Massachusetts
Department of
Public Health

MASSACHUSETTS
ORAL HEALTH PRACTICE GUIDELINES
FOR
PREGNANCY AND EARLY CHILDHOOD

OCTOBER 2024

INFORMATION FOR PROVIDERS

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ORAL HEALTH PRACTICE GUIDELINES
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The Massachusetts
Oral Health Practice Guidelines
are available online at:
www.mass.gov/oralhealthpregnancy

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EXECUTIVE SUMMARY

The United States Department of Health and Human Services recognized the importance of oral health across the lifespan in its Healthy People 2030 health promotion and disease-prevention goals and objectives. Oral health is one of the 23 Healthy People 2030 Leading Health Indicators, more specifically increase use of the oral health care system among children, adolescents, and adults.[1] Additionally, Healthy People 2030 includes 15 other objectives related to oral health including improving oral health status, and increasing access to oral health prevention and treatment service.[2] In 2000, the Surgeon General's report, Oral Health in America, identified oral diseases as the "silent epidemic" affecting millions of children and adults in the United States.[3] Since then, evidence of the effects of poor oral health on systemic health and social and economic well-being has accumulated. Since 2010, universal access to affordable dental care has been a priority for the Massachusetts Title V Maternal and Child Health Program which has led to several initiatives to improve oral health among pregnant people and young children.

This resource builds on state and national efforts to promote information, share best practices, and educate healthcare providers across professions for the benefit of patients, including pregnant people, children, and families, receiving oral health care.

In 2013, the Title V Program, in collaboration with the Office of Oral Health at the Massachusetts Department of Public Health (DPH), convened a statewide summit to lay a foundation for the integration of dental care into routine prenatal care. DPH also endorsed efforts by Massachusetts Health Quality Partners to include oral health in its 2013 Perinatal Care Recommendations. Subsequently, DPH convened an Oral Health Advisory Committee and work groups to develop oral health care practice guidelines for providers who care for pregnant people and young children.

Massachusetts data show that pregnant people are much less likely to obtain oral health care during pregnancy than before pregnancy.[4] The American College of Obstetricians and Gynecologists emphasizes that dental treatment is safe and desirable during pregnancy.[5] Obstetric healthcare providers can educate their patients while coordinating and collaborating with oral healthcare providers to improve their patient's oral health. The oral health practice guidelines for prenatal providers in this resource include instructions on how to assess oral health status, advise and educate patients, and recommendations for referral and collaboration with oral healthcare providers. Furthermore, this section describes how the normal and pathologic aspects of pregnancy may affect oral health and related care.

Similarly, specific recommendations for oral healthcare providers include assessment (e.g., health history, dental history, comprehensive examination including blood pressure and radiographs as appropriate), advice and education, and the provision of all necessary treatment. Pregnancy itself should not affect the type or quality of oral health care offered to pregnant patients. However, oral healthcare providers must be aware of medications which are acceptable for use during pregnancy (Appendix 1).

Improving pregnant and postpartum people's oral health will also improve the health of their children by decreasing transmission of decay causing bacteria. Dental caries (cavities) is the most prevalent chronic condition among children.[6] All healthcare providers can cooperate together to reduce caries risk for their

young patients. Oral health practice guidelines for pediatric healthcare providers include recommendations for assessment of oral health among children, including those with special health care needs. Appendices include risk assessment tools, information on fluoride use, prescribing guidelines, and a list of Massachusetts communities that benefit from community water fluoridation.

Community water fluoridation is the most cost effective preventive measure for tooth decay for all individuals, including pregnant people, and it is the foundation for better oral health.[7] Healthcare providers may advise and educate patients with respect to diet and oral hygiene, complete an oral health screening, provide intervention including fluoride varnish application, and make a referral to a dental home. A dental home may be the office of a general dentist who feels comfortable treating pregnant patients and young children, a pediatric dental office that specializes in the treatment of children (pedodontist), or another location where a patient can receive consistent and comprehensive dental care. All healthcare providers may benefit from reviewing the appendices that include a list of perinatal oral health guidelines and tools, and resources including information on MassHealth (Medicaid).

This resource builds on state and national efforts to promote information, share best practices, and educate healthcare providers across professions for the benefit of patients, including pregnant people, children, and families, receiving oral health care. DPH will publish this resource and maintain it as an electronic document online at mass.gov/oralhealthpregnancy.

INTRODUCTION

ORAL DISEASES: THE SILENT EPIDEMIC

Oral health is essential to promote general health and well-being. In 2000, the Surgeon General's report on oral health, Oral Health in America, identified oral diseases as the "silent epidemic" affecting millions of children and adults in the United States.[3] The United States Department of Health and Human Services recognized the importance of oral health across the lifespan in its health promotion and disease prevention goals and objectives for Healthy People 2030. Moreover, oral health—more specifically increasing the use of the oral health care system among children, adolescents, and adults—is one of the 23 Healthy People 2030 Leading Health Indicators, which are designed to guide efforts to improve overall health and well-being across the U.S. Additionally, Healthy People 2030 includes 15 other objectives related to oral health, including improving oral health status and increasing access to oral health prevention and treatment services.[2]

Women are at risk for oral conditions during pregnancy and across the lifespan.

During pregnancy, physical and physiological changes occur that can adversely affect the mouth. Gingivitis is the most common oral condition of pregnancy.[8],[9] Left untreated, gingivitis may progress to periodontal disease which may destroy both soft and hard tissues.[10] Other oral conditions that commonly occur during pregnancy include benign oral gingival lesions, tooth mobility, tooth erosion and dental caries (cavities).[11] Pregnant people are at high risk for dental caries due to increased exposure to gastric acid resulting from morning sickness early in pregnancy or an incompetent esophageal sphincter and gastric pressure later in pregnancy. Other causes of dental caries during pregnancy include inadequate amounts of fluoride, high intake of sugary food or beverages, and a lack of oral health care.[12] In addition, pregnant people who have caries may transmit caries-causing bacteria to their infants.[12] Furthermore, oral health disorders have been found to be associated with a number of diseases affecting people across their lifespan, including cardiovascular disease, diabetes, Alzheimer's disease, respiratory infections, and osteoporosis of the oral cavity.[5]

Dental caries is the number one chronic condition in children; oral health care is the most common unmet health care need in children.

Among children, dental caries is the number one chronic condition; it is five times more prevalent than asthma.[13] In 2020, parent-reported prevalence of dental decay among children ages 1–17 was 12.1% nationally, and unmet dental needs increased 51.7%, from 2.9% to 4.4% between 2019 and 2020.

