Oral Health Care for Pregnant Women

South Carolina Oral Health Advisory Council & Coalition

Oral Health Care for Pregnant Women

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Background on Document Development

The South Carolina Oral Health Coalition identified early childhood as a priority at the December 2006 Quarterly Advisory Summit. An Early Childhood workgroup was convened in June 2007 to develop the Population III: Early Childhood Chapter of the State Oral Health Plan. The outcome established for this section of the plan was improved oral health status for children aged 3 years or less. In addition to impacting access to oral health for the young child, the workgroup recognized that current research suggests that some prenatal oral conditions may have adverse health consequences for the mother and young child. Consequently, the workgroup, in developing a comprehensive approach to young children, included a component and subsequent objectives for Oral Health Care for Pregnant Women. (SC State Oral Health Plan, Population III: Early Childhood, Access at: http://www.scdhec.gov/health/mch/oral/plan.htm

Objective 6(III).30

By July 2008, DHEC and the South Carolina Oral Health Advisory Council and Coalition will form a workgroup to develop a publication of the clinical practice guidelines established by New York State for oral health care of pregnant women in South Carolina.

Action Plan for Objective 6(III).30

The workgroup developed the following action step at the October 2007 Early Childhood Workgoup meeting:

Step 1: Convene a group of dentists/physicians to review and update the Oral Health Care during Pregnancy and Early Childhood Practice Guidelines developed by the New York State Department of Health (Kumar J, Samelson R, eds., 2006).

A. Review Committee:

By August 2008, membership for the Review Committee was identified and confirmed by Chairpersons, Dr. Rick McDaniel and Brenda Martin.

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Acknowledgement: We wish to thank Sara N. Stingel, S.C. DHEC Art Department for preparing the document. We are also sincerely appreciate the review and editing of the document by Jessie Buerlein, Children's Dental Health Project.

Guideline Review and Update Process:

1. The New York document and the document review tool were sent to all members of the committee along with the process for reviewing and updating the document as detailed below:
   - Member comments have been addressed reasonably.
   - There is consensus among all members on the content of the guidelines.
   - Within the knowledge of the reviewer, the scientific recommendations within the guidelines are current.

2. The committee met July 18, 2008, to review members' comments, to establish consensus among the members on the contents of the New York document, and to identify the need for any updates to the information provided in the document.

3. Following the July meeting, Dr. McDaniel consulted with committee members in drafting *South Carolina Takes Action: Oral Health Care for Pregnant Women*. Additional documents utilized in developing the *South Carolina Takes Action: Oral Health Care for Pregnant Women* included the *Guidelines on Oral Health Care for the Pregnant Adolescent*, American Academy of Pediatric Dentistry, 2007; *Oral Health Care During Pregnancy: A Summary of Practice Guidelines*, National Maternal and Child Oral Health Resource Center, Georgetown University, 2008 and *Access to Oral Health Care During the Perinatal Period: A Policy Brief*, National Maternal and Child Oral Health Resource Center, Georgetown University, 2008

4. The draft was sent to committee members for input December 4, 2008.

5. The final document was approved January 2009.

6. *South Carolina Takes Action: Oral Health Care for Pregnant Women* will be presented to the Commissioner's Obstetric Task Force November 2009.

The Nation Takes Action

The Surgeon General's Report on Oral Health in 2000 concluded that oral diseases can be associated with systemic conditions including adverse pregnancy outcomes. The National Center for Education in Maternal and Child Health published Bright Futures in Practice: Oral Health to promote and improve the oral health and well-being of pregnant women, infants, children, and adolescents in 2004. The Bright Futures document recommends that pregnant women visit a dentist for an examination and restoration of all active decay as soon as feasible. In addition, the American Dental Association, the Academy of Pediatric Dentistry, the American Academy of Periodontology, the Academy of General Dentistry, and the American Academy of Pediatrics have issued statements and/or recommendations for improving the oral health of pregnant women. These organizations recommend that women who are pregnant or planning a pregnancy receive comprehensive preventive dental care including a comprehensive gingival and periodontal examination and necessary dental disease prevention procedures and treatment. (Kumar and Iida, 2008)

A State Takes Action: New York State Department of Health

In 2006, the New York State Department of Health published Oral Health Care during Pregnancy and Early Childhood: Practice Guidelines, the results of an expert panel of health professionals convened to reinforce the recommendations of national organizations and to provide guidance for health care providers. The panel reviewed literature, identified existing guidelines, practices and interventions, assessed issues of concern, and developed recommendations. The panel recognized the need to periodically review and update the guidelines.

