# Complete Summary

## GUIDELINE TITLE

Guideline on oral health care for the pregnant adolescent.

## BIBLIOGRAPHIC SOURCE(S)

American Academy of Pediatric Dentistry (AAPD). Guidelines on oral health care for the pregnant adolescent. Chicago (IL): American Academy of Pediatric Dentistry (AAPD); 2007. 9 p. [47 references]

## GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT



## SCOPE

### DISEASE/CONDITION(S)

Oral health conditions and diseases, such as:

- Oral injury
- Xerostomia
- Dental caries
- Dental erosion
- Perimyolysis
- Gingivitis
- Periodontitis
- Infection (*Bacteroides, Prevotella, Porphyromonas, Streptococcus mutans*)
- Pain

### GUIDELINE CATEGORY

Counseling
Evaluation
Management
Prevention
Risk Assessment

## CLINICAL SPECIALTY

Dentistry
Family Practice
Obstetrics and Gynecology
Pediatrics
Preventive Medicine

## INTENDED USERS

Allied Health Personnel
Dentists
Health Care Providers
Health Plans
Managed Care Organizations
Physicians
Public Health Departments

## GUIDELINE OBJECTIVE(S)

To address management of oral health care particular to the pregnant adolescent

**Note**: The guideline is not intended to provide specific treatment recommendations for oral conditions

## TARGET POPULATION

Pregnant adolescents

## INTERVENTIONS AND PRACTICES CONSIDERED

### Evaluation/Risk Assessment

1. Comprehensive evaluation including:
    - Medical, dental, and dietary history
    - Clinical examination
    - Caries risk assessment using the American Academy of Pediatric Dentistry's (AAPD's) caries-risk assessment tool
2. Radiographs, as indicated

### Management/Prevention

1. Counseling/anticipatory guidance
2. Preventative services
3. Referral to periodontist, if necessary

4. Mouth rinsing for morning sickness
5. Timing of elective restorative and periodontal therapies
6. Restorative care when necessary
7. Positive youth development (PYD)
8. Proper consent according to state law

### MAJOR OUTCOMES CONSIDERED

- Changes in levels and types of oral bacteria
- Incidence of preterm or low birth weight births associated with periodontitis
- Incidence of preeclampsia associated with periodontitis
- Levels of maternal discomfort based on trimester at treatment
- Incidence of improved oral hygiene during pregnancy

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A MEDLINE search was conducted using the terms "pregnancy", "adolescent pregnancy", "maternal", and "pre-term birth" with "oral health."

### NUMBER OF SOURCE DOCUMENTS

Not stated

### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

### METHODS USED TO ANALYZE THE EVIDENCE

Review

### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

This guideline is based on a review of the current dental and medical literature related to adolescent pregnancy.

### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

## DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The clinical guidelines of the American Academy of Pediatric Dentistry (AAPD) are developed under the direction of the Board of Trustees, utilizing the resources and expertise of its membership operating through the Council on Clinical Affairs (CCA).

Proposals to develop or modify guidelines may originate from 4 sources:

1. The officers or trustees acting at any meeting of the Board of Trustees
2. A council, committee, or task force in its report to the Board of Trustees
3. Any member of the AAPD acting through the Reference Committee hearing of the General Assembly at the Annual Session
4. Officers, trustees, council and committee chairs, or other participants at the AAPD's Annual Strategic Planning Session

Regardless of the source, proposals are considered carefully, and those deemed sufficiently meritorious by a majority vote of the Board of Trustees are referred to the CCA for development or review/revision.

Once a charge (directive from the Board of Trustees) for development or review/revision of a clinical guideline is sent to the CCA, it is assigned to 1 or more members of the CCA for completion. CCA members are instructed to follow the specified format for a guideline. All clinical guidelines are based on 2 sources of evidence: (1) the scientific literature; and (2) experts in the field. CCA, in collaboration with the Council on Scientific Affairs, performs a comprehensive review of current scientific literature for each document. In cases where scientific data does not appear conclusive, experts may be consulted.

The CCA meets on an interim basis (midwinter) to discuss proposed oral health policies and clinical guidelines. Each new or reviewed/revised guideline is reviewed, discussed, and confirmed by the entire council.

Some recommendations are evidence-based, while others represent best clinical practice and expert opinion.

## RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Once developed by the Council on Clinical Affairs (CCA), the guideline is submitted for the consideration of the Board of Trustees. While the board may request revision, in which case it is returned to the council for modification, once accepted by majority vote of the board, it is referred for Reference Committee hearing at the upcoming Annual Session. At the Reference Committee hearing, the membership may provide comment or suggestion for alteration of the document before presentation to the General Assembly. The final document then is presented for ratification by a majority vote of the membership present and voting at the General Assembly. If accepted by the General Assembly, either as proposed or as amended by that body, the document then becomes the official American Academy of Pediatric Dentistry (AAPD) clinical guideline for publication in the AAPD's Reference Manual and on the AAPD's Web site.

# RECOMMENDATIONS

## MAJOR RECOMMENDATIONS

The American Academy of Pediatric Dentistry (AAPD) recommends that all pregnant adolescents seek professional oral health care during the first trimester. After obtaining a thorough medical history, the dental professional should perform a comprehensive evaluation which includes a thorough dental history, dietary history, clinical examination, and caries risk assessment. The dental history includes, but is not limited to, discussion of preexisting oral conditions, signs/symptoms of such, current oral hygiene practices and preventive home care, previous radiographic exposures, and tobacco use. The adolescent's dietary history should focus on exposures to carbohydrates, especially due to increased snacking, and acidic beverages/foods. During the clinical examination, the practitioner should pay particular attention to health status of the periodontal tissues. The AAPD's caries-risk assessment tool (AAPD, "Policy on the use", 2006), utilizing historical and clinical findings, will aid the practitioner in identifying risk factors in order to develop an individualized preventive program.

Based upon the historical indicators, clinical findings, and previous radiographic surveys, radiographs may be indicated. Because risk of carcinogenesis or fetal effects is very small but significant, radiographs should be obtained only when there is expectation that diagnostic yield (including the absence of pathology) will influence patient care. If dental treatment must be deferred until after delivery, radiographic assessment also should be deferred. All radiographic procedures should be conducted in accordance with radiation safety practices. These include optimizing the radiographic techniques, shielding the pelvic region and thyroid gland, and using the fastest imaging system consistent with the imaging task. Image receptors of speeds slower than American National Standards Institute (ANSI) speed group E shall not be used.

Counseling for all pregnant patients should address:

1. Relationship of maternal oral health with fetal health (e.g., association of periodontal disease with preterm birth and pre-eclampsia)

2. An individualized preventive plan including oral hygiene instructions, rinses, and/or xylitol gum to decrease the likelihood of *Streptococcus mutans* (SM) transmission postpartum
3. Dietary considerations (e.g., maintaining a healthy diet, avoiding frequent exposures to cariogenic foods and beverages, overall nutrient and energy needs)
4. Anticipatory guidance for the infant's oral health including the benefits of early establishment of a dental home
5. Anticipatory guidance for the adolescent's oral health to include injury prevention, oral piercings, tobacco and substance abuse, sealants, and third molars
6. Oral changes that may occur secondary to pregnancy (e.g., xerostomia, shifts in oral flora)
7. Individualized treatment recommendations based upon the specific oral findings for each patient

Preventive services must be a high priority for the adolescent pregnant patient. Ideally, a dental prophylaxis should be performed during the first trimester and again during the third trimester if oral home care is inadequate or periodontal conditions warrant professional care. Referral to a periodontist should be considered in the presence of progressive periodontal disease. While fluoridated dentifrice and professionally-applied topical fluoride treatments can be effective caries preventive measures for the expectant adolescent, the AAPD does not support the use of prenatal fluoride supplements to benefit the fetus (AAPD, 2007).

A pregnant adolescent experiencing morning sickness should be instructed to rinse with a cup of water containing a teaspoon of sodium bicarbonate and to avoid tooth brushing for about 1 hour after vomiting to minimize dental erosion caused by stomach acid exposure (New York State Dept of Health, 2006). Where there is established erosion, fluoride may be used to minimize hard tissue loss and control sensitivity. A daily neutral sodium fluoride mouth rinse or gel to combat enamel softening by acids and control pulpal sensitivity may be prescribed (Linnett & Seow, 2001). A palliative approach to alleviate dry mouth may include increased water consumption or chewing sugarless gum to increase salivation.

Customary practice regarding invasive dental procedures requires certain precautions during pregnancy, particularly during the first trimester. Elective restorative and periodontal therapies should be performed during the second trimester. Dental treatment for a pregnant patient who is experiencing pain or infection should not be delayed until after delivery. When selecting therapeutic agents for local anesthesia, infection, postoperative pain, or sedation, the dentist must evaluate the potential benefits of the dental therapy versus the risk to the pregnant patient and the fetus. The practitioner should select the safest medication, limit the duration of the drug regimen, and minimize dosage. Health care providers should avoid the use of aspirin, aspirin-containing products, erythromycin estolate, and tetracycline in the pregnant patient (New York State Dept of Health, 2006).

Patients requiring restorative care should be counseled regarding the risk and benefits and alternatives to amalgam fillings. The dental practitioner should use rubber dam and high speed suction during the placement or removal of amalgam

to reduce the risk of vapor inhalation (Whittle, Whittle, & Sarll, 1998). Consultation with the prenatal medical provider should precede use of nitrous oxide/oxygen analgesia/anxiolysis during pregnancy. Nitrous oxide inhalation should be limited to cases where topical and local anesthetics alone are inadequate. Precautions must be taken to prevent hypoxia, hypotension, and aspiration (Rosen, 1999).

The pediatric dentist should incorporate positive youth development (PYD) (AAPD, "Guideline on adolescent", 2006) into care for the adolescent patient. This approach goes beyond traditional prevention, intervention, and treatment of risky behaviors and problems and suggests that a strong interpersonal relationship between the adolescent and the pediatric dentist can be influential in improving adolescent oral health and transitioning to adult care. Through positive youth development, the dentist can promote healthy lifestyles, teach positive patterns of social interaction, and provide a safety net in times of need. At a time agreed upon by the patient, parent, and pediatric dentist, the patient should be transitioned to a practitioner knowledgeable and comfortable with managing that patient's specific oral care needs.

Dental practitioners must be familiar with state statutes that govern consent for care for a pregnant patient less than the age of majority. If a pregnant adolescent's parents are unaware of the pregnancy, and state laws require parental consent for dental treatment, the practitioner should encourage the adolescent to inform them so appropriate informed consent for dental treatment can occur.

### CLINICAL ALGORITHM(S)

None provided

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

All clinical guidelines are based on 2 sources of evidence: (1) the scientific literature; and (2) experts in the field.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

- Improved management of oral health care in pregnant adolescents.
- Avoidance of fetal hypoxia, premature labor/abortion, and teratogenic effects.
- Prevention of any dental infections or other complications from occurring in the third trimester.

- Promotion of healthy lifestyles, teaching of positive patterns of social interaction, and provision of a safety net in times of need.
- Reduction in salivary *Streptococcus mutans* (SM) in the offspring.

### POTENTIAL HARMS

- Exposure to radiation
- Aspiration, particularly during the last trimester
- Vapor inhalation from placement or removal of amalgam
- Hypoxia, hypotension, or aspiration from the use of nitrous oxide

## CONTRAINDICATIONS

### CONTRAINDICATIONS

- Health care providers should avoid the use of aspirin, aspirin-containing products, erythromycin estolate, and tetracycline in the pregnant patient.
- Due to the increased risk of pregnancy loss, use of nitrous oxide may be contraindicated in the first trimester of pregnancy.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms
Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better
Staying Healthy

### IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

American Academy of Pediatric Dentistry (AAPD). Guidelines on oral health care for the pregnant adolescent. Chicago (IL): American Academy of Pediatric Dentistry (AAPD); 2007. 9 p. [47 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2007 May

### GUIDELINE DEVELOPER(S)

American Academy of Pediatric Dentistry - Professional Association

### SOURCE(S) OF FUNDING

American Academy of Pediatric Dentistry

### GUIDELINE COMMITTEE

Council on Clinical Affairs—Committee on the Adolescent

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

The Council on Clinical Affairs and Council on Scientific Affairs are comprised of pediatric dentists representing the six geographical districts of the American Academy of Pediatric Dentistry (AAPD) along with additional consultants confirmed by the Board of Trustees.

### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Council members and consultants were asked to disclose potential conflicts of interest. None was identified.

### GUIDELINE STATUS

This is the current release of the guideline.

### GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Pediatric Dentistry Web site.

Print copies: Available from the American Academy of Pediatric Dentistry, 211 East Chicago Avenue, Suite 700, Chicago, Illinois 60611.

### AVAILABILITY OF COMPANION DOCUMENTS

Information about the American Academy of Pediatric Dentistry (AAPD) mission and guideline development process is available on the AAPD Web site.

The following implementation tools are available for download from the AAPD Web site:

- Dental growth and development chart
- American Academy of Pediatric Dentistry Caries-Risk Assessment Tool (CAT)

### PATIENT RESOURCES

None available

### NGC STATUS

This NGC summary was completed by ECRI Institute on April 3, 2008. The information was verified by the guideline developer on April 30, 2008.

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