Educational Curriculum on Perinatal and Infant Oral Health Care: Current Standards of Care for Dental and Dental Hygiene Students

Module 1 – Oral Health during Pregnancy

Acknowledgments

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Objectives

After viewing these resources students will be able to provide oral health education to women on the potential impact of dental infections on pregnancy, and the importance of preventive oral care and treatment services throughout pregnancy by:

1. Recognizing the need to establish optimal oral health prior to pregnancy.
2. Understanding the association between inflammatory response and adverse birth outcomes (i.e. low birth weight and pre-term delivery).
3. Identifying bacteria implicated in the inflammatory response system.
4. Understanding the association between maternal oral bacteria and dental caries risk to her child.
5. Providing dental care that is safe and ethical throughout all stages of pregnancy.

State of Oral Health of Pregnant Women in Wisconsin

To set the stage for this module, please review the current Pregnancy Risk Assessment Monitoring System or PRAMS data collected in 2014.

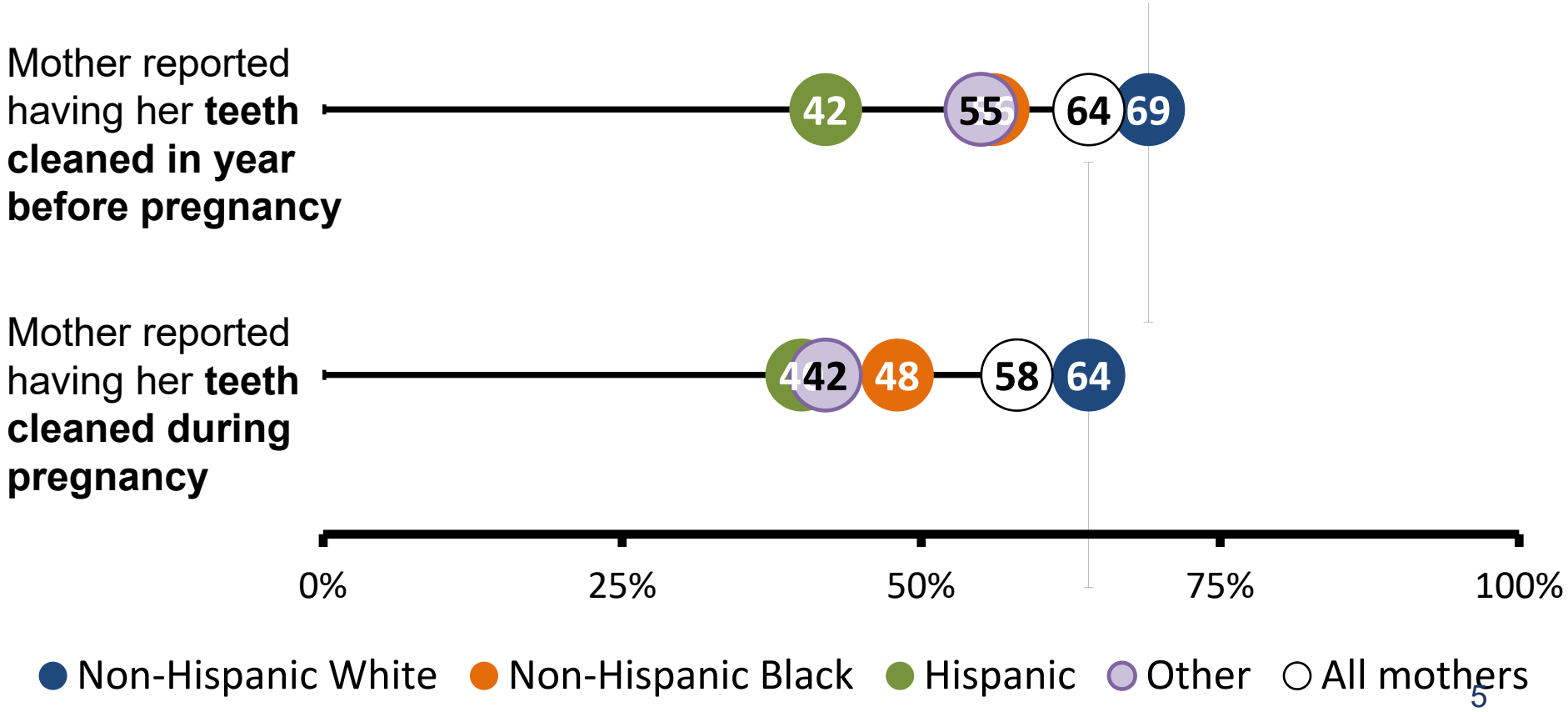
This is self reported data collected from postpartum women about experiences during their most recent pregnancy.

Results:

- **Mothers of minority race/ethnicity** were significantly less likely than non-Hispanic white mothers to have their teeth cleaned before and during pregnancy.
- **Mothers with public insurance** were significantly less likely to have their teeth cleaned before and during pregnancy.

Teeth Cleaning Before and During Pregnancy

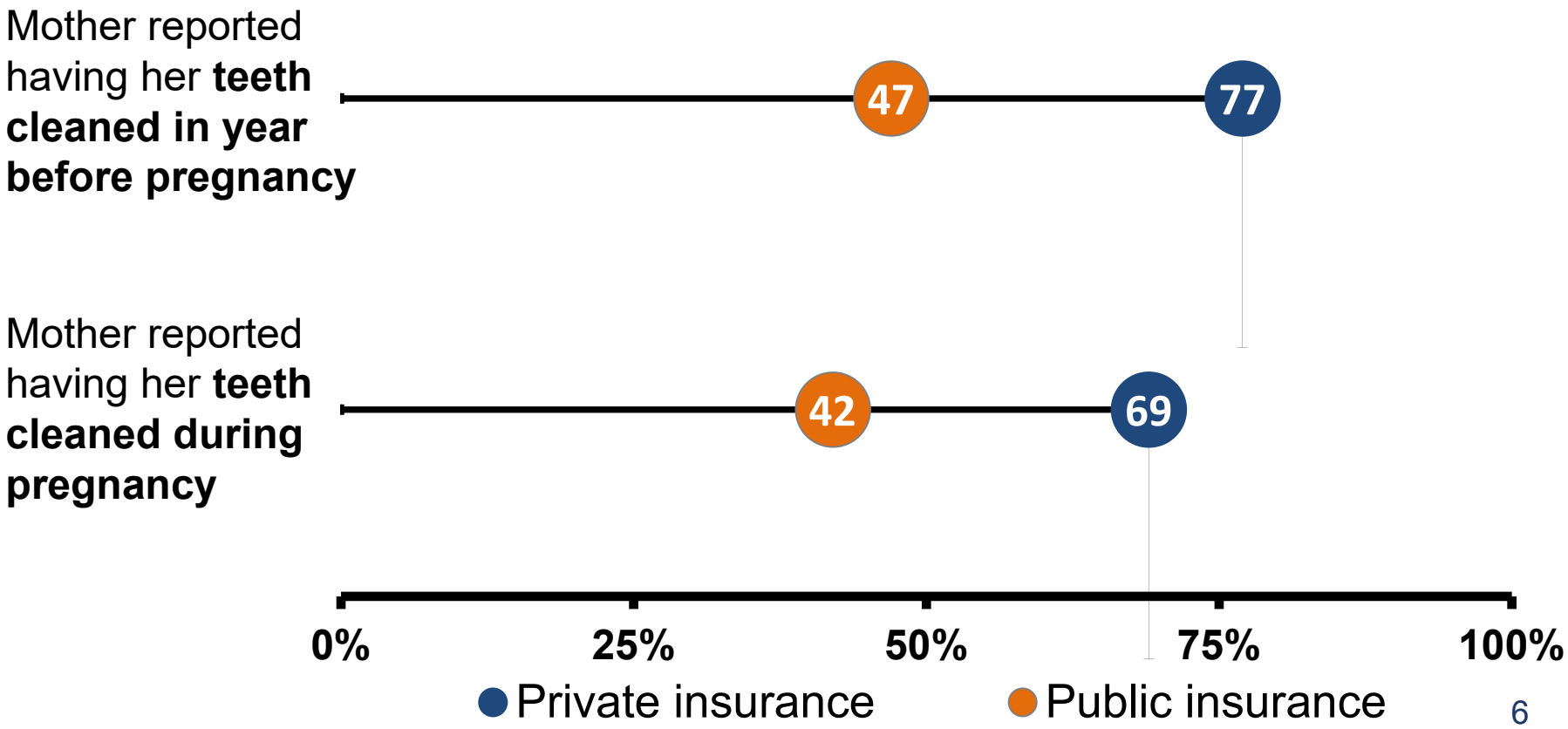
Mothers of minority race/ethnicity were significantly less likely than non-Hispanic white mothers to have their teeth cleaned before and during pregnancy.