In 2008, the National Maternal and Child Oral Health Resource Center (OHRC), in collaboration with the Maternal and Child Health Bureau Perinatal Oral Health Workgroup, published Oral Health Care During Pregnancy: A Summary of Practice Guidelines based on the New York Department of Health's publication. The guidelines are intended to bring about changes in the health care delivery system and to improve the overall standard of care for pregnant women. In addition, OHRC published Access to Oral Health Care during the Perinatal Period: A Policy Brief in 2008. This brief was developed to help policymakers, health professionals, and the public better understand the importance of oral health during the perinatal period. The brief describes barriers to accessing oral health services and information, including myths and misperceptions, and present potential solutions.

South Carolina Takes Action: Oral Health Care for Pregnant Women

These events substantiated the fortuitous decision of the SC Oral Health Coalition Early Childhood Workgroup to convene a special workgroup whose task would be to address oral health issues specific to pregnant women in South Carolina through the development of a publication based on the clinical practice guidelines established by New York State. Upon completion, the South Carolina recommendations will be an effective tool for implementing the Early Childhood Chapter of the SC State Oral Health Plan as it relates to oral health during the perinatal period.

Introduction

Oral Health During Pregnancy

Oral health is an essential component of the overall health status for pregnant women and women of reproductive age. Physiologic changes occurring during pregnancy can place a tremendous strain on a woman's body, including the mouth. Achieving and maintaining good oral health is very important for mothers and their children. Poor oral health of the mother, including dental decay and periodontal disease before and during pregnancy, has been linked to poor birth and pregnancy outcomes such as preterm birth and low birth-weight. In addition, ensuring good oral health for women during the perinatal period plays a vital role in promoting the oral health of her children after birth (National Maternal and Child Oral Health Resource Center (NMCOHRC), 2008). In addition to these recommendations, good oral health is important to the overall health of all women across the lifespan.

Association between periodontal disease and preterm/low birthweight babies

Periodontal disease is a bacterial infection detectable in up to 30 percent of pregnant women that can lead to destruction of the gums, bones, and ligaments supporting teeth. A growing body of research has linked periodontal disease with premature delivery (delivery before 37 weeks of gestation) and low birth weight (weighing less than 5.5 pounds at full term) outcomes among infants. Poor health outcomes resulting from premature delivery and low birth weights are significant contributors to infant mortality and long-term health complications among infants (Kumar J, Samelson R, eds., 2006).

Tooth Decay

Tooth decay is a chronic bacterial disease that can affect all people across all age groups. Pregnancy impacts oral health in several ways. Changes in the woman's diet and oral hygiene practices during pregnancy can result in an increase in tooth decay. In addition, nausea and vomiting during pregnancy can cause extensive erosion of the tooth surface and lead to deteriorating oral health status. Treatment of tooth decay in pregnant women cannot only improve the overall health of the mother but also helps decrease the transmission of dental caries causing bacteria from the mother to the infant. (Kumar J, Samelson R, eds., 2006).

Children whose mothers have poor oral health and high levels of oral bacteria are at greater risk for developing dental caries or tooth decay, as compared with children whose mothers have good oral health and lower levels of oral bacteria (Ramos-Gomez, Weintraub, Gansky, Hoover, and Featherstone, 2002).

The most common chronic infectious disease in children continues to be tooth decay. In 2007, the Centers for Disease Control and Prevention reported that tooth decay in baby teeth has increased 15 percent among US toddlers and preschoolers ages 2 to 5 years old. Although tooth decay is largely preventable, 28% of young children experience tooth decay and 74% of these children were in need of dental repair (Dye BA, et al, 2007). To prevent tooth decay in young children, health promotion must start before the child is born.

Conclusion

Improving the oral health of pregnant women has the potential to improve women's overall health, to reduce complications of dental disease during pregnancy and to reduce the risk for early childhood tooth decay in their children. In addition, improving the oral health of pregnant women may also reduce premature and low birth weight deliveries. Given the importance of oral health to women's overall health and well being, and the growing body of scientific evidence related to its association with birth outcomes, it is vital South Carolina health professionals work together to ensure pregnant women receive oral health education, counseling, and access to the oral health care system.

The South Carolina Data

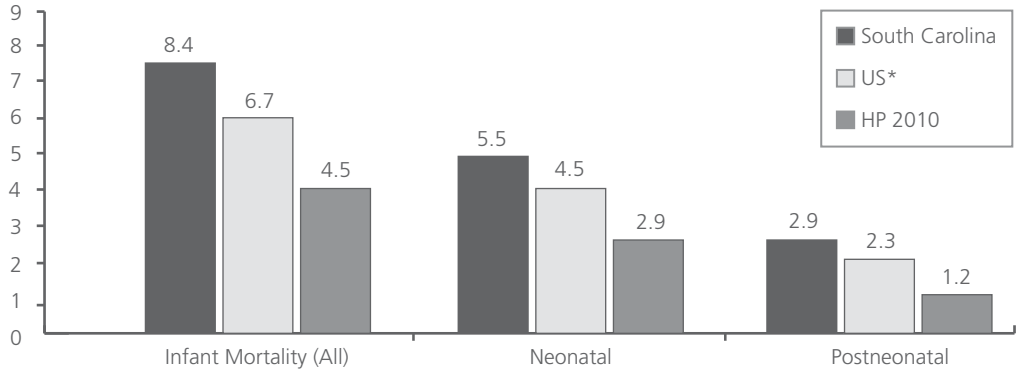
Infant Mortality and Preterm Birth in South Carolina