According to the National Health and Nutrition Examination Survey, "approximately 23% of children ages 2-5 had experienced dental caries in primary teeth in 2011-2016" and "17% of children ages 6-11 had experienced dental caries in permanent teeth" during 2011-2016.[14,15]

Untreated caries may cause pain, school absences, difficulty concentrating, and poor dental appearance, all of which can adversely affect a child's quality of life and ability to succeed academically and socially.[16] Although a critical component of overall health, oral health care is the most common unmet health care need among children.[17]

Improving oral health care requires:

- Addressing inequities and disparities
- Increasing health literacy
- Using special accommodations and strategies

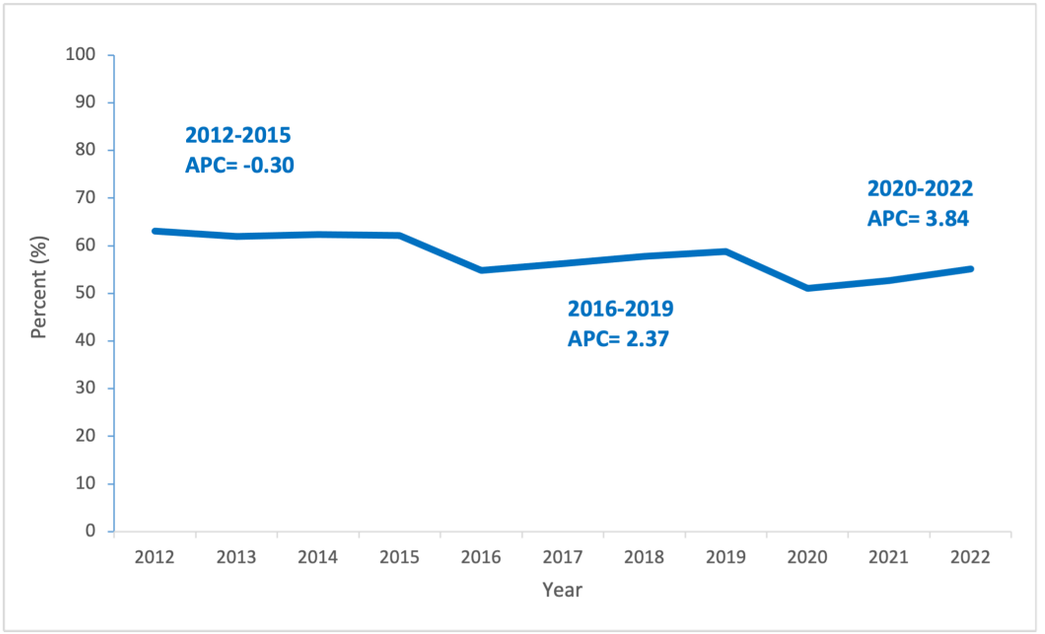
According to the National Center for Health Statistics, 4.3 million U.S. children ages 2-17 had unmet dental needs in 2010 because their families could not afford dental care.[18] Under the Affordable Care Act (ACA), pediatric dental coverage is considered an essential benefit; health insurance marketplaces created under the ACA must offer choice and availability of oral health coverage for everyone.[19] To effectively improve oral health among pregnant people and children, it is important to understand and address two contributing factors: health literacy and oral health disparities by race, ethnicity, and income. Often, those with low levels of health literacy are found among those who are most vulnerable to poor oral hea lth.[20,21]

Children with special health care needs (CSHCN) are a group for whom oral health care can present additional challenges. According to the Health Resources and Services Administration, these children are defined as "… those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally." About 23.4% of Massachusetts children ages 0-17 met this definition in 2020-2021.[20,22] These children require special accommodations and strategies to successfully receive prevention and treatment services in community settings. To address these issues across diverse, vulnerable populations, it is important for providers to understand the populations they serve and provide culturally and linguistically appropriate care to meet their needs.

STATUS OF ORAL HEALTH AMONG PREGNANT WOMEN AND CHILDREN IN MASSACHUSETTS

According to data collected by DPH using the Pregnancy Risk Assessment Monitoring System (PRAMS), the overall prevalence of dental cleaning during pregnancy steadily declined during 2012-2016 from 63.0% to 54.9% with an annual percentage change (APC) of 2.6%.[23] From 2017-2019, following the release of the Oral Health Practice Guideline for Pregnancy and Early Childhood 2016, there was an increase from 56.2% to 58.8% with an APC of 2.29%.[24] Later in 2020, there was a sharp decline to 51.1%, which can mostly likely be attributed to the lack of services during the COVID-19 pandemic.[25] Furthermore, the 2021 rate showed a slight improvement with a rate of 52.7% and in 2022, the rate rose to 55.1%. None of these changes across all years were statistically significant (Figure 1).

Figure 1. Trends of Teeth Cleaning during Pregnancy, Massachusetts PRAMS 2012-2022



While a similar pattern was observed in the trends across all racial/ethnic groups, racial gaps have not improved and should continue to be closely monitored (Figure 2). Over the past decade, dental cleaning rates statistically and significantly declined for all age groups, with rates consistently higher among ages 30-39 and ages 40 or older (Figure 3). In addition, there are persistent gaps in the trends of dental cleaning during pregnancy among people who utilize Medicaid compared to those who utilize private insurance. Dental cleaning during pregnancy among Medicaid participants declined steadily during 2012-2022 from 53.7% to 38.0% with an APC of -3.20%. While a similar decline was observed among people utilizing private insurance, the decline is more modest with an APC of -1.09% (Figure 4).

