, the supply is insufficient to meet a demand that has always had difficulty accessing oral health services, keeping many users excluded from the system [25].

This is because Belém, for example, is the 11<sup>th</sup> largest city in Brazil and, despite the large population, in addition to the 29 BHU, there are 103 FHS teams in the municipality, of which only six have type I oral health teams [26,27].

In this context, it is urgent to expand the supply of oral health services, in quantity and quality, to at least one oral health team for each unit or family health team [25]. From the speeches analyzed, it is perceived that nurses corroborate this statement.

The issue of territorialization, which is foreseen by the National Policy on Basic Care (PNAB) and fundamental for the practical application of the concept of "non-peregrine pregnant woman", a principle of the "Cegonha" Network, is also evidenced in these statements [15,28]. This means that, for each defined territory, there should be a flow for users to walk through the health system to assist in the management of health demands and health needs in order to assure them full assistance [15,28].

In addition to the expanded view of the professional, the structuring of the network of care to the pregnant woman needs to work in fact and not only in compliance with policies, since these need to incorporate the dynamic concept of access and to focus the territorial issue as the main strategy to face social inequalities.

## Conclusion

Thus, it was observed that the nurses interviewed know prenatal protocols and their attributions as care actors and as the main responsible for the flow of care to pregnant women. The perception about oral health and dental care during pregnancy is incipient, but with great potential, a fact that shows the need for greater oral health coverage in the city, in addition to the incentive to multiprofessional work in the minimum qualification of care, in order to promote the health care of pregnant women in the public health system.

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