Source: Wisconsin PRAMS 2014, Division of Public Health, Department of Health Services

Teeth Cleaning Before and During Pregnancy

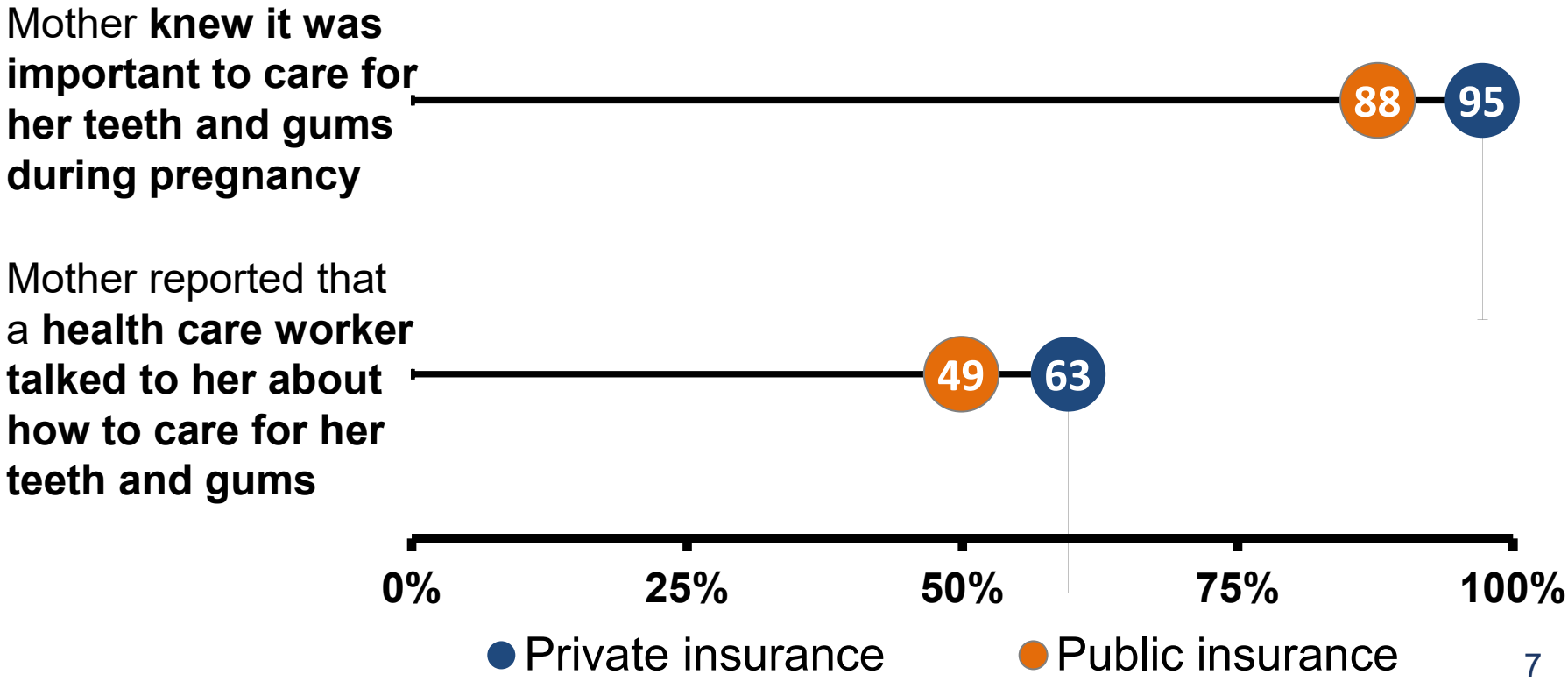
Mothers with public insurance were significantly less likely to have their teeth cleaned before and during pregnancy.



Source: Wisconsin PRAMS 2014, Division of Public Health, Department of Health Services

Oral Health Care Education during Pregnancy

Mothers with public insurance were less likely to report knowing the importance of caring for their teeth and gums and having a healthcare worker talk to them about it.



Source: Wisconsin PRAMS 2014, Division of Public Health, Department of Health Services

Activity 1 – Smiles for Life Curriculum

The Smiles for Life curriculum consists of eight 45-minute modules covering core areas of oral health relevant to health professionals. User competencies are measured through assessments at course completion. Users must score an 80% or higher to receive credit for each course.

- **Complete Course 5: Oral Health and the Pregnant Patient**
  www.smilesforlifeoralhealth.org

How to register for Smiles for Life

Register for Smiles for Life

- Registration will allow you to:
  - Take the end of course assessment.
  - Receive the certificate of completion.
  - Return to complete additional courses.
- Write down your login and password for future course access.

Source: Clark MB, Douglass AB, Maier R, Deutchman M, Douglass JM, Gonsalves W, Silk H, Tysinger JW, Wrightson AS, Quinonez R, Dolce M, Bowser J. Smiles for Life: A National Oral Health Curriculum. 3rd Edition. Society of Teachers of Family Medicine. 2010 www.smilesforlifeoralhealth.com.

Activity 1 – Assessment

- In **Course 5: Oral Health and the Pregnant Patient** complete the 'Post Assessment', print the certificate of completion and provide a copy to your instructor.

Post Assessment

A required assessment will be given at the end of the course. **If you score less than 80% correct, you will need to go back and retake it before receiving credit.**

- Complete questions # 1-11 in the case study guide.

Optional Clinical Cases

We recommend you complete the optional clinical cases. Launch buttons for each are located at the start of the chapter that corresponds with that case. You can also open these cases at any time by clicking the links that will appear at the top of each page. Each clinical case opens in its own window.

Student Version

Pregnancy Case Study Photos

Instructor Answer Guide

Activity 2 – Article Review

- Read the four articles described and accessed on the following slides.
- Complete **two** assessment activities described on slide 17.