Figure 2. Trends of Teeth Cleaning during Pregnancy by Race and Ethnicity, Massachusetts PRAMS 2012-2022

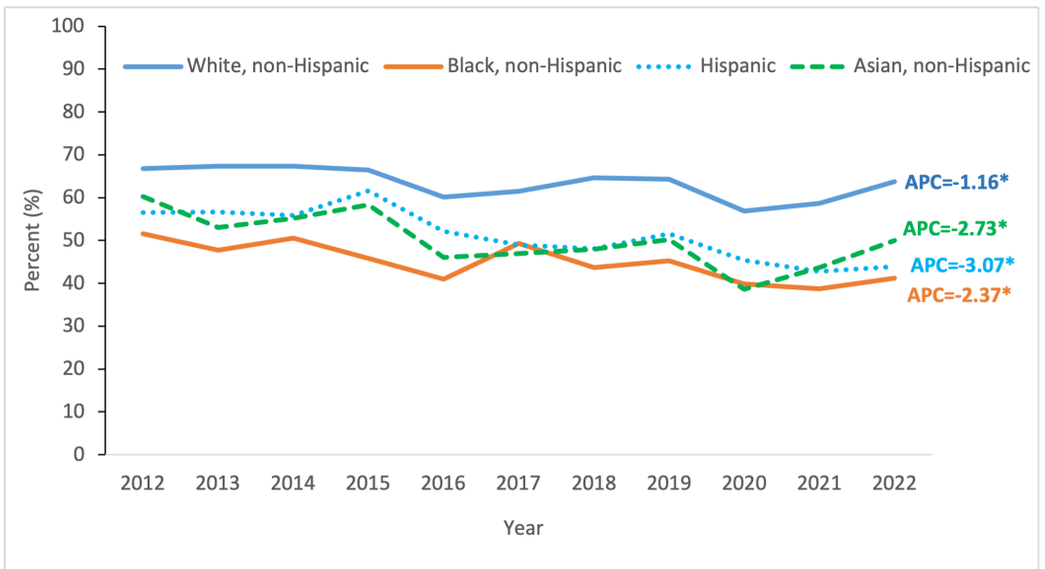


Figure 3. Trends of Teeth Cleaning during Pregnancy by Age, Massachusetts PRAMS 2012-2022

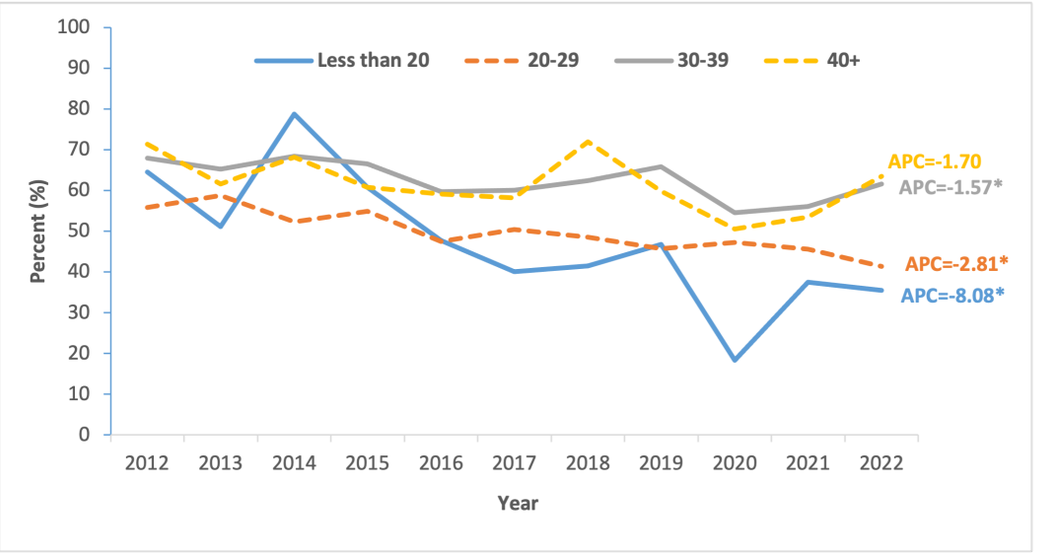
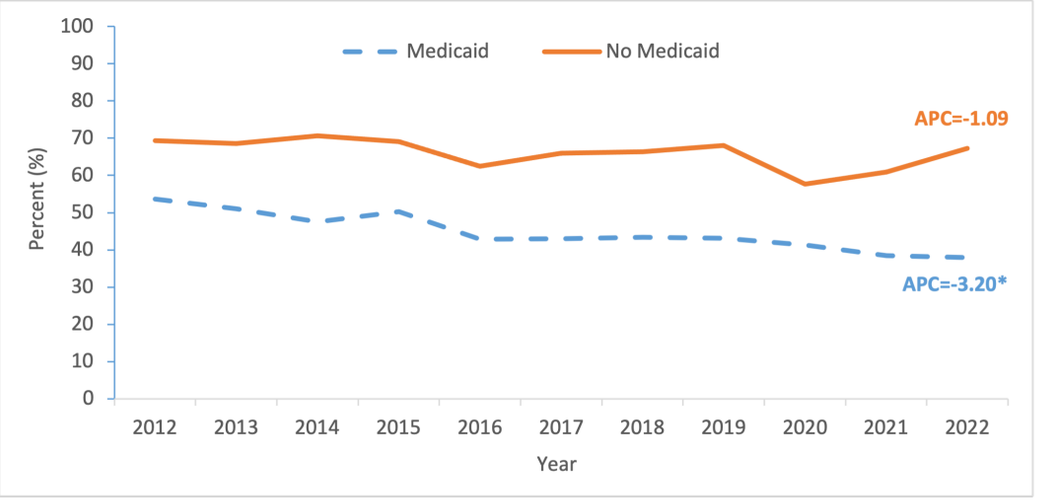


Figure 4. Trends of Teeth Cleaning during Pregnancy by Prenatal Care Insurance Type, Massachusetts PRAMS 2012-2022



In 2022, 52.7% of people who gave birth reported having dental cleaning during the last 12 months before pregnancy and 55.1% reported cleanings during pregnancy, which is higher than the rate of 50% for 2011. PRAMS respondents ages 30-39 and ages 40 or older were more likely than those who are younger to have their teeth cleaned during pregnancy (Figure 5).

Figure 5. Prevalence of Teeth Cleaning During Pregnancy by Age, Massachusetts PRAMS 2022

