

Prenatal Oral Health Care

An Issue Brief from the Center for Oral Health



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About COH

Center for Oral Health (COH), founded in 1985, is a non-profit organization dedicated to promoting public oral health, with a focus on children and vulnerable populations. COH collaborates with national, state, and local partners to develop innovative community-based strategies for improving oral health outcomes. COH is located in Los Angeles County on the campus of Western University of Health Sciences.

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Introduction

Oral health care is an integral component to a woman's prenatal care during her pregnancy. While providing oral health care to a pregnant woman is important, educating them about prevention and treatment of dental caries and other oral diseases is essential for the overall health of the woman and her baby. Educating the providers can increase the likelihood that the message will reach the pregnant women. Patients are more likely to listen to their prenatal care professionals about the importance of oral health and seek dental care during their pregnancy. There needs to be a coordinated effort between the prenatal and oral health providers to devise a plan to incorporate dental care as an integral part of a pregnant woman's prenatal care.

Background

Good oral health and hygiene protects not only the pregnant woman's health but also protects her baby during her pregnancy. Controlling the oral disease of a pregnant woman can potentially reduce the transmission of pathogenic bacteria from the mother to her baby. It is the responsibility of both the prenatal and oral health provider to advise and encourage pregnant women to seek dental care as part of their prenatal care. It is especially a good opportunity for those women who do not normally have access to dental care since pregnancy is the only time some women are eligible for dental benefits through publicly funded programs (e.g., Medicaid).

Many obstetricians have not been trained to understand the relationship between oral health and overall health and therefore fail to refer their patients to dental providers. Many dentists withhold or delay treatment of pregnant women due to the preconceived notion that dental care

will potentially harm either the woman or the fetus. The lack of understanding about the impact and safety of dental care during pregnancy by prenatal and dental care providers alike hinder oral health care being provided to pregnant women.

A national consensus statement was developed through a joint effort by the American College of Obstetricians and Gynecologists and the American Dental Association in collaboration with the Maternal and Child Health Bureau, the Health Resources and Services Administration, and the U.S. Department of Health and Human Services. It serves as a guideline to both prenatal care professionals and oral health care professionals to provide oral health treatment and education. By combining efforts, the overall health of a pregnant woman can greatly improve, not only during pregnancy, but also in her future as well as the future health of her baby.

Adverse Pregnancy Outcomes

There is a common misconception that receiving dental care can lead to certain complications with pregnancy, such as miscarriages and preterm birth. However, there is a growing body of literature that shows a link between not treating oral health problems and adverse pregnancy outcomes. APO may include miscarriage (spontaneous abortion), preterm birth, preeclampsia and gestational diabetes. While the factors which contribute to these complications are not fully understood, scientific research to date indicate that not receiving dental care during pregnancy can cause harm to the pregnant woman as well as her baby.



Key Findings/Research

Control of oral diseases in pregnant women has the potential to reduce the transmission of oral bacteria from the mother to the baby. According to the Journal of Periodontology; 2013, studies showed that periodontal pathogens may reach the placenta. The presence of the pathogens within the fetal circulation

and amniotic fluid can stimulate a fetal immune/inflammatory response characterized by the production of IgM antibodies and the secretion of elevated levels of inflammatory mediators. These types of response may cause miscarriage or premature birth. Also, preeclampsia may be caused by structural changes within the placenta due to the infection/inflammation caused by these pathogens

The Journal of Clinical Periodontology; 2013 identified two major pathways that have been proposed to trigger an inflammatory/immune response and/or suppression of local growth factors (such as IGF-2) in the fetal-placental unit (myometrium, membranes, amniotic fluid, placenta, fetal circulation and tissues).

Direct pathway

- (a) Oral microorganisms and/or their components reaching fetal-placental unit via hematogenous dissemination from oral cavity,
- (b) Oral microorganisms and/or their components reaching fetal-placental unit by an ascending route via genitourinary tract.

Indirect pathway

- (a) Inflammatory mediators locally produced in periodontal tissues, for example, PGE₂, TNF α , circulate and impact the fetal-placental unit,
- (b) Inflammatory mediators and/or microbial components circulate to the liver, enhancing cytokine production (e.g. IL-6) and acute phase protein responses (e.g. CRP), which then impact the fetal-placental unit.

Lower exposures may induce hyper contractility of the uterus, cervical dilation and loss of membrane integrity leading to pre-term delivery. Growth restriction and earlier pre-term delivery are associated with higher and/or earlier exposures. Even higher exposures may lead to spontaneous abortion, late miscarriage and stillbirth (Madianos et al. 2013).

Prenatal Care Professionals

Dental care should be incorporated as an integral part of a pregnant women's prenatal care. Prenatal care professionals should understand the importance of their role in encouraging pregnant women to seek dental care. They have the opportunity to provide information to pregnant women throughout their pregnancy since prenatal care is provided at regular intervals.

Prenatal care professionals should follow the steps outlined below to insure that their patient is well informed about the importance of oral health care.

- Educate the pregnant woman about the importance of her oral health, not only for her overall health, but also for the health of her baby.
- Advise the pregnant woman that dental care is highly beneficial and can be undertaken any time during pregnancy with no additional fetal or maternal risk as compared to not providing care.
- Inquire if she has any concerns/fears about getting dental care while pregnant. Inform her that dental care is safe during pregnancy and address specific concerns.
- Encourage all women at the first prenatal visit to schedule a dental examination if one has not been performed in the past six months, or if a new condition has developed or is suspected.
- Obtain or develop and maintain a list of community dental referral sources that will provide services for pregnant women, particularly for women enrolled in publicly funded programs (e.g., Medicaid).
- Share appropriate clinical information with the dental care professional and answer questions that he/she may ask about a patient or condition. There needs to be an open communication line between obstetricians and dentists.
- Encourage pregnant women to adhere to the dental care professional's recommendations for appropriate treatment and follow-up care for oral disease. It is important to show patients that obstetricians are in agreement with dentists.

Prenatal care professionals can also educate pregnant women and encourage behaviors that support good oral health. It is more likely to make an impact on the women if they hear it from their prenatal care provider as well as their dental provider. The list of recommendations includes:

- Brushing teeth twice daily with fluoridated toothpaste, especially before bedtime, and flossing daily.
- Taking prenatal vitamins, including folic acid to reduce the risk of birth defects such

as cleft lip and palate, and eating foods high in protein, calcium, phosphorus and vitamins A, C and D.

- Chewing xylitol-containing gum or other xylitol-containing products, four to five times a day, after eating.
- Not delaying necessary dental treatment.
- Limiting foods containing fermentable carbohydrates—sugars (including fruit sugars), cookies, crackers, chips—to mealtimes only. Frequent between-meal consumption of these foods increases caries risk.
- Limiting drinking juice, soda, sports drinks or carbonated drinks between meals. These drinks contain sugar that can cause caries.



For those pregnant women experiencing frequent nausea and vomiting, special recommendations are advised in order to reduce erosion of tooth surfaces. The list of recommendations include:

- Eating small amounts of nutritious yet non-cariogenic food (snacks rich in protein, such as cheese) throughout the day.
- Using a teaspoon of baking soda (sodium bicarbonate) in a cup of water to rinse and spit after vomiting, avoiding tooth brushing directly after vomiting as the effect of erosion can be exacerbated by brushing an already demineralized tooth surface.
- Using gentle tooth brushing and fluoride toothpaste twice daily to prevent damage to demineralized tooth surfaces.
- Using a fluoride-containing mouth rinse/or MI paste immediately before bedtime to help remineralize teeth.

About the Author

Dr. Shirley Kang received her Bachelor of Sciences in Biochemistry and Cell Biology from University of California, San Diego. She then worked for Stanford University Medical School, PAN Facility as a DNA sequence analyst before attending dental school.

In 2007, Dr. Kang received her DDS degree from University of Southern California, Ostrow School of Dentistry where she received the John Ingle Award for Excellence in Basic Sciences for her research in Tissue Regeneration. She became an associate at a private practice in Anaheim as well as teaching part time at USC.

She joined Western University College of Dental Medicine as a part-time faculty in 2010 and decided to become full time in 2011. She is currently an assistant professor and a clinical team leader faculty.

Dr. Kang is a member of ADA, CDA and TCDS. She is also affiliated is Korean American Dental Association and American Association of Women Dentists.

Dental Care Professionals

Dental care professionals must stay educated on the current stance that the benefits of providing dental care during pregnancy far outweigh the potential risks according to knowledge of maternal and fetal physiology.

Prevention, diagnosis and treatment of oral diseases, including needed dental radiographs and use of local anesthesia, are highly beneficial and can be undertaken during pregnancy with no additional fetal or maternal risk when compared to the risk of not providing care. The American Academy of Periodontology, for example, urges dental care professionals to provide preventive services as early in pregnancy as possible and to provide treatment for acute infection or sources of sepsis irrespective of the stage of pregnancy. The timing of such care is vital given that the oral health of pregnant women has the potential to impact the health status of their baby.

Dental care professionals should render all needed dental services to pregnant women, regardless of their stage in pregnancy. It is not necessary to have approval from the prenatal care provider for routine dental care of a healthy patient. They should also be ready and willing to provide emergency/acute care at any time during pregnancy as indicated by oral condition.

Summary

Good oral health and hygiene is a vital part of the pregnant woman's overall health during her pregnancy and can protect both her and her baby's health. Prenatal care professionals play an important role in educating pregnant women to seek out dental care. Dental care professionals must put aside previous misconceptions about providing only minimal dental care to pregnant women. Both the prenatal and oral health providers share the responsibility of educating pregnant women. A coordinated effort between prenatal and oral health professionals helps ensure that oral health care is incorporated as an integral part of a pregnant woman's prenatal care.



The views expressed in this brief do not necessarily reflect the views of Center for Oral Health. This brief is a work in progress and/or is produced in parallel with other briefs contributing to other work or formal publications by Center for Oral Health. Comments are welcome. Please direct them to Dr. Conrado Barzaga at cbarzaga@tc4oh.org

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