“Periodontal Infection as a Possible Risk Factor for Preterm Low Birth Weight”

https://onlinelibrary.wiley.com/doi/abs/10.1902/jop.1996.67.10s.1103

Periodontal Infection as a Possible Risk Factor for Preterm Low Birth Weight

Steven Offenbacher, Vern Katz,† Gregory Fertik,* John Collins,* Doryck Boyd,*‡ Gayle Maynor,* Rosemary McKaig,* and James Beck**

PERIODONTAL DISEASES ARE GRAM-NEGATIVE ANAEROBIC INFECTIONS that can occur in women of childbearing age (18 to 34 years). In the present investigation we sought to determine whether the prevalence of maternal periodontal infection could be associated with preterm low birth weight (PLBW), controlling for known risk factors and potential covariates. A case-control study of 124 pregnant or postpartum mothers was performed. PLBW cases were defined as a mother with a birth of less than 2,500 g and one or more of the following: gestational age <37 weeks, preterm labor (PTL), or premature rupture of membranes (PROM). Controls were normal birth weight infants (NBW). Assessments included a broad range of known obstetric risk factors, such as tobacco use, drug use, alcohol consumption, level of prenatal care, parity, genitourinary infections, and nutrition. Each subject received a periodontal examination to determine clinical attachment level. PLBW cases and primiparous PLBW cases (n = 93) had significantly worse periodontal disease than the respective NBW controls. Multivariate logistic regression models, controlling for other risk factors and covariates, demonstrated that periodontal disease is a statistically significant risk factor for PLBW with adjusted odds ratios of 7.9 and 7.5 for all PLBW cases and primiparous PLBW cases, respectively. These data indicate that periodontal diseases represent a previously unrecognized and clinically significant risk factor for preterm low birth weight as a consequence of either PTL or preterm PROM. *J Periodontol 1996;67: 1103–1113.*

Key Words: Infant, low birth weight; periodontal diseases/adverse effects; pregnancy; risk factors; infant, premature.

Preterm infants who are born with low birth weights (LBW, i.e. <2,500 g) represent a major social and economic public health problem, even in industrialized nations. Although there has been an overall decline in infant mortality in the United States over the past 40 years, preterm LBW remains a significant cause of perinatal mortality and morbidity. A 47% decrease in the infant mortality rate to a level of 13.1 per 1,000 live births occurred between 1965 and 1980,[1] but that rate has not significantly improved over the last decade. Most of the evidence indicates that the most recent decline in infant mortality largely can be attributed to increased survival of low birth weight infants, as a result of more intensive hospital-based management of LBW infants.[2,3] While there has been a decrease in infant mortality over the last 40 years, there has been minimal decline in the incidence of LBW. In the U.S., approximately one in 10 deliveries results in a preterm LBW (PLBW) infant, usually as a direct consequence of preterm labor (PTL) or premature rupture of membranes (PROM).[4] More than 60% of the mortality that occurs among infants without anatomic or chromosomal congenital defects is attributable to preterm LBW.[2] These infants account for 5 million neonatal intensive care unit hospital days per year at an annual cost of greater than $5 billion.[3] The overall cost to society in terms of suffering and long-term disabilities, however, far exceeds these monetary estimates. Most long-term disability cases, for example, begin as low birth weight infants. Thus, the emotional, psychological, and financial burdens on families who experience PLBW can have profound and long-term consequences on society. To address this problem, some feel more emphasis should be placed on prevention rather than costly tertiary care.[5] McCormick[2] states, “the decline in neonatal mortality will be sustained only through the prevention of low-weight births and increased attention to the efficacy of services

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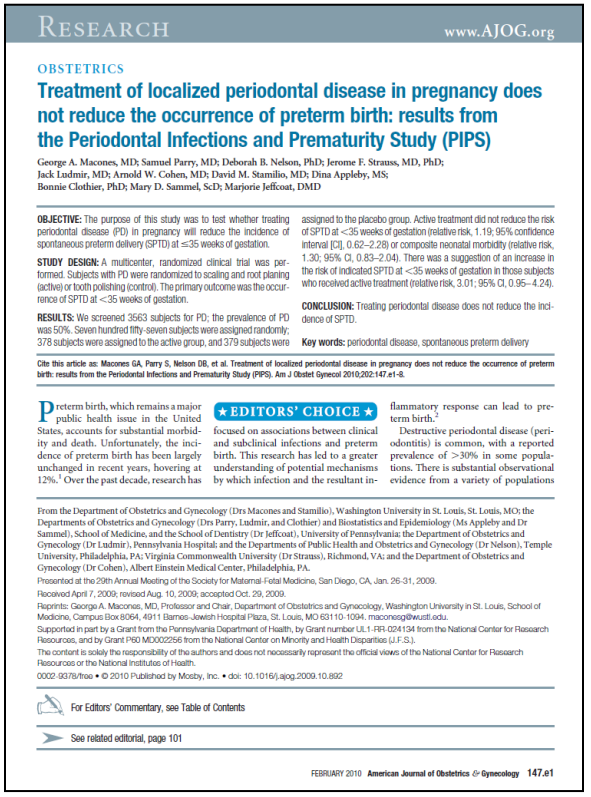
‡School of Dentistry, Meharry Medical College, Nashville, TN.

Source: Offenbacher et.al. *Periodontal Infection as a Possible Risk Factor for Preterm Low Birth Weight*. J Periodontol 1996;67:1103-1113.

“Treatment of localized periodontal disease in pregnancy does not reduce the occurrence of preterm birth: results from the Periodontal Infections and Prematurity Study (PIPS)”

https://www.sciencedirect.com/science/article/pii/S0002937809021188



RESEARCH www.AJOG.org

OBSTETRICS

Treatment of localized periodontal disease in pregnancy does not reduce the occurrence of preterm birth: results from the Periodontal Infections and Prematurity Study (PIPS)

George A. Macones, MD; Samuel Parry, MD; Deborah B. Nelson, PhD; Jerome F. Strauss, MD, PhD; Jack Ludmir, MD; Arnold W. Cohen, MD; David M. Stamilio, MD; Dina Appleby, MS; Bonnie Clothier, PhD; Mary D. Sammel, ScD; Marjorie Jeffcoat, DMD

OBJECTIVE: The purpose of this study was to test whether treating periodontal disease (PD) in pregnancy will reduce the incidence of spontaneous preterm delivery (SPTD) at ≤35 weeks of gestation.

STUDY DESIGN: A multicenter, randomized clinical trial was performed. Subjects with PD were randomized to scaling and root planing (active) or tooth polishing (control). The primary outcome was the occurrence of SPTD at <35 weeks of gestation.

RESULTS: We screened 3563 subjects for PD; the prevalence of PD was 50%. Seven hundred fifty-seven subjects were assigned randomly; 378 subjects were assigned to the active group, and 379 subjects were assigned to the placebo group. Active treatment did not reduce the risk of SPTD at <35 weeks of gestation (relative risk, 1.19; 95% confidence interval [CI], 0.62–2.28) or composite neonatal morbidity (relative risk, 1.30; 95% CI, 0.83–2.04). There was a suggestion of an increase in the risk of indicated SPTD at <35 weeks of gestation in those subjects who received active treatment (relative risk, 3.01; 95% CI, 0.95–4.24).

CONCLUSION: Treating periodontal disease does not reduce the incidence of SPTD.

Key words: periodontal disease, spontaneous preterm delivery

Cite this article as: Macones GA, Parry S, Nelson DB, et al. Treatment of localized periodontal disease in pregnancy does not reduce the occurrence of preterm birth: results from the Periodontal Infections and Prematurity Study (PIPS). Am J Obstet Gynecol 2010;202:147.e1-8.

Preterm birth, which remains a major public health issue in the United States, accounts for substantial morbidity and death. Unfortunately, the incidence of preterm birth has been largely unchanged in recent years, hovering at 12%.[1] Over the past decade, research has

★EDITORS' CHOICE★

focused on associations between clinical and subclinical infections and preterm birth. This research has led to a greater understanding of potential mechanisms by which infection and the resultant inflammatory response can lead to preterm birth.[2]

Destructive periodontal disease (periodontitis) is common, with a reported prevalence of >30% in some populations. There is substantial observational evidence from a variety of populations

From the Department of Obstetrics and Gynecology (Drs Macones and Stamilio), Washington University in St. Louis, St. Louis, MO; the Departments of Obstetrics and Gynecology (Drs Parry, Ludmir, and Clothier) and Biostatistics and Epidemiology (Ms Appleby and Dr Sammel), School of Medicine, and the School of Dentistry (Dr Jeffcoat), University of Pennsylvania; the Department of Obstetrics and Gynecology (Dr Ludmir), Pennsylvania Hospital; and the Departments of Public Health and Obstetrics and Gynecology (Dr Nelson), Temple University, Philadelphia, PA; Virginia Commonwealth University (Dr Strauss), Richmond, VA; and the Department of Obstetrics and Gynecology (Dr Cohen), Albert Einstein Medical Center, Philadelphia, PA.

Presented at the 29th Annual Meeting of the Society for Maternal-Fetal Medicine, San Diego, CA, Jan. 26-31, 2009.

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Reprints: George A. Macones, MD, Professor and Chair, Department of Obstetrics and Gynecology, Washington University in St. Louis, School of Medicine, Campus Box 8064, 4911 Barnes-Jewish Hospital Plaza, St. Louis, MO 63110-1094. maconesg@wustl.edu.

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The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Center for Research Resources or the National Institutes of Health.

0002-9378/free • © 2010 Published by Mosby, Inc. • doi: 10.1016/j.ajog.2009.10.892

For Editors' Commentary, see Table of Contents

See related editorial, page 101

Source: Macones GA, Parry S, Nelson DB, et al. *Treatment of localized periodontal disease in pregnancy does not reduce the occurrence of pretermbirth: results from the Periodontal Infections and Prematurity Study (PIPS).* Am J Obstet Gynecol 2010;202:147.e1-8.

“Periodontal disease treatment does not affect pregnancy outcomes”

https://jada.ada.org/article/S0002-8177(14)60094-5/fulltext

ORIGINAL CONTRIBUTIONS

CRITICAL SUMMARIES

Periodontal disease treatment does not affect pregnancy outcomes

A critical summary of Chambrone L, Pannuti CM, Guglielmetti MR, Chambrone LA. Evidence grade associating periodontitis with preterm birth and/or low birth weight, II: a systematic review of randomized trials evaluating the effects of periodontal treatment. J Clin Periodontol 2011;38(10):902-914.

David Leader, DMD, MPH

Systematic review conclusion. Periodontal disease treatment does not lower the risk of preterm birth, low birth weight or both.
Critical summary assessment. Although periodontal disease treatment is recommended during pregnancy, the results of a systematic review of 13 randomized controlled clinical trials, for which a meta-analysis was conducted in 11 of the trials, do not indicate that there is a lower risk of preterm birth or low birth weight.
Evidence quality rating. Good.

Clinical question. For live births to women who have gingivitis or periodontitis, does periodontal disease treatment (PDT) compared with no treatment reduce the incidence of preterm birth (PB), low birth weight (LBW) or both?

Review methods. The authors searched three databases—including one that incorporated references from the gray literature—and hand searched reference lists for randomized controlled clinical trials (RCTs) that involved pregnant patients diagnosed with periodontal disease on the basis of a clinical or radiographic examination. The RCTs' investigators reported the number, percentage or means for PB, LBW or both for live and single births for pregnant women with and without PDT. The systematic review (SR) authors investigated the methodological quality of the included studies by using the Cochrane Collaboration's tool for assessing the risk of bias, and they considered method of randomization, allocation criteria, whether the examiners were masked and completeness of the follow-up.[1]

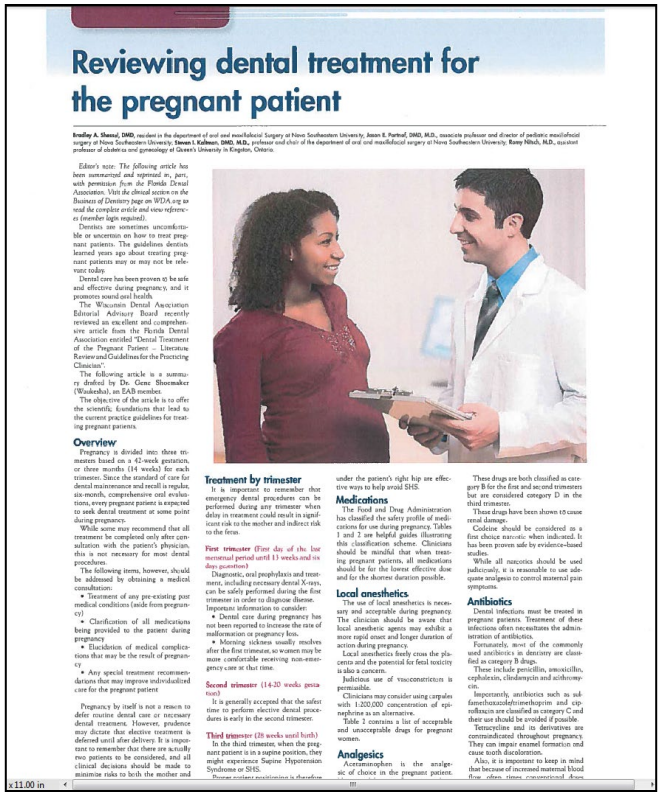
Main results. The SR included 13 trials. A total of 7,107 women were screened or enrolled in the trials, and 6,813 participants completed the trials. Investigators in eight of the trials (61.5 percent) reported that maternal periodontal disease treatment (MPDT) may reduce the incidence of adverse pregnancy outcomes such as PB, LBW or both. The investigators in the other trials did not support that statement. The results of meta-analyses in 11 of the trials showed that PDT had little to no effect on pregnancy outcomes.

Conclusions. Although the results of more than one-half of the included trials show that PDT had a positive effect on PB, LBW or both, the results of meta-analyses in 11 of the trials showed little or no effect.

The authors of the systematic review reported that they received no financial support.

Source: Leader, David. Periodontal disease treatment does not affect pregnancy outcomes. Journal of the American Dental Association 2014;145(7):757-759.

“Reviewing dental treatment for the pregnant patient”



Reviewing dental treatment for the pregnant patient

Bradley A. Shessel, DMD, resident in the department of oral and maxillofacial Surgery at Nova Southeastern University; **Jason E. Partnaf, DMD, M.D.**, associate professor and director of pediatric maxillofacial surgery at Nova Southeastern University; **Steven I. Kaltman, DMD, M.D.**, professor and chair of the department of oral and maxillofacial surgery at Nova Southeastern University; **Ronny Nitsch, M.D.**, assistant professor of obstetrics and gynecology at Queen's University in Kingston, Ontario.

Editor's note: The following article has been summarized and reprinted in, part, with permission from the Florida Dental Association. Visit the clinical section on the Business of Dentistry page on WDA.org to read the complete article and view references (member login required).

Dentists are sometimes uncomfortable or uncertain on how to treat pregnant patients. The guidelines dentists learned years ago about treating pregnant patients may or may not be relevant today.

Dental care has been proven to be safe and effective during pregnancy, and it promotes sound oral health.

The Wisconsin Dental Association Editorial Advisory Board recently reviewed an excellent and comprehensive article from the Florida Dental Association entitled "Dental Treatment of the Pregnant Patient — Literature Review and Guidelines for the Practicing Clinician".

The following article is a summary drafted by Dr. Gene Shoemaker (Waukesha), an EAB member.

The objective of the article is to offer the scientific foundations that lead to the current practice guidelines for treating pregnant patients.

Overview

Pregnancy is divided into three trimesters based on a 42-week gestation, or three months (14 weeks) for each trimester. Since the standard of care for dental maintenance and recall is regular, six-month, comprehensive oral evaluations, every pregnant patient is expected to seek dental treatment at some point during pregnancy.

While some may recommend that all treatment be completed only after consultation with the patient's physician, this is not necessary for most dental procedures.

The following items, however, should be addressed by obtaining a medical consultation:

- Treatment of any pre-existing post medical conditions (aside from pregnancy)
- Clarification of all medications being provided to the patient during pregnancy
- Elucidation of medical complications that may be the result of pregnancy
- Any special treatment recommendations that may improve individualized care for the pregnant patient

Pregnancy by itself is not a reason to defer routine dental care or necessary dental treatment. However, prudence may dictate that elective treatment is deferred until after delivery. It is important to remember that there are actually two patients to be considered, and all clinical decisions should be made to minimize risks to both the mother and

Treatment by trimester

It is important to remember that emergency dental procedures can be performed during any trimester when delay in treatment could result in significant risk to the mother and indirect risk to the fetus.

First trimester (First day of the last menstrual period until 13 weeks and six days gestation)

Diagnostic, oral prophylaxis and treatment, including necessary dental X-rays, can be safely performed during the first trimester in order to diagnose disease. Important information to consider:

- Dental care during pregnancy has not been reported to increase the rate of malformation or pregnancy loss.
- Morning sickness usually resolves after the first trimester, so women may be more comfortable receiving non-emergency care at that time.

Second trimester (14-20 weeks gestation)

It is generally accepted that the safest time to perform elective dental procedures is early in the second trimester.

Third trimester (28 weeks until birth)

In the third trimester, when the pregnant patient is in a supine position, they might experience Supine Hypotension Syndrome or SHS.

Supine patient positioning is therefore under the patient's right hip are effective ways to help avoid SHS.

Medications

The Food and Drug Administration has classified the safety profile of medications for use during pregnancy. Tables 1 and 2 are helpful guides illustrating this classification scheme. Clinicians should be mindful that when treating pregnant patients, all medications should be for the lowest effective dose and for the shortest duration possible.

Local anesthetics

The use of local anesthetics is necessary and acceptable during pregnancy. The clinician should be aware that local anesthetic agents may exhibit a more rapid onset and longer duration of action during pregnancy.

Local anesthetics freely cross the placenta and the potential for fetal toxicity is also a concern.

Judicious use of vasoconstrictors is permissible.

Clinicians may consider using carpules with 1:200,000 concentration of epinephrine as an alternative.

Table 2 contains a list of acceptable and unacceptable drugs for pregnant women.

Analgesics

Acetaminophen is the analgesic of choice in the pregnant patient.

These drugs are both classified as category B for the first and second trimesters but are considered category D in the third trimester.

These drugs have been shown to cause renal damage.

Codeine should be considered as a first choice narcotic when indicated. It has been proven safe by evidence-based studies.

While all narcotics should be used judiciously, it is reasonable to use adequate analgesia to control maternal pain symptoms.

Antibiotics

Dental infections must be treated in pregnant patients. Treatment of these infections often necessitates the administration of antibiotics.

Fortunately, most of the commonly used antibiotics in dentistry are classified as category B drugs.

These include penicillin, amoxicillin, cephalexin, clindamycin and azithromycin.

Importantly, antibiotics such as sulfamethoxazole/trimethoprim and ciprofloxacin are classified as category C and their use should be avoided if possible.

Tetracycline and its derivatives are contraindicated throughout pregnancy. They can impair enamel formation and cause tooth discoloration.

Also, it is important to keep in mind that because of increased maternal blood

Source: Shessel, B., Partnaf, J., Kaltman, S., Nitsch, R. (2014). *Reviewing dental treatment for the pregnant patient*. Wisconsin Dental Association Journal 2014: September Issue: 8-9.

Activity 2 – Assessment

Reflect on key concepts presented in the articles by completing **two** of the following activities:

- Create a Venn Diagram comparing and contrasting the main outcomes of 2 of the articles. Include how the key points and outcomes are similar, different and areas that overlap.
- Find another article on the topic and provide a 1 page summary. Include key points and describe how they support, rebuke or provide new evidence to support current practice guidelines.
- Interview a current provider on their clinical experience providing care to pregnant women and reflect on how this aligns with the articles.
- Complete a 1 page summary of the key concepts presented in the 4 articles. Include what was new information to you, what was most interesting and any questions you have about the information.

Activity 3 – Perinatal Guidelines

- Read the perinatal guidelines, produced by three professional organizations, described and accessed on the following slides.
- Choose **one** assessment activity described on slide 22 to complete.

“Guidelines on Perinatal and Infant Oral Health Care”

American Academy of Pediatric Dentistry (AAPD)

https://www.aapd.org/globalassets/media/policies_guidelines/bp_perinataloralhealthcare.pdf

REFERENCE MANUAL V 40 / NO 6 18 / 19

Perinatal and Infant Oral Health Care

Review Council
Council on Clinical Affairs

Latest Revision
2016

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) recognizes that perinatal and infant oral health are the foundations upon which preventive education and dental care must be built to enhance the opportunity for a child to have a lifetime free from preventable oral disease. Recognizing that dentists, physicians, allied health professionals, and community organizations must be involved as partners to achieve this goal, the AAPD proposes guidelines for perinatal and infant oral health care, including caries risk assessment, anticipatory guidance, preventive strategies, and therapeutic interventions, to be followed by the stakeholders in pediatric oral health.

Method

Recommendations on perinatal and infant oral health care were developed by the Infant Oral Health Subcommittee of the Clinical Affairs Committee and adopted in 1986. The *Guideline on Perinatal Oral Health Care* was originally developed by the Infant Oral Health Subcommittee of the Council on Clinical Affairs and adopted in 2009. This document is a merger and an update of the previous versions, revised in 2014 and 2011 respectively. This revision included a search of the PubMed®/MEDLINE database using the terms: infant oral health, infantoral health care, early childhood caries, perinatal, perinatal oral health, and early childhood caries prevention; fields: all; limits: within the last 10 years, humans, English, and clinical trials. Papers for review were chosen from the resultant list of articles and from references within selected articles and hand searches of the literature. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

Dental caries, consequences, and management

The Centers for Disease Control and Prevention reports that dental caries is the most prevalent chronic disease in our nation's children.[1] More than 28 percent of children have caries by the time they reach kindergarten.[2] Epidemiologic data from a 2011-2012 national survey clearly indicate that early childhood caries (**ECC**) remains highly prevalent in poor and near poor U.S. preschool children. For the overall population of preschool children, the prevalence of ECC, as measured by decayed and filled tooth surfaces (**dfs**), is unchanged from previous surveys, but the filled component (**fs**) has greatly increased indicating that more treatment is being provided.[3]