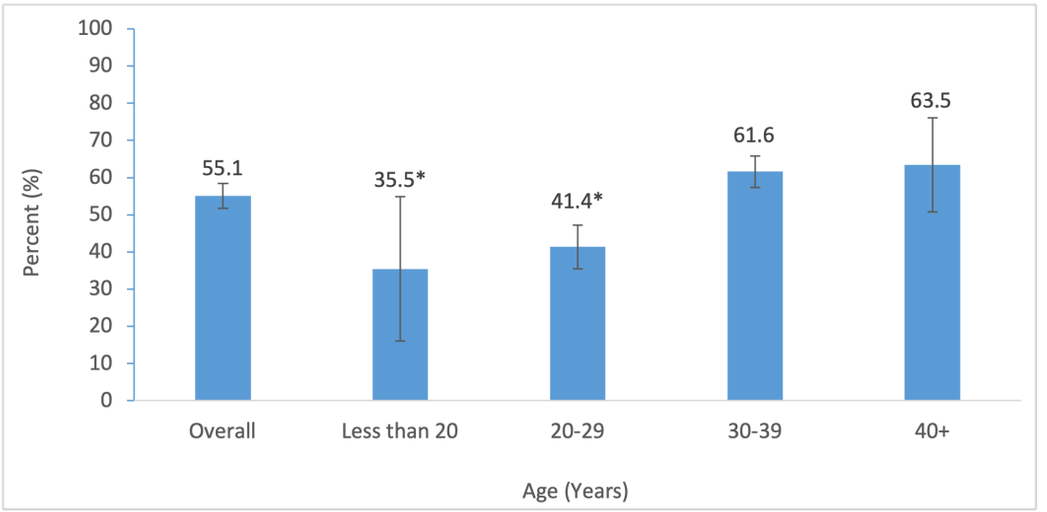


Figure 5 shows the percentage of people who reported having their teeth cleaned during pregnancy by four age categories. People who were ages 20 and younger had the lowest prevalence of teeth cleaning during pregnancy at 35.5%, which was statistically significantly lower compared to those 30-39 (41.4% for those ages 20-29, 61.6% for those ages 30-39, and 63.5% for those ages 40 and older). There was no statistical difference in prevalence between those 30-39 and those ages 40 and older.

Among different racial/ethnic groups, White, non-Hispanic people were most likely to have their teeth cleaned during pregnancy compared to any other racial or ethnic groups. For Black, non-Hispanic, Hispanic, and Asian non-Hispanic individuals, less than 50% had cleanings during pregnancy, which is statistically significantly lower compared to their White, non-Hispanic counterparts (Figure 6).

Figure 6. Prevalence of Teeth Cleaning During Pregnancy by Race and Hispanic Ethnicity, Massachusetts PRAMS 2022

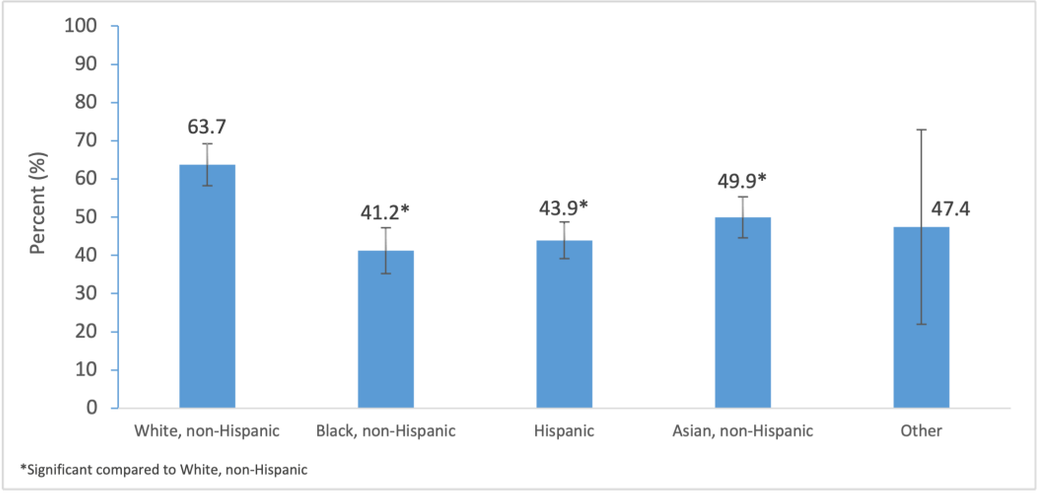


Figure 6 shows the percentage of birthing people who reported having their teeth cleaned during pregnancy by five racial/ethnic categories. Among PRAMS respondents, 63.7% of White, non-Hispanic, 41.2% of Black, non-Hispanic, 43.9% of Hispanic, 49.9% of Asian, non-Hispanic, and 47.4% of Other, non-Hispanic reported teeth cleaning. Compared those who identified as White, non-Hispanic, there were no overlaps in the 95% confidence intervals, indicating a statistically significant difference among Black non-Hispanic, Hispanic, and Asian, non-Hispanic respondents. The 95% confidence intervals overlapped between White, non-Hispanic and Other non-Hispanic respondents, indicating no statistically significant differences between the two groups.

In 2022, pregnant people with private insurance were more likely to have their teeth cleaned during pregnancy (68.2%) than those with Medicaid insurance (38.0%) (Figure 7).

Figure 7. Prevalence of Teeth Cleaning during Pregnancy by Insurance, Massachusetts PRAMS 2022

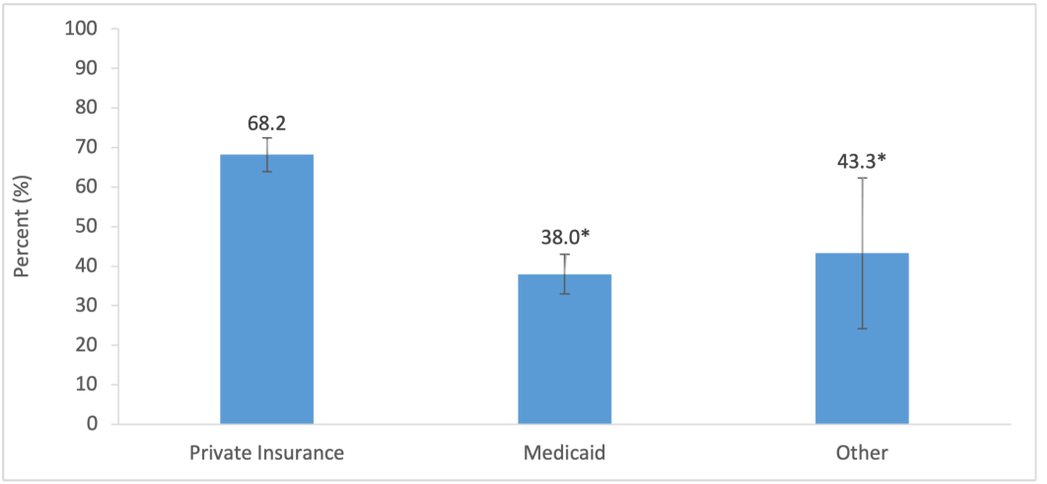


Figure 7 shows the percentage of people who reported having their teeth cleaned during pregnancy by three insurance categories. Among those with private insurance and Medicaid, 68.2% and 38.0% reported teeth cleaning, respectively. Among all other pregnant people, including those with no insurance or utilizing other public insurance, 43.3% reported teeth cleaning. People who had private insurance were statistically significantly more likely to have teeth cleaning during pregnancy than those utilizing Medicaid and all other pregnant people.