The infant mortality rate is an important health outcome measure that is often used as a measure of the overall health status of a given population. It reflects the heath status of mothers and children and is also indicative of underlying socioeconomic and racial disparities. Nationally, despite an increase in 2002, infant mortality rates have steadily declined over the past 40 years as reflected in the 2006 infant mortality rate of 6.7 deaths per 1,000 live births (Heron et al, 2008).

Key Facts about Infant Mortality in South Carolina

- The 2006 infant mortality rate of 8.4 deaths per 1,000 live births represents the second lowest rate in the past 18 years (8.3 in 1996 and 2003)
- In 2006 the overall Infant Mortality Rate decreased 11.6 percent from 9.5 infant deaths per 1,000 live births in 2005, to 8.4 infant deaths per 1,000 live births in 2006
- A notable 19.4 percent decrease in the post neonatal mortality rate was observed from 2005 (3.6 per 1,000 live births) to 2006 (2.9 per 1,000 live births)
- Despite marked improvement between 2005 and 2006, significant gaps in infant mortality rates between white and black populations remain significant with black populations 2.3 times more likely to experience an infant death

Figure 1: How Is South Carolina Doing Compared to the US and Healthy People 2010 Objectives?



*2006 US Rates based on estimates
** Death of a live born infant under 28 days of age
*** Death of a live born infant 28-364 days of age

Leading Causes of Death

- Congenital malformations- increased by 24.1 percent from 79 in 2005 to 98 in 2006
- Preterm/birth weight disorders- decreased by 1.2 percent from 81 in 2005 to 80 in 2006
- SIDS- decreased by 8.3 percent from 48 in 2005 to 44 in 2006
- Fetus/newborn affected by Maternal complications of pregnancy- increased by 50 percent from 28 in 2005 to 42 in 2006
- Accidents- increased by 17.9 percent from 28 in 2005 to 33 in 2006 (S.C. Department of Health and Environmental Control Office of Public Health Statistics and Information Services, 2007)

Dental Care Utilization and Oral Health Counseling During Pregnancy in SC

Access to timely oral health care during the perinatal period is a contributing factor to the health and well being of both women and their unborn children. The South Carolina Pregnancy Risk Assessment Monitoring System (PRAMS) report for 2004-2005 on the dental experiences among South Carolina women during pregnancy reinforces the need for the development of the *South Carolina Takes Action: Oral Health Care for Pregnant Women* resource.

Key findings from the SC PRAMS report include:

1. **Dental Care Utilization:** only 2 out of 5 pregnant women in South Carolina reported receiving dental care.

2. **Prenatal Oral Health Counseling:** less than forty percent received prenatal oral health counseling

3. **Dental Problem during Pregnancy:** Twenty-eight percent reported having a dental problem during pregnancy and nearly forty-nine percent of this group did not seek dental care.

Oral Health During Pregnancy - Recommendations for Health Professionals

Health professionals play a key role in preparing women for healthy pregnancies. These professionals can provide oral health education and counseling as well as link women to dental care during the perinatal period. Within the health care system, there may be multiple opportunities among health professionals to reach pregnant women such as:

- Family physicians
- Obstetricians
- Pediatricians
- Advanced Practice Registered Nurses, Registered Nurses, Licensed Practical Nurses
- Physician Assistants
- Certified Registered Nurse Midwives
- Health Educators
- Women, Infants and Children Program (WIC) Nutritionists
- Early Head Start Health Coordinators
- Healthy Start Staff
- Outreach Workers from Community Health Centers, Managed Care Organizations and other community outreach programs.
- Dentists, dental hygienists and dental assistants

Oral Health Guidance during Pregnancy

While specific treatment decisions are individually based, these recommendations provide general guidance for the purpose of enhancing the health care delivery system and improving the care for women during pregnancy. Key points that need to be addressed:

1. Explain the importance of maintaining oral hygiene and receiving dental care.

2. Explain that dental care during pregnancy is safe and effective and is essential for the pregnant woman and her fetus.

3. Reassure women that diagnosis (including necessary dental X-rays) and dental treatment for conditions requiring immediate attention are safe during the first trimester of pregnancy.

4. Inform women that needed treatment can be provided throughout the remainder of the pregnancy; however, the time period between the 14th and 20th week is the best time to provide dental care.

5. Advise women that delaying necessary treatment could result in significant risk to the mother and indirectly to the fetus (Kumar J, Samelson R, eds. 2006).

Table 1: Strategies for the Medical Professional to Improve Access to Dental Care during Pregnancy

Strategy	Activity
Prenatal Classes	Integrate a component on oral hygiene and dental care in prenatal classes.
Health Literacy	Develop oral health education materials at appropriate reading levels.
Patient Intake Forms	Include an oral health assessment that identifies problems and offers recommendations on patient intake forms.
Referral to Dentist	Make a referral to a dentist (sample form in Appendix)
Transportation:	Assist women in securing transportation for dental care.
Counseling	Assist women in making decisions about dental care.

(Kumar & Iida, 2008)

Key Oral Health Messages for Pregnant Women

- Brush teeth twice daily with a fluoride toothpaste and floss daily
- Limit foods containing sugar to mealtimes only
- Choose water or low-fat milk as a beverage. Avoid carbonated beverages during pregnancy.
- Choose fruit rather than fruit juice to meet the recommended daily fruit intake
- Obtain necessary dental treatment before delivery

Suggestions for Pregnant Women with Nausea and Vomiting

Instruct pregnant women who are experiencing morning sickness to

- Eat small amounts of nutritious food throughout the day.
- Rinse with a cup of water containing a teaspoon of sodium bicarbonate (baking soda) after vomiting to neutralize the stomach acid.

- Delay toothbrushing for about one hour to minimize hard tissue loss and control sensitivity
- Resume gentle toothbrushing with a fluoride toothpaste (Kumar J, Samelson R, eds. 2006)

The Oral Health Assessment: *Ask, Advise, Refer*

Conducting an oral health assessment is one way for health professionals to provide guidance and to educate pregnant women about the need for oral health care during the perinatal period. This assessment should include interviewing the patient using the following protocol.

Ask – Oral Health Questions

The following two interview questions are recommended for incorporation into the initial prenatal visit.

- Do you have bleeding gums, toothache, cavities, loose teeth, teeth that do not look right or other problems in your mouth?
- Have you had a dental visit in the last six months?

Advise – Pregnant Women On the Need for Oral Health Care

- If the last dental visit took place more than six months ago or if any oral problems (e.g. toothache, bleeding gums) are identified, tell women to schedule an appointment with a dentist as soon as possible.
- Encourage women to improve or maintain good oral health during pregnancy and to attend prenatal classes.
- Counsel women to adhere to their dentist's recommendations for treatment or follow-up.

Refer – Pregnant Women for Dental Care

- Dental Referrals: Provide referrals as needed. (Appendix 1. Summary Doc Referral form for Pregnant women to receive oral health care)
- Dental Referral Network: Provide a list of dentists in the community, including those who accept Medicaid and other public insurance programs. (Access at: http://www.scdhhs.gov/ADOProviderSearch.asp.)

Oral Health During Pregnancy - Recommendations for Dental Professionals

Conducting Health History, Risk Assessment, and Oral Examination

Every pregnant woman should receive a comprehensive dental examination early in the pregnancy or at some point during the pregnancy. Dental professionals should perform a comprehensive evaluation that includes a health history, risk assessment, and an oral examination including periodontal measurements.

Health History

Medical history should be taken and evaluated to identify predisposing conditions that may affect treatment, patient management, and outcomes. Such conditions include, but are not limited to diabetes, hypertension, pregnancy, smoking, substance abuse and medications, or other existing conditions that impact traditional dental therapy (Kumar J, Samelson R, eds. 2006).

Determine Weeks of Gestation (due date)

- First trimester, defined as starting at the first day of the last menstrual period and continuing until 13 weeks and six days, is when organogenesis, development of the organs, takes place. Technically, the conceptus is called an embryo until the ninth week, when it becomes a fetus. It is during the embryonic period when the risk of teratogenicity, the ability to cause birth defects, exists. Performing dental care during early pregnancy has never been reported to increase the rate of malformations in infants.
- Second trimester—starts at 14 weeks
- Third trimester starts at 28 weeks (Kumar J, Samelson R, eds. 2006)

Diabetes and Pregnancy

For women with diabetes diagnosed prior to pregnancy, oral health is particularly important as acute and chronic infections make control of diabetes more challenging. (DHHS, 2000).

Hypertensive Disorders of Pregnancy

Dental professionals should be knowledgeable of hypertensive disorders because of increased risk of bleeding during procedures and should consult the prenatal care provider before initiating dental procedures in women with uncontrolled severe hypertension (Kumar J, Samelson R, eds. 2006).

Table 2: Classification of Blood Pressure (US DHHS, National Institute of Health, 2003)

Category	SBP mmHG	DBP mmHg
Normal	<120	and <80
Prehypertension	120-139	or 80-89
Hypertension, Stage 1 (mild)	120-139	or 90-99
Hypertension, Stage 2 (severe)	≥160	or ≥100

* Reference card available (US DHHS, National Institute of Health, 2003)

Prophylactic Antibiotics during Pregnancy

Pregnancy by itself is not an indication for prophylactic antibiotics during dental procedures. Criteria for prescribing antibiotics for bacterial endocarditis are the same for pregnant women as they are for all individuals (Wilson et al, 2007).

Caries Risk Assessment

For adults there are a number of factors that contribute to caries risk such as:

- Visible cavities
- Many multi surface restorations
- Exposed root surfaces
- Deep pits/fissures on teeth
- Radiographic lesions
- Visible heavy plaque on teeth
- Saliva reducing factors (medications/radiation/systemic)
- Dietary history that includes frequent exposures to carbohydrates and frequent snacking and acidic beverages such as soda.
- Drug and alcohol abuse (Featherstone, 2007)

For pregnant adolescents, dental professionals may use the American Association of Pediatric Dentistry's (AAPD) caries-risk assessment tool (American Academy of Pediatric Dentistry, 2006). A member of the American Dental Association (ADA) can access the organization's website and use an assessment tool specific for ages greater than six years (ada.org). Utilizing historical and clinical findings gathered in a caries risk assessment, will aid the dental professional in identifying risk factors in order to develop an individualized preventive approach.

Protective factors to consider are: access to fluoridated water, use of fluoridated toothpaste, adequate salivary flow, use of fluoride mouthrinse, and use of xylitol gum/mints (Featherstone, 2007).

Community Water Fluoridation

South Carolina participates with the Centers for Disease Control's national public website, *My Water's Fluoride*, which allows consumers to learn the fluoridation status of their water system. The best source of information on fluoride levels is the local water utility; however, individuals can access *My Water's Fluoride* and follow the links to their local water system. My Water's Fluoride can be accessed through this link: **http://apps.nccd.cdc.gov/MWF/Index.asp**. Optimal fluoride levels recommended by the US Public Health Service and CDC for drinking water range from 0.7 parts per million (ppm) to 1.2 ppm.

Periodontal Disease Risk Assessment

Risk assessment for periodontal diseases should be part of every comprehensive dental and periodontal evaluation. This evolving paradigm in the treatment of chronic diseases, such as periodontal diseases, not only identifies the existence of disease and its severity, but also considers factors that may influence future progression of the disease. Some factors that may influence the progression of periodontal disease are:

- Smoking and tobacco use
- Diabetes
- Pregnancy
- Cardiovascular disease
- Prescription medications that cause decreased flow of saliva
- HIV/AIDS
- Inadequate nutrition and stress (Kumar J, Samelson R, eds. 2006).

Clinical Examination and Treatment of the Pregnant Woman

A clinical oral examination is an extensive evaluation, recording all extraoral and intraoral tissues as well as dental health indicators including periodontal status. The challenge of periodontal disease is that it can progress silently, often without pain or overt symptoms that would alert the patient to its presence. Therefore, a key component of the clinical exam is a complete periodontal probing which measures the crevice depth around each tooth.

If it is determined that treatment is needed, several key factors need to be considered in the development of a treatment plan. These include:

- Chief complaint (if any)
- Medical history

- History of tobacco, alcohol or other substance abuse
- Findings from the clinical evaluation, including the gingival and periodontal examination
- Findings from radiographs when needed
- Restorative dental service options
- Safe administration of drugs

In some cases diagnostic X-rays need to be used during pregnancy as part of the treatment plan. Current evidence suggests that there is not increased risk to the fetus with regard to congenital malformation, growth retardation or abortion from ionizing radiation at a dose of less than five rad. The US Food and Drug Administration (FDA) and the American Dental Association (ADA) have provided detailed guidelines for prescribing dental radiographs. Every precaution should be taken to minimize radiation exposure including the use of a protective thyroid collar and abdominal apron (American Dental Association, US Food & Drug Administration, 2004).

Safe Administration of Drugs During the Perinatal Period

Dental professionals need to be fully informed about the safe administration of drugs for pregnant women. The FDA developed a classification system to provide therapeutic guidance for use of drugs during pregnancy. Most medications prescribed for common diseases can be used with relative safety (with a few notable exceptions like thalidomide and aspirin) because there have been few adverse drug reports. Moreover, the untreated disease or condition itself may pose more serious risks to both mother and fetus than any unsubstantiated risks from the medications. It is important for health care professionals who care for pregnant women to be familiar with the FDA classification system in Table 3. (Kumar J, Samelson R, eds. 2006).

Table 3: FDA Classification System

Category	Interpretation
A	Controlled studies show no risk - Adequate, well-controlled studies in pregnant women have failed to demonstrate risk to the fetus.
B	No evidence of risk to humans – Either animal studies show risk (but human findings do not) OR if no adequate human studies have been done, animal findings are negative.
C	Human studies are lacking and animal studies are either positive for fetal risk or lacking as well. However, potential benefits may justify the potential risk.
D	Positive evidence of risk. – Investigational or post marketing data show risk to the fetus. Nevertheless, potential benefits may outweigh the risks, such as some anticonvulsive medications.
X	Contraindicated in pregnancy – Studies in animals or humans or investigational or post marketing reports have shown fetal risk, which clearly outweighs any possible benefit to the patient, such as isotretinoin and thalidomide.

Dentists typically use antibiotics and analgesics for treating infection and controlling pain. Pharmacotherapeutics should not be a substitute for appropriate and timely dental procedures. Recommendations for some commonly used drugs are summarized in Table 4.

Table 4: FDA Use-in-Pregnancy Ratings for Drugs

These Drugs May Be Used in Pregnancy	FDA Category	These Drugs May NOT Be Used in Pregnancy	FDA Category
Antibiotics		**Antibiotics**	
Penicillin	B	Tetracyclines	D
Amoxicillin	B	Erythromycin in the estolate form	
Cephalosporins	B	Quinolones	B
Clindamycin	B	Clarithromycin	C
Erythromycin (except for estolate form)	B		
Analgesics		**Analgesics**	
Acetaminophen	B	Aspirin	C
Acetaminophen with codeine	C		
Codeine	C		
Hydrocodone	C		
Meperidine	B		
Morphine	B		

After 1st trimester for 24 to 72 hrs only			
Ibuprofen	B		
Naprosyn	B		

Drugs such as aspirin, aspirin containing products, erythromycin estolate and tetracycline should be avoided during pregnancy.

Local Anesthetic with Epinephrine

Local anesthetic with epinepherine can be used during pregnancy. Lidocaine with epinephrine prolongs the length of anesthesia because the drug is absorbed slowly. There is a theoretical concern about the effect of epinephrine on uterine muscle. No scientific studies, however, could be found to confirm this effect in pregnant women. The frequency of malformations was not increased among reviews of almost 300 children whose mothers were given lidocaine during early pregnancy (Kumar J, Samelson R, eds. 2006).

Table 5: Common local anesthetic and FDA Drug Category for Pregnant Women (ADA, CAPIR, 2006)

Local Anesthesia	FDA Category
Lidocaine (2%)	B
Mepivicaine (3%)	C
Prilocaine	B
Bupivacaine	C
Etidocaine	B
Procaine	C

Amalgam Restorations

The Division of Oral Health of the South Carolina Department of Health and Environmental Control defers to the American Dental Association on clinical matters concerning standards of care regarding the use of dental amalgam (American Dental Association, 2008)

Note: It is important that pregnant women are positioned appropriately during an examination and treatment procedure. Suggestions include:

- Keep the head at a higher level than the feet.
- Place a small pillow under the right hip, or have women turn slightly to the left to avoid dizziness or nausea (Kumar J, Samelson R, eds. 2006).

Pregnant Women and Oral Disease Management

(Kumar J, Samelson R, eds. 2006)

It is recommended that the dental professional develop a comprehensive treatment plan and discuss it with the patient. Steps include:

- Develop a plan for treatment of dental needs, maintenance of optimal health, and prevention strategies based on benefits, risks and alternatives
- Provide a timeline to complete all necessary dental procedures prior to delivery
- Provide for emergency care any time during pregnancy as indicated by oral condition
- Develop strategies to reduce maternal cariogenic bacterial load. Possible strategies include:
    - Use fluoride toothpaste and mouthrinse depending upon access to a public fluoridated water system
    - Use of chlorhexidine mouthrinse and fluoride varnish as appropriate
    - Use of chewing gum or mints that contain xylitol
    - Restoration of teeth affected by untreated caries
    - Treatment of periodontal disease
- Recommend tobacco cessation.
    - South Carolina Quit Line Information and the Quit Line Provider Fax Referral are available online at the DHEC website. Access at: **http://www.scdhec.gov/health/chcdp/tobacco/quitforkeeps.htm**
- Reinforce the importance of eating smart and making healthy food choices from the five food groups every day. Choices from these groups provide important nutrients for the mother and developing baby. An excellent resource for eating healthy during pregnancy is available at the March of Dimes Website: **http://www.marchofdimes.com/pnhec/159_823.asp**

When to Consult with a Prenatal Health Professional

It is sometimes necessary to seek additional consult and guidance from a prenatal health professional, for example, when there is a question to defer treatment because of pregnancy. Consults may be needed when there are co-morbid conditions or medication use (e.g., diabetes, hypertension, heparin) that may affect the management of oral problems. In addition, a prenatal health professional should always be consulted when intravenous sedation or general anesthesia is needed to conduct treatment of dental problems (Kumar J, Samelson R, eds. 2006).

Strategies for the Dental Professional to Improve Access to Dental Care during Pregnancy

One of the most critical aspects for treating the pregnant woman is gaining access to care. (Kumar J, Samelson R, eds., 2006).

Table 6: Strategies for Dental Professionals to Improve Access to Dental Care during Pregnancy

Strategy	Activity		
Reduce practice-level barriers	Reduce long waiting lists for appointments or long waits in the dental office waiting room.		
	Accept patients enrolled in Medicaid and managed care organizations.		
Reduce system-level barriers	Develop partnerships with programs that reach pregnant women. Examples are:		
	WIC (the Special Supplemental Nutrition Program for Women, Infants and Children).	**Healthy Start**	**Early Head Start** and other programs that serve pregnant women.
	For more information access information online at: http://www.scdhec.gov/health/mch/wic/index.html	For more information access information online at: http://www.healthystartassoc.org/hswdir6.html	For more information access information online at: http://childcare.sc.gov/main/general/programs/headstart.aspx

Conclusion

Oral health is an essential component of the overall health status for pregnant women and for women across the lifespan. The intent of these guidelines is to increase the comfort level of health professionals and dental professionals in the oral health care of pregnant women. It is essential that the health professional recognize oral health care as a need and a priority area for women who are pregnant or who plan to become pregnant. Oral health must become a larger care priority during the perinatal period and health professionals must recognize the effect of poor oral health on the mother and the unborn child. In addition it is vitally important for the dental professional to feel comfortable and informed in the treatment of his/her pregnant patients and to promote access to care for pregnant patients, including those covered by Medicaid. Pregnant women need to be encouraged to go to the dentist and dental professionals need to make every effort to attend to the unique needs of pregnant patients. With a greater level of understanding and an increased attitude of collaboration between the health professional and the dental provider, great strides can be made in reducing problems that may arise from poor oral health care during pregnancy, in order to ensure that pregnant women and their children will have the best health outcomes possible.

DISCLAIMER

South Carolina Takes Action: Oral Health Care for Pregnant Women is offered as a resource tool for dentists, physicians, and other health care professionals. They are not intended to set specific standards of care or to provide legal or other professional advice. Professionals should always exercise their own professional judgment in a given situation with any given patient and consult with professional advisors for such advice.

References

American Academy of Pediatric Dentistry (2006). Policy on Use of a Caries-risk Assessment Tool (CAT) for Infants, Children, and Adolescents. Chicago (IL): American Academy of Pediatric Dentistry. Accessed on May 17, 2009 at: *http://www.aapd.org/media/Policies_Guidelines/P_CariesRiskAssess.pdf*

American Academy of Pediatric Dentistry (2007). Guidelines on Oral Health Care for the Pregnant Adolescent. Chicago (IL): American Academy of Pediatric Dentistry. Accessed on May 17, 2009 at: *http://www.aapd.org/media/Policies_Guidelines/G_Pregnancy.pdf*

American Dental Association (ADA) Statement on Dental Amalgam, (2008) Accessed on May 17, 2009 at: *http://www.ada.org/prof/resources/positions/statements/amalgam.asp*

American Dental Association Caries Risk Assessment Form (age > 6). Accessed on May 17, 2009 at: *http://www.ada.org/prof/resources/topics/topics_caries_over6.doc*

American Dental Association Council on Access, Prevention and Interprofessional Relations (CAPIR), November 2006. Oral Health Care Series, Volume 1, Women's Oral Health Issues. Accessed May 18, 2009 at: *http://www.ada.org/prof/resources/topics/healthcare_womens.pdf*

American Dental Association, U.S. Food & Drug Administration. (2004). The Selection of Patients For Dental Radiograph Examinations. Accessed on May 17, 2009 at: *http://www.ada.org/prof/resources/topics/radiography.asp*

American Dental Association. FDA Proposes Major Revisions to Drug Labeling. June 4, 2008. Accessed May 18, 2009 at: *http://www.ada.org/prof/resources/pubs/adanews/adanewsarticle.asp?articleid=3050*

American Dental Association/US Department of Health and Human Services. The Selection of Patients for Dental Radiographic Examinations—2004. Accessed May 17, 2009 at: *http://www.ada.org/rof/resources/topics/topics_radiography_examinations.pdf*

Casamassimo P, Holt K, eds. (2004). Bright Futures in Practice: Oral Health—Pocket Guide. Washington, DC: National Maternal and Child Oral Health Resource Center. Accessed on May 17, 2009 at: *http://www.mchoralhealth.org/PocketGuide/index.html*

Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans G, et al. (2007). Trends in oral health status: United States, 1988–1994 and 1999–2004. National Center for Health Statistics. Vital Health Stat 11(248). Access on May 17, 2009 at: *http://www.cdc.gov/nchs/data/series/sr_11/sr11_248.pdf*

Featherstone J, Domejean-Orliaguet, S, Jenson L, Wolfe M, and Young D. (2007). Caries Risk Assessment in Practice for Age 6 Through Adult, California Dental Association Journal. *http://www.scdhec.gov/co/phsis/Biostatistics/an_pubs/PRAMS_Oral_Health_final.pdf*

Heron MP, Hoyert DL, Xu J, Scott C, Tejada-Vera B. Deaths: Preliminary data for 2006. National vital statistics reports; vol 56 no 16. Hyattsville, MD: National Center for Health Statistics. 2008.

Kumar J, Samelson R, eds. (2006). Oral Health Care During Pregnancy and Early Childhood: Practice Guidelines. Albany, NY: New York State Department of Health. Accessed on May 17, 2009 at: *http://www.health.state.ny.us/publications/0824.pdf*

Kumar, J Iida, H, eds. (2008) Oral Health Care During Pregnancy: A Summary of Practice Guidelines. National Maternal and Child Health Oral Health Resource Center, Georgetown University. Accessed on May 17, 2009 *at: http://www.mchoralhealth.org/PD1Fs/Summary_PracticeGuidelines.pdf*

National Maternal and Child Oral Health Resource Center (NMCOHRC), (2008). Access to Oral Health Care During the Perinatal Period: A Policy Brief. Accessed on May 17, 2009 at: *http://www.mchoralhealth.org/materials/perinatal.html*

Ramos-Gomez, FJ, Weintraub, JA, Gansky SA, Hoover CI, Featherstone JD (2002). Bacterial, behavioral and environmental factors associated with early childhood caries. Journal of Clinical Pediatric Dentistry 26(2): 165-173

Reference Card From the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) (2003). Access on May17, 2009 at: *http://www.nhlbi.nih.gov/guidelines/hypertension/phycard.pdf*

S.C. Department of Health and Environmental Control. South Carolina PRAMS Special Delivery, Oral Health during Pregnancy in South Carolina, 2004-2005. (2007, April), 4:1. Accessed on May 17, 2009 at:

S.C. Department of Health and Environmental Control. Office of Public Health Statistics and Information Services, Division of Biostatistics. http://www.scdhec.net/co/phsis/biostatistics/

U.S. Department of Health and Human Services. Healthy People 2010. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute. (2003, December). The "Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure" Department of Health and Human Services, NIH Publication No.03-5233December 2003. Accessed on May 17, 2009 at: *http://www.nhlbi.nih.gov/guidelines/hypertension/jnc7full.pdf*

U.S. Department of Health and Human Services (DHHS). Oral Health in America: A Report of the Surgeon General. (2000). NIH Publication No. 00-4713, Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research

U.S. Food and Drug Administration, Center for Drug Evaluation and Research. Summary of Proposed Rule on Pregnancy and Lactation Labeling. May 28, 2008. Accessed May 18, 2009 at: *http://www.fda.gov/cder/regulatory/pregnancy_labeling/summary.htm*

Wilson W, Taubert K, Gewitz M, Lockhart P, Baddour L, Levison M, Bolger A, Cabell C, Takahashi M, Baltimore R, Newburger J, Strom B, Tani L, Gerber M, Bonow R, Pallasch T. Shulman S, Rowley A, Burns J, Ferrieri P, Gardner T, Goff D and Durack, D (2007), Prevention of Infective Endocarditis: Guidelines from the American Heart Association in Journal of the American Dental Association 2008. Accessed online on May 17, 2009 at: *http://jada.ada.org/cgi/reprint/139/suppl_1/3S*

Appendix: Referral Form for Pregnant Women to Receive Dental Care

Referred to: _____ Date: _____

Patient's Name: (First) _____ (Last): _____

Known allergies: _____

Estimated delivery date: _____ Week of gestation today: _____

Precautions: _____ None

Specify if any: _____

_____

Patient may have (check all that apply):		
	Acetaminophen with codeine for pain control	
	Alternative pain control medication	Please Specify:
	Amoxicillin	
	Cephalosporins	
	Clindamycin	
	Erythromycin (not estolate form)	
	Penicillin	
	Local Anesthetic with epinephrine	
	Other, specify	

Name: _____ Date: _____ Phone: _____

Signature: _____

Do not hesitate to call with questions

Adapted from: Kumar J, Samelson R, eds. (2006). Oral Health Care During Pregnancy and Early Childhood: Practice Guidelines. Albany, NY: New York State Department of Health. Accessed on May 17, 2009

Appendix: Dentist's Report: For the Prenatal Health Professional

Date: _____

Patient's Name: (First) _____ (Last): _____

DOB: _____

Diagnosis: _____

Treatment plan: (check all that apply):	
	Dental examination
	Dental prophylaxis
	Scaling and root planning
	Extraction
	Dental X-rays with abdominal and thyroid lead shield
	Local anesthetic with epinephrine
	Root canal
	Restorations filling cavities
	Other, specify

Name: _____ Date: _____ Phone: _____

Signature: _____

Contact information: _____

Adapted from: Kumar J, Samelson R, eds. (2006). Oral Health Care During Pregnancy and Early Childhood: Practice Guidelines. Albany, NY: New York State Department of Health. Accessed on May 17, 2009

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