ECC and the more severe form of ECC (i.e., s-ECC) begin soon after tooth eruption, developing on all surfaces of primary teeth, progressing rapidly, and having a lasting detrimental impact on the dentition.[4,5] This disease affects the general population, but is 32 times more likely to occur in infants who are of low socioeconomic status, who consume a diet high in sugar, and whose mothers have a low education level.[6-8] The consequences of ECC often include higher risk of new carious lesions in both the primary and permanent dentitions[4,9,10] hospitalizations and emergency room visits,[11,12] high treatment costs,[13] loss of school days,[14] diminished ability to learn,[15] and reduced oral health-related quality of life.[16]

It has been reported that 89 percent of children age one year had an office-based physician visit, compared with only 1.5 percent who had a dental office visit.[17] In a recent study, 99 percent of Medicaid-enrolled children had well baby visits before age one, whereas only two percent had a dental visit.[18] Since medical health care professionals see new mothers and infants earlier and more often than dentists, it is essential that they be aware of the multifactorial etiology and associated risk factors of ECC, give appropriate counseling regarding ECC prevention to pregnant women and caregivers, and facilitate the establishment of a dental home.[19]

Because restorative care to treat ECC often requires the use of sedation and general anesthesia with associated high costs and possible health risks,[20] and because there is high recurrence of lesions subsequent to the procedures,[21] there is now more emphasis on prevention and arrestment of the disease processes to manage ECC. Approaches include methods that have been referred to as (1) chronic disease management, which includes patient engagement to facilitate preventive measures and temporary restorations to postpone advanced restorative care,[22] (2) active surveillance, which emphasizes careful monitoring of caries progression and establishment of a prevention program in children with incipient lesions,[23] and (3) interim therapeutic restorations (**ITR**) that temporarily restore teeth

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry. **ECC:** Early childhood caries. **dfs:** Decayed and filled tooth surfaces. **ITR:** Interim therapeutic restorations. **MI:** Motivational interviewing.

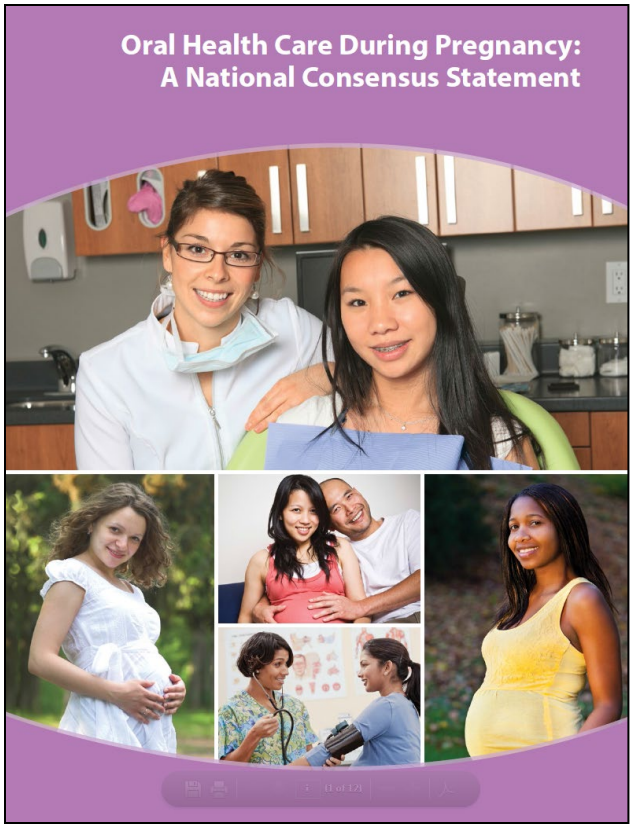
216 RECOMMENDATIONS: *BEST PRACTICES*

The American Academy of Pediatric Dentistry Council on Clinical Affairs. (2011). *Guidelines on Perinatal and Infant Oral Health Care*. References Manual Volume 40(6):18/19 pg:2016-220

“Oral Health Care During Pregnancy: A National Consensus Statement”

Oral Health Care During Pregnancy Expert Workgroup

https://www.mchoralhealth.org/PDFs/OralHealthPregnancyConsensus.pdf

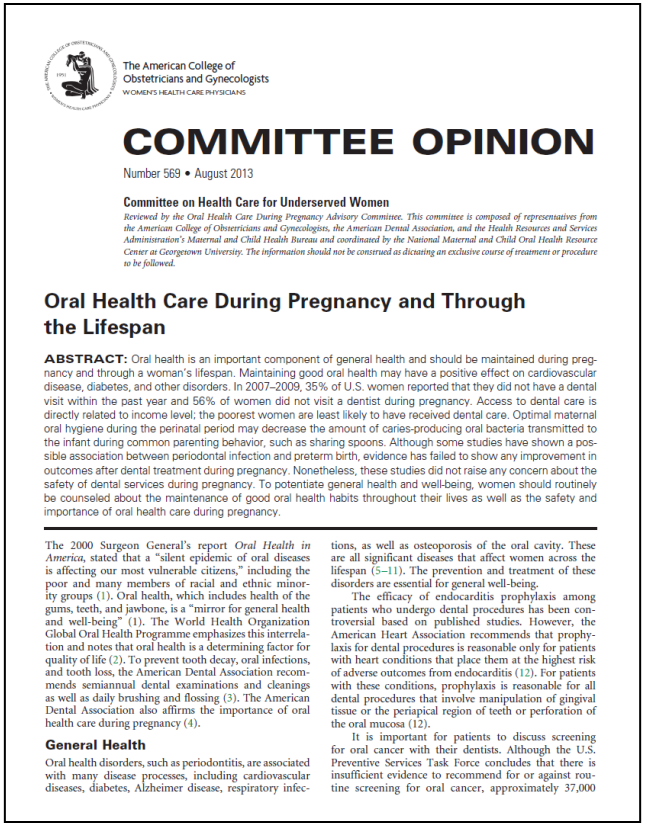


Source: Oral Health Care During Pregnancy Expert Workgroup. (2012). *Oral Health Care During Pregnancy: A National Consensus Statement.* Washington, DC: National Maternal and Child Oral Health Resource Center.

“Oral Health Care During Pregnancy and Through the Lifespan”

The American College of Obstetricians and Gynecologists

https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Oral-Health-Care-During-Pregnancy-and-Through-the-Lifespan



The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

Number 569 • August 2013

Committee on Health Care for Underserved Women

Reviewed by the Oral Health Care During Pregnancy Advisory Committee. This committee is composed of representatives from the American College of Obstetricians and Gynecologists, the American Dental Association, and the Health Resources and Services Administration's Maternal and Child Health Bureau and coordinated by the National Maternal and Child Oral Health Resource Center at Georgetown University. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

Oral Health Care During Pregnancy and Through the Lifespan

ABSTRACT: Oral health is an important component of general health and should be maintained during pregnancy and through a woman's lifespan. Maintaining good oral health may have a positive effect on cardiovascular disease, diabetes, and other disorders. In 2007–2009, 35% of U.S. women reported that they did not have a dental visit within the past year and 56% of women did not visit a dentist during pregnancy. Access to dental care is directly related to income level; the poorest women are least likely to have received dental care. Optimal maternal oral hygiene during the perinatal period may decrease the amount of caries-producing oral bacteria transmitted to the infant during common parenting behavior, such as sharing spoons. Although some studies have shown a possible association between periodontal infection and preterm birth, evidence has failed to show any improvement in outcomes after dental treatment during pregnancy. Nonetheless, these studies did not raise any concern about the safety of dental services during pregnancy. To potentiate general health and well-being, women should routinely be counseled about the maintenance of good oral health habits throughout their lives as well as the safety and importance of oral health care during pregnancy.

The 2000 Surgeon General's report *Oral Health in America*, stated that a "silent epidemic of oral diseases is affecting our most vulnerable citizens," including the poor and many members of racial and ethnic minority groups (1). Oral health, which includes health of the gums, teeth, and jawbone, is a "mirror for general health and well-being" (1). The World Health Organization Global Oral Health Programme emphasizes this interrelation and notes that oral health is a determining factor for quality of life (2). To prevent tooth decay, oral infections, and tooth loss, the American Dental Association recommends semiannual dental examinations and cleanings as well as daily brushing and flossing (3). The American Dental Association also affirms the importance of oral health care during pregnancy (4).

General Health

Oral health disorders, such as periodontitis, are associated with many disease processes, including cardiovascular diseases, diabetes, Alzheimer disease, respiratory infections, as well as osteoporosis of the oral cavity. These are all significant diseases that affect women across the lifespan (5–11). The prevention and treatment of these disorders are essential for general well-being.

The efficacy of endocarditis prophylaxis among patients who undergo dental procedures has been controversial based on published studies. However, the American Heart Association recommends that prophylaxis for dental procedures is reasonable only for patients with heart conditions that place them at the highest risk of adverse outcomes from endocarditis (12). For patients with these conditions, prophylaxis is reasonable for all dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa (12).

It is important for patients to discuss screening for oral cancer with their dentists. Although the U.S. Preventive Services Task Force concludes that there is insufficient evidence to recommend for or against routine screening for oral cancer, approximately 37,000

Source: American College of Obstetricians and Gynecologists. (2013). *Oral health care during pregnancy and through the lifespan. Committee Opinion No. 569.* Obstet Gynecol 112:417-22.

Activity 3 – Assessment

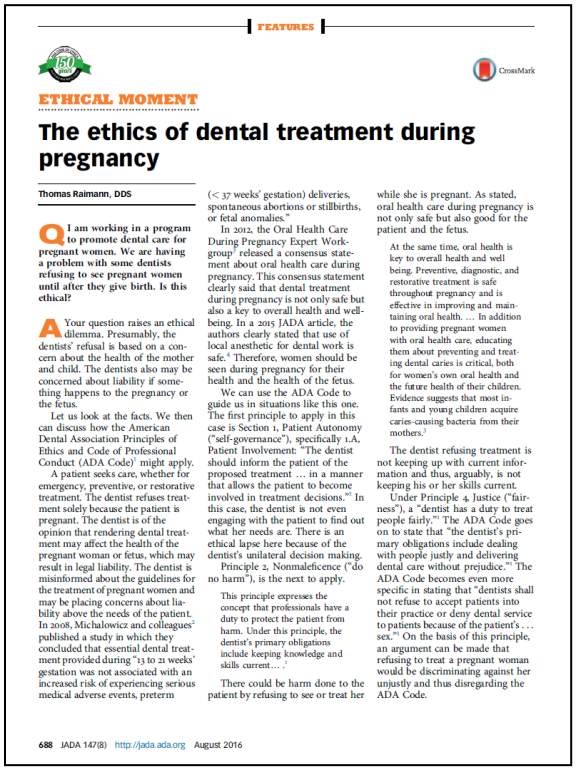
Reflect on key concepts presented in the guidelines by completing **one** of the following activities:

- Pretend you are a newly hired dental hygienist in a private practice. Upon starting at the clinic, you realize that an exam and cleaning is provided to pregnant women but any restorative needs are not completed until after the patient delivers. With the new information you've learned, create a 'lunch and learn' session to share with your colleagues on the clinical background, importance, and safety of providing preventive and restorative care during all trimesters.
- Your best friend is a registered nurse at the local hospital and responsible for leading educational sessions (birthing classes) for pregnant women. She invited you to come and provide a brief presentation on the importance of oral health care for pregnant woman. Create a brief (5-8 slide) presentation to include key messages and action steps to promote optimal oral health prior to delivery.
- Create a poster on the importance of oral health care for the pregnant patients that could hang in a private practice. Include key patient messages using language that is easily understood. In addition, find two already developed resources (tip sheets, brochures) for take home patient education.
- Contact via phone, 5 local dental clinics to see if they are accepting pregnant patients, what services they provide and when (what trimester). Write a reflection on your experience comparing and contrasting the results you found with the information you've learned by reading the professional guidelines.

Activity 4 – Ethics Article

- Read the following article.
- Choose **one** assessment activity described on slide 24 to complete.

https://jada.ada.org/article/S0002-8177(16)30337-3/fulltext



FEATURES

ETHICAL MOMENT

The ethics of dental treatment during pregnancy

Thomas Raimann, DDS

Q I am working in a program to promote dental care for pregnant women. We are having a problem with some dentists refusing to see pregnant women until after they give birth. Is this ethical?

A Your question raises an ethical dilemma. Presumably, the dentists' refusal is based on a concern about the health of the mother and child. The dentists also may be concerned about liability if something happens to the pregnancy or the fetus.

Let us look at the facts. We then can discuss how the American Dental Association Principles of Ethics and Code of Professional Conduct (ADA Code)[1] might apply.

A patient seeks care, whether for emergency, preventive, or restorative treatment. The dentist refuses treatment solely because the patient is pregnant. The dentist is of the opinion that rendering dental treatment may affect the health of the pregnant woman or fetus, which may result in legal liability. The dentist is misinformed about the guidelines for the treatment of pregnant women and may be placing concerns about liability above the needs of the patient. In 2008, Michalowicz and colleagues[2] published a study in which they concluded that essential dental treatment provided during "13 to 21 weeks' gestation was not associated with an increased risk of experiencing serious medical adverse events, preterm (< 37 weeks' gestation) deliveries, spontaneous abortions or stillbirths, or fetal anomalies."

In 2012, the Oral Health Care During Pregnancy Expert Workgroup[3] released a consensus statement about oral health care during pregnancy. This consensus statement clearly said that dental treatment during pregnancy is not only safe but also a key to overall health and well-being. In a 2015 JADA article, the authors clearly stated that use of local anesthetic for dental work is safe.[4] Therefore, women should be seen during pregnancy for their health and the health of the fetus.

We can use the ADA Code to guide us in situations like this one. The first principle to apply in this case is Section 1, Patient Autonomy ("self-governance"), specifically 1.A, Patient Involvement: "The dentist should inform the patient of the proposed treatment . . . in a manner that allows the patient to become involved in treatment decisions."[5] In this case, the dentist is not even engaging with the patient to find out what her needs are. There is an ethical lapse here because of the dentist's unilateral decision making.

Principle 2, Nonmaleficence ("do no harm"), is the next to apply.

> This principle expresses the concept that professionals have a duty to protect the patient from harm. Under this principle, the dentist's primary obligations include keeping knowledge and skills current . . .[1]

There could be harm done to the patient by refusing to see or treat her while she is pregnant. As stated, oral health care during pregnancy is not only safe but also good for the patient and the fetus.

> At the same time, oral health is key to overall health and well being. Preventive, diagnostic, and restorative treatment is safe throughout pregnancy and is effective in improving and maintaining oral health. . . . In addition to providing pregnant women with oral health care, educating them about preventing and treating dental caries is critical, both for women's own oral health and the future health of their children. Evidence suggests that most infants and young children acquire caries-causing bacteria from their mothers.[3]

The dentist refusing treatment is not keeping up with current information and thus, arguably, is not keeping his or her skills current.

Under Principle 4, Justice ("fairness"), a "dentist has a duty to treat people fairly."[5] The ADA Code goes on to state that "the dentist's primary obligations include dealing with people justly and delivering dental care without prejudice."[5] The ADA Code becomes even more specific in stating that "dentists shall not refuse to accept patients into their practice or deny dental service to patients because of the patient's . . . sex."[5] On the basis of this principle, an argument can be made that refusing to treat a pregnant woman would be discriminating against her unjustly and thus disregarding the ADA Code.

688 JADA 147(8) http://jada.ada.org August 2016

Source: Raimann, Thomas. The ethics of dental treatment during pregnancy. Journal of the American Dental Association 2016;147(8):688-689.

Activity 4 – Assessment

- Complete a 1 page reflection paper on the ethical considerations presented in the article and what consequences there are for refusing to treat a pregnant patient.

OR

- Based on what you now know about the ethical perspective of dental treatment of pregnant women, create a public service announcement that could be broadcasted in your community to increase awareness on the importance of oral health care for pregnant women.

CODA Standard 2-12

Patient Care Competencies

2-12

- Graduates must be competent in providing dental hygiene care for the child, adolescent, adult and geriatric patient.
- Graduates must be competent in assessing the treatment needs of patients with special needs.

Intent:

- *Age appropriate patient pool should be available to provide a wide scope of patient experiences that include patients whose medical, physical, psychological, or social situations may make it necessary to modify procedures in order to provide dental hygiene treatment for that individual. Student experiences should be evaluated for competency and monitored to ensure equal opportunities for each enrolled student.*
- *Clinical instruction and experiences with special needs patients should include instruction in proper communication techniques and assessing the treatment needs compatible with these patients.*

CODA Standard 2-12 (continued)

Examples of evidence to demonstrate compliance may include:

- Program clinical and radiographic experiences, direct and non-direct patient contact assignments, and off-site enrichments experiences.
- Patient tracking data for enrolled and past students.
- Policies regarding selection of patients and assignments of procedures.
- Student clinical evaluation mechanism demonstrating student competences in clinical skills, communication and practice management.

CODA Standard 2-22

Critical Thinking Competencies

2-22

Graduates must be competent in the evaluation of current scientific literature.

Intent:

- *Dental hygienists should be able to evaluate scientific literature as a basis for life-long learning, evidenced-based practice and as a foundation for adapting to changes in healthcare.*

Examples of evidence to demonstrate compliance may include:

- Written course documentation of content in the evaluation of current and classic scientific literature.
- Evaluation mechanisms designed to monitor knowledge and performance.
- Outcomes assessment mechanisms.

CODA Standard 2-23

Critical Thinking Competencies

2-23

Graduates must be competent in problem solving strategies related to comprehensive patient care and management of patients.

Intent:

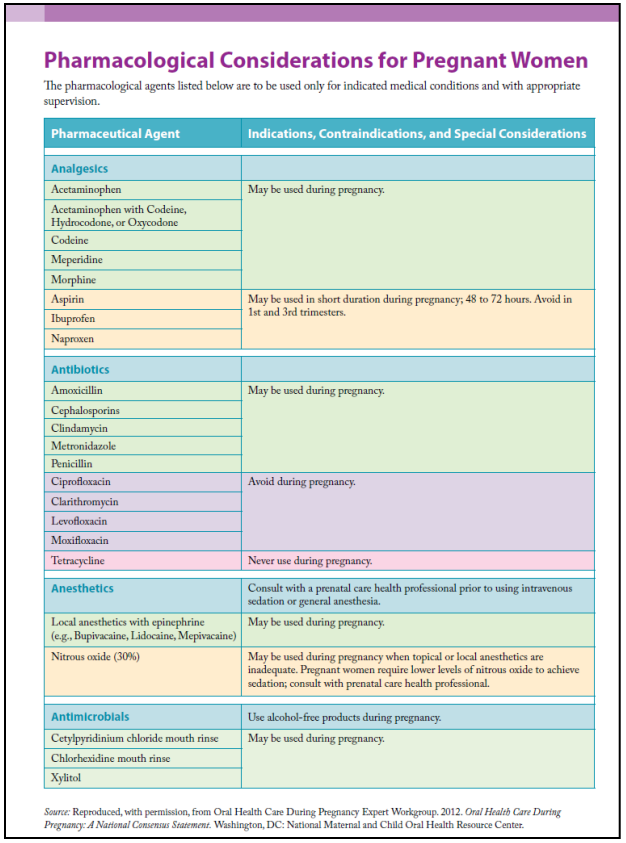
- *Critical thinking and decision making skills are necessary to provide effective and efficient dental hygiene services. Throughout the curriculum, the educational program should use teaching and learning methods that support the development of critical thinking and problem solving skills.*

Examples of evidence to demonstrate compliance may include:

- Evaluation mechanisms designed to monitor knowledge and performance.
- Outcomes assessment mechanisms demonstrating application of critical thinking skills.
- Activities or projects that demonstrate student experiences with analysis of problems related to comprehensive patient care.
- Demonstration of the use of active learning methods that promote critical appraisal of scientific evidence in combination with clinical application and patient factors.

Resources

https://www.mchoralhealth.org/PDFs/OralHealthPregnancyPharmacological.pdf



Pharmacological Considerations for Pregnant Women

The pharmacological agents listed below are to be used only for indicated medical conditions and with appropriate supervision.

Pharmaceutical Agent	Indications, Contraindications, and Special Considerations
Analgesics	
Acetaminophen	May be used during pregnancy.
Acetaminophen with Codeine, Hydrocodone, or Oxycodone	
Codeine	
Meperidine	
Morphine	
Aspirin	May be used in short duration during pregnancy; 48 to 72 hours. Avoid in 1st and 3rd trimesters.
Ibuprofen	
Naproxen	
Antibiotics	
Amoxicillin	May be used during pregnancy.
Cephalosporins	
Clindamycin	
Metronidazole	
Penicillin	
Ciprofloxacin	Avoid during pregnancy.
Clarithromycin	
Levofloxacin	
Moxifloxacin	
Tetracycline	Never use during pregnancy.
Anesthetics	Consult with a prenatal care health professional prior to using intravenous sedation or general anesthesia.
Local anesthetics with epinephrine (e.g., Bupivacaine, Lidocaine, Mepivacaine)	May be used during pregnancy.
Nitrous oxide (30%)	May be used during pregnancy when topical or local anesthetics are inadequate. Pregnant women require lower levels of nitrous oxide to achieve sedation; consult with prenatal care health professional.
Antimicrobials	Use alcohol-free products during pregnancy.
Cetylpyridinium chloride mouth rinse	May be used during pregnancy.
Chlorhexidine mouth rinse	
Xylitol	

Source: Reproduced, with permission, from Oral Health Care During Pregnancy Expert Workgroup. 2012. *Oral Health Care During Pregnancy: A National Consensus Statement.* Washington, DC: National Maternal and Child Oral Health Resource Center.

Source: Oral Health Care During Pregnancy Expert Workgroup. (2012). *Oral Health Care During Pregnancy: A National Consensus Statement.* Washington, DC: National Maternal and Child Oral Health Resource Center.

Please Provide Feedback

- Use the link below to provide feedback on the content and how you used these modules.
- Thank you!
- https://www.surveymonkey.com/r/66Q3ZQ2
- For questions contact: dfischer@chw.org