While the oral health of children in Massachusetts is better than the national average, there is opportunity for improvement. According to the 2021-2022 National Survey of Children's Health, 82.1% of Massachusetts parents of children ages 1-17 rated the condition of their children's teeth as excellent or very good compared to 77.1% for the national average, while 3.3% rated it as poor or fair compared to 5.6% for the national average.26 These differences were all statistically significant. Moreover in 2021-2022, 17.3% of Massachusetts parents with children with special health care needs (SHCN) reported one or more oral health problems such as toothaches, bleeding gums or decayed teeth or cavities in a 12-month period compared to 9.8% of parents with children without SHCN. In addition, the percent reporting the condition of children's teeth as a) excellent

or very good, b) good, or c) fair or poor were rated respectively for children with SHCN as 70.9%, 21.2% and 7.9% compared to 85.5%, 12.4%, and 1.8%, respectively for children without SHCN.[26]

NATIONAL EFFORTS TO ADDRESS ORAL HEALTH AMONG PREGNANT PATIENTS AND CHILDREN

Several national organizations have undertaken various efforts including statements, guidelines, educational materials, and tools to promote and improve oral health among pregnant people and children. National organizations involved in such efforts include the American College of Obstetricians and Gynecologists (ACOG), the American Academy of Pediatric Dentistry (AAPD), the American Academy of Pediatrics (AAP), the American Academy of Periodontology, the American Academy of Physician Assistants (AAPA), the American College of Nurse-Midwives (ACNM), the Society of Teachers in Family Medicine (STFM), and the American Dental Association (ADA).

In 2008, an expert panel convened by the U.S. Maternal and Child Health Bureau (MCHB) developed strategies for improving perinatal oral health. One strategy was to "promote the use of guidelines addressing oral health during the perinatal period and to disseminate guidelines to maternal and child health and oral health professionals." This led to the development of a national consensus statement in collaboration with ACOG and the ADA "Oral Health Care during Pregnancy: A National Consensus Statement," as well as a Committee Opinion from ACOG titled, "Oral Health Care During Pregnancy and Through the Life Span." In addition, several states including New York, California, South Carolina, and Washington developed statewide practice guidelines for perinatal oral health. In 2020, the Oral Health Section of the American Public Health Association (APHA), approved a new oral health policy statement, "Improving Access to Dental Care for Pregnant Women through Education, Integration of Health Services, Insurance Coverage, an Appropriate Dental Workforce, and Research."[27] The consensus statement and other policies and guidelines, including links where available, are included in Appendix 2.

MASSACHUSETTS EFFORTS TO ADDRESS ORAL HEALTH FOR PREGNANT PATIENTS AND CHILDREN

In 2010, the Massachusetts Title V program selected oral health as one of its priorities, more specifically "Coordinating preventive oral health measures and promoting universal access to affordable dental care." The state performance measure for this priority was the "percentage of people with a recent live birth reporting that they had their teeth cleaned recently (during pregnancy and one year before or after)."

In 2011, DPH surveyed Massachusetts family medicine physicians, obstetricians-gynecologists (OB-GYN), dentists, and dental hygienists to identify opportunities for improvement in oral health care among pregnant people and children and had a 15% response rate. The responses suggested opportunities for improvement. For example, family medicine physicians and OB-GYN respondents do not routinely refer their pregnant patients to oral healthcare professionals. In addition, very few of these providers give their patients educational materials on oral health during pregnancy while higher proportions of dentists and dental hygienists provide this

information. Responses also suggest that the knowledge of perinatal oral health and its relationship to diseases, such as cardiovascular disease and birth outcomes, is not consistent across providers. Subsequently, Massachusetts held an oral health summit and convened an advisory committee to develop practice guidelines for pediatric, prenatal, and oral health providers for the oral health care of pregnant people and young children.

While the Massachusetts Oral Health Practice Guidelines for Pregnancy and Early Childhood were released in 2016, a 2023 survey of 86 obstetricians, family doctors and midwives in the state revealed the following results:

- 74% reported not hearing about the guidelines.
- 78% reported not being well-trained in oral health.
- 83% reported not often asking about oral health during prenatal visits.
- 66% reported not often referring pregnant patients to dental care,
- 45% reported not often referring prenatal patients with oral health issues (e.g., dental caries and periodontitis) to dental care.
- 88% reported not often examining the gums and teeth of patients during prenatal visits.
- 16% reported oral health is less important compared to other health issues in pregnancy.[28]

ROLE OF HEALTH CARE PROVIDERS IN IMPROVING ORAL HEALTH FOR PREGNANT PEOPLE AND CHILDREN

Establishing and maintaining good oral health during pregnancy and early childhood offers both opportunities and challenges. It requires education, coordination and collaboration among pregnant people, children and their families, and their prenatal care, pediatric, and oral health care providers. Prenatal and pediatric providers, including physicians, nurses, and medical assistants, can perform oral health screenings; provide oral health information, including prevention and treatment; complete interventions like fluoride varnish application; and offer referrals to and collaborate with oral health providers.

Typically, prenatal and pediatric providers refer patients to a general or pediatric dentist where they would also be seen by dental hygienists or dental assistants. These dental practitioners might then make subsequent referrals to dental specialists, such as periodontists, prosthodontists, endodontists, orthodontists, and oral and maxillofacial surgeons. Dental providers practice in diverse locations, including private practices, community health centers, dental schools, hospitals, and public health settings. In addition, community health workers can be a valuable resource in facilitating access to dental services for families where they are available.

The practice guidelines that follow provide specific information for prenatal, pediatric, and oral health providers about how to address the oral health care needs of their pregnant patients and children.


HEALTH CARE
PROVIDERS CAN
EDUCATE,
COORDINATE
AND
COLLABORATE

ORAL HEALTH PRACTICE GUIDELINES FOR PROVIDERS OF PREGNANT PATIENTS

Despite the evidence that dental care during pregnancy, including prevention and treatment, is safe and important to overall health, many pregnant people do not receive oral health care. ACOG issued in 2013, and reaffirmed in 2022, a Committee Opinion to emphasize the importance and safety of dental treatment during pregnancy.5 The practice guidelines included in this section are consistent with guidance from professional organizations and provide information about the provision of dental care, including advice and education to pregnant people. In addition to these practice guidelines, there are additional policies and guidelines provided in Appendix 2.

It is important for oral health providers who care for pregnant people to be aware of the effects of pregnancy on oral and systemic health. It is necessary to understand the physiologic changes throughout all three trimesters (1st trimester: through 13 weeks gestation; 2nd trimester: 14-27 weeks; and 3rd trimester: 28 weeks to birth [40 weeks +/-2 weeks]), as well as potential risks found during pregnancy. Normal physiologic changes include increased blood volume and lower blood pressure in the first trimester. Later in pregnancy, the uterus may put pressure on the vena cava necessitating that the patient change position during dental treatment.

Furthermore, it is important to know what medications or drugs a pregnant person is taking and only prescribe ones that are safe as medications and drugs can have significant effects on the fetus. A list of safe and unsafe antibiotics, analgesics, and anesthetics can be found in Appendix 1. Certain populations, including teens and people ages 35 and older, people with multiple pregnancies, and those with systemic diseases, such as HIV and Hepatitis C, are at increased risk for pregnancy complications or adverse birth outcomes. Oral health and prenatal providers should work together as needed to provide coordinated prevention and treatment services.

GUIDELINES FOR PRENATAL PROVIDERS

ASSESS ORAL HEALTH STATUS

- During the first prenatal visit, take an oral health history, including recent dental problems and dental care received. Ask questions about the patient's oral health history including::
  - Do you have swollen or bleeding gums, a toothache, problems eating or chewing food, or other problems in your mouth?
  - When was your last dental appointment?
  - What was the purpose of your last dental appointment?
  - Do you have dental insurance?
  - What is the name and contact information of your dentist? Or, do you need help finding a dentist?
- Provide a brief oral examination by checking teeth and gums. For training in proper oral examination, see Appendix 3 for links to the Smiles for Life Course 5: Oral Health and the Pregnant Patient, and Course 7: The Oral Examination training materials.
- Follow up on any oral health problems, as needed, in subsequent prenatal and post-partum visits.
- Document in the prenatal care record any oral health issues identified; status of smoking, alcohol, and marijuana or other drug use; and history of dental services received.

ADVISE AND EDUCATE

Provide reassurance to patients that fluoridation in community drinking water is safe and effective and ask about their consumption of tap versus bottled water. Note that bottled water may or may not be fluoridated.

For publicly supplied tap water, search the fluoridation status of the patient's drinking water via the Department of Public Health's Community Water Fluoridation Status website. Note, that private home well water may require additional testing for composition, including fluoride levels which may already be occurring within the natural supply, but could potentially exist at non-optimal levels (high or low) for good oral health.

Additional fluoridation information can be found at the following websites:

- CDC Community Water Fluoridation
- American Dental Association Fluoride in Water
- Campaign for Dental Health[29]

- Advise pregnant people about the following during prenatal visits:
  - The daily oral care of caregivers can influence the future routines of their children. Encourage caregivers to prioritize their own oral health in order to have a lasting, positive impact on their child's oral health.
  - Emphasize the importance of oral health care during pregnancy, including attending dental visits at least every 6 months and adhering to their oral health providers' recommendations.
  - Provide reassurance that dental care throughout pregnancy, including x-rays, dental restorations/extractions, pain medication and local anesthesia, is safe.

Community water fluoridation is the most cost-effective preventive measure for tooth decay for all individuals, including pregnant people, and it is the foundation for better oral health. One of the Healthy People 2030 oral health objectives is to increase the proportion of people whose water systems have the recommended amount of fluoride.[30]

- For dental restorations, the FDA in 2020 recommended that pregnant people, people who are planning to become pregnant, and lactating people and their newborns and infants should avoid amalgam (mercury-containing fillings) and choose composite resins and glass ionomer cement fillings instead. The FDA is not recommending anyone remove or replace existing amalgam fillings in good condition unless it is considered medically necessary because removing intact amalgam fillings can cause a temporary increase in exposure to mercury vapor and the potential loss of healthy tooth structure, potentially resulting in more risks than benefits.[31]
- Offer suggestions about ways to prevent tooth decay in pregnant people experiencing frequent nausea and vomiting including:
  - Eating small amounts of nutritious foods throughout the day (See Appendix 4 and Appendix 5 for a list of suggested foods)
  - Using a teaspoon of baking soda (sodium bicarbonate) in a cup of water as a rinse after vomiting to neutralize acid
  - Avoiding toothbrushing one hour after vomiting as stomach acid can weaken the enamel and cause hypersensitivity
  - Chewing sugarless gum after eating, which prevents transmission of bacteria (Strep mutans) to their children reducing children's risk of tooth decay[32]
  - Gently brushing with soft toothbrush and fluoride or nano-hydroxyapatite toothpaste to prevent damage to demineralized tooth surfaces
- Include oral health in prenatal care classes offered to pregnant people.

REFER AND COLLABORATE

- Refer pregnant people with identified oral health problems in the first or subsequent visits to oral health providers immediately.
- Develop referral procedures to oral health professional offices to facilitate timely appointments.
- Establish a process with your oral health referral sites to communicate back to your practice when/if the referred patient was seen.
- Establish a process for direct provider-to-provider communications between your oral health referral site provider(s) and the referring prenatal provider.
- Complete a referral form for the oral health providers. A sample form adapted from California Dental Society is provided in Appendix 6 (See Appendix 2 for a link to California Dental Association Foundation guidelines).
  - Include pertinent health information on the oral health referral form.
  - Include a list of medications that are safe to take during pregnancy. (See Appendix 1 for a list of medications that are safe to take as well as those to use with caution or avoid during pregnancy).
- Encourage people who have not seen a dentist in the last 6 months to schedule an appointment with their dentist. For people who do not have a regular source of dental care ("dental home"), assist them in locating a dental home in their communities.
  - When assisting patients to locate a dental home, determine the person's dental insurance coverage and refer them to providers who participate in their dental plans and are comfortable caring for pregnant people.
    - See Appendix 7 for a description of MassHealth coverage and contact information to help in finding MassHealth dental providers for patients.

GUIDELINES FOR ORAL HEALTH PROVIDERS

ASSESS ORAL HEALTH STATUS

- For new pregnant patients, take a full medical history and risk assessment. For existing patients, update their medical history when first seen during pregnancy. Include the following:
  - Primary reason or concern for visit
  - General health information including but not limited to primary care provider's name and contact information, medications taken, and the use of tobacco products, alcohol, and drugs
  - Prenatal information including due date, whether receiving prenatal care, name and contact information of prenatal care provider, and complications (e.g., high blood pressure, diabetes, morning sickness, severe or prolonged vomiting, bleeding disorders)
  - Social history including socioeconomic status, employment status, education, current access to social services, cultural status, literacy level, primary language, medical and dental insurance, home stability, members of household, and history of family/personal violence
  - Special needs, including medical, psychological, and physical needs
- Ask about the patient's oral health history including:
  - Acute and non-acute dental issues
  - Professional dental care received in the past
  - Home dental care practices
  - Past or current caries and risk for caries (See resource for Caries Risk Assessment and Management)
  - Diet and nutrition including consumption and frequency of sugary foods and drinks
  - Whether the patient lives in a fluoridated or non-fluoridated community and has a history of fluoride treatment (See Appendix 8 for a list of fluoridated communities in Massachusetts)
  - Other supplemental oral care tools such as calcium phosphate paste
  - Patient's concerns/questions about oral care and treatment during pregnancy
- Conduct examination:
  - Take blood pressure; immediately consult with prenatal providers for pregnant patients with high blood pressure (>140/90) to determine need for immediate referral or to continue dental care plan for the visit.
  - Perform a comprehensive oral examination and note any pregnancy-specific oral issues including those listed below (See Appendix 9 for example of oral conditions seen in pregnant people).Periodontal issues – pregnancy gingivitis, periodontitis exacerbation.
    - » Periodontal issues: Pregnancy gingivitis, periodontitis exacerbation
    - » Dental erosions: Secondary to severe or prolonged vomiting gastroesophageal reflux disease
    - » Common pregnancy related oral conditions:
      - › Pyogenic granuloma (i.e., pregnancy tumor)
      - › Tooth mobility (i.e., may be normal due to hormonal relaxation of connective tissue)
  - Take radiographs, as needed, based on risk and evidence using ADA-FDA

2012 guidelines. (See Appendix 2 for a link to the guidelines).
    - The American College of Obstetricians and Gynecologists (ACOG) has affirmed that dental radiography is safe and acceptable during all trimesters when clinically indicated to complete a thorough examination, diagnosis, and treatment plan.[5]

ADVISE AND EDUCATE

- Reassure patients on the safety of dental care during pregnancy, community water fluoridation, and restoration (both amalgam and composite) of untreated caries.
- Encourage patients with caries to get treatment as soon as possible.
- Inform patients to seek dental care for conditions that require immediate treatment, such as extractions and root canals.
- Reassure patients that dental treatments can be managed safely at any time during pregnancy, and that delaying treatment may result in more complex problems. (See Appendix 2 for links to the ACOG's Committee Opinion on Oral Health, Oral Health Care during Pregnancy: A National Consensus Statement-Summary of an Expert Workgroup Meeting, Oral Health Care during Pregnancy and through the Lifespan, and other state guidelines).
- Provide information to your patients about common oral health conditions and changes during pregnancy (e.g., pregnancy gingivitis) and how maternal oral health affects their child's oral health (e.g., the transmission of maternal caries bacteria to infants).
- Advise patients to have a dental cleaning by an oral healthcare provider every six months or more often as required.
- Discuss oral hygiene, fluoride, diet and nutrition, and dental visits with your patients:
    - Advise patients to brush teeth twice daily with a soft toothbrush and fluoride containing toothpaste, and floss daily to reduce gingival bleeding (some bleeding is normal during pregnancy).
    - Discuss fluoride, fluoride toothpaste, fluoride rinses, and nano-hydroxyapatite and their safety during pregnancy when used properly; include the safety of community water fluoridation if applicable.
    - Provide nutrition advice including:
        - Eating healthy foods and snacks, and limiting foods containing added sugar to avoid gaining excessive weight
        - Drinking water or low-fat milk and limiting juice, sport drinks, and all carbonated beverages
        - If experiencing vomiting and nausea, eating small amounts of nutritious foods throughout the day (See Appendix 4 and Appendix 5 for lists of healthy snacks)
    - Encourage patients to continue dental care throughout their pregnancy and during the postpartum period.
    - Encourage patients to find a dental home for themselves and their families.
    - Recommend that dental visits for children should begin within six months of the eruption of their first tooth or by age 1.
- Discuss other oral health topics/recommendations with women, as appropriate:
    - Recommend patients to rinse with a cup of water with a teaspoon of baking soda after vomiting. They should not brush for one hour after vomiting as stomach acid can cause loss of enamel and hypersensitivity.
    - Inform patients that chlorhexidine and other non-alcohol mouth rinses

are acceptable during pregnancy as needed (limit chlorhexidine duration to avoid staining of teeth).
    - Consider recommending sugarless gum or mints in the postpartum period (up to two years) to reduce transmission of oral bacteria to the infant.[32]
- Support prenatal health by encouraging the use of prenatal vitamins, attendance at prenatal visits, breastfeeding, etc.

PROVIDE TREATMENT AND MANAGEMENT

- Develop a comprehensive management plan during pregnancy and provide a dental home for patients. Discuss the following topics with patients:
    - Treatment options and the safety of all procedures and medications during pregnancy (See Appendix 1 for list of safe medications)
    - Possible barriers for oral health care during pregnancy including:
        - » Socioeconomic barriers (e.g., transportation, financial)
        - » Competing health issues, especially for those with special needs
        - » Fear and fatalistic attitudes, such as "lose one tooth for each baby"
        - » Lack of awareness among other health providers about the importance and safety of oral health care during pregnancy
- Communicate with prenatal providers for routine care if possible. If a pregnant patient has blood pressure higher than 140/90, call their prenatal provider immediately before providing treatment.
- Provide comprehensive treatment to address caries including:
    - Restoration, root canals, extractions as needed.
    - Avoid temporary material when possible (as it may be difficult for pregnant and postpartum women to return in the short term).
- Perform all necessary treatments for periodontitis for possible improved prenatal systemic health improvements including improvement in cardiometabolic risk, reduction in systemic inflammation and the occurrence of preterm deliveries;[33] read and follow antibiotic recommendations for pregnancy.
- Use practical tips that can help pregnant patients during visits:
    - In all trimesters: Keep patient's head higher than the level of their feet, use semi-reclining positions, and allow for frequent position changes.
    - Accommodate patient preferences for appointment times due to pregnancy related issues, such as morning sickness.
    - In the third trimester (28 weeks to birth): Place a pillow under right flank to position pregnant individual slightly on their left side to maximize blood flow return through the vena cava.
- Follow up with patients to check that they are carrying through with home care.
- Consider the use of teledentistry or portable/mobile care to provide an additional modality for access to care when indicated and clinically appropriate.
- Schedule follow up visits with patients.
- Consider modifying electronic system to track comprehensive oral health issues in pregnant patients.

COLLABORATION

- For patients without a medical home, help them make the connection to a provider.
- Establish a process with your medical home referral sites to communicate back to your practice when/if the referred patient was seen.
- Establish a process for direct provider-to-provider communications between your medical home referral provider(s) and the referring oral health provider.
- Consult with prenatal providers for high-risk patients, such as those with gestational diabetes or pre-eclampsia; the need for general anesthesia; and complex medical conditions, as needed.
- Update prenatal health providers with pertinent management plans, especially for high-risk patients, as needed.

Collaborate with prenatal providers as much as possible (e.g., giving inter-professional rounds, hosting a meet-and-greet with local prenatal providers).

ORAL HEALTH PRACTICE GUIDELINES FOR PROVIDERS OF PEDIATRIC PATIENTS

To ensure a lifetime of oral health, it is important for children to establish good oral health habits and a dental home as early as possible. The first dental visit should occur either within six months of the eruption of the child's first tooth or by age one. Deciduous teeth are essential for eating and speaking, as well as socialization, nutrition, and appearance. Moreover, they play a crucial role for holding the space for the adult teeth. Childhood oral health problems, including dental caries, may cause immediate complications as well as a lifetime of oral health issues including pain, local and systemic infections, poor eating and growth, poor self-esteem, financial costs, missed school days, and missed work for parents.[6,34,35]

Children with Special Health Care Needs (CSHCN) are children who typically require accommodations and strategies to address their specific physical, behavioral, and/or communication disabilities. Recommended accommodations and strategies may be found in "An Oral Health Professionals Guide for Serving Young Children with Special Health Care Needs."

Pediatric health providers, in collaboration with oral health care providers, play an important role in promoting good oral health and reducing the burden of early childhood caries. These guidelines support practitioners in these efforts and provide detailed information about how to provide optimal oral health care during early childhood. Other oral health policies and guidelines available to oral health providers are included in Appendix 2.

GUIDELINES FOR PEDIATRIC PROVIDERS

The practice guidelines presented below pertain to young children. Families of children with special health care needs may require additional assistance in preparing their child for a dental visit, including communication prior to the appointment.

ASSESS ORAL HEALTH STATUS

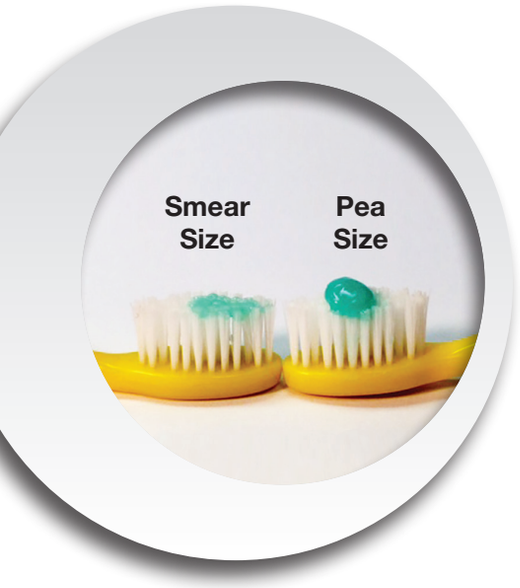
- Perform an oral health risk assessment. Ideally, the assessment should include an evaluation of risk factors, such as maternal (or primary caregiver) oral health status, continual bottle or sippy cup use with fluids other than water, frequent snacking, and special health care needs. The American Academy of Pediatrics (AAP) has developed an oral health risk assessment tool in English and Spanish (Appendix 2) that may be useful to providers.
  - Determine if the child lives in a fluoridated or non-fluoridated community, and whether the child drinks the community water. This is important because living in a non-fluoridated community may increase the risk of dental caries. There are approximately forty states, including Massachusetts, that provide public information on the fluoride content of community water systems through the CDC's My Water's Fluoride.[36] See Appendix 8 for a list of communities with fluoridated, partially fluoridated, and non-fluoridated water systems in Massachusetts.
- Perform an oral examination to look for white spots or visible decalcifications, obvious decay, restorations (fillings), visible plaque accumulation, and gingivitis (swollen/bleeding gums). Providers can reference the Smiles for Life course on performing an oral health examination.
- For information on performing an examination and fluoride varnish, see AAP's Oral Health Education and Training website or Appendix 2 for more resources.

ADVISE AND EDUCATE

- Advise and educate parents/caregivers about the importance of eating healthy foods and avoiding sugary drinks:
  - Serve age-appropriate healthy foods during planned meals and snacks.
    - » Encourage eating fruits and vegetables or other healthy snack options, such as grain products (e.g., whole grain crackers) and dairy products (e.g., milk, cheese, cottage cheese, unsweetened yogurt).
    - » Avoid sugary and sticky foods such as candy, processed crackers, sugar-based gum, cookies, cakes, fruit roll-ups, and raisins.
    - » Drink water or milk between meals.
- Advise and educate parents/caregivers about the importance of eating healthy foods and avoiding sugary drinks:
- Encourage and support families in breastfeeding their child.
- Serve age-appropriate healthy foods during planned meals and snacks.
  - Encourage eating fruits and vegetables or other healthy snack options, such as grain products (e.g., whole grain crackers) and dairy products (e.g., milk, cheese, cottage cheese, unsweetened yogurt).
  - Avoid sugary and sticky foods such as candy, processed crackers, sugar-based gum, cookies, cakes, fruit roll-ups, and raisins.

- Drink water or milk between meals.

- Advise and educate parents/caregivers about the importance of practicing good oral hygiene:
  - Limit food and utensil sharing between caregivers and infants or children to reduce the transmission of tooth specific bacteria that can cause dental caries.
  - Encourage parents/caregivers to practice and set an example of good oral health habits like flossing, brushing, and seeing a dental health professional regularly.
  - Avoid cleaning a dropped pacifier or toy with their mouth.
  - Do not dip the pacifier in sweetened foods such as honey, syrup, or sugar.
- For infants and toddlers from birth to age 3:
  - Wipe gums with a clean, soft washcloth, after each feeding to establish early good oral health habits.
  - Once the teeth erupt, brush teeth gently with a soft child-size toothbrush with a pea-sized smear of fluoridated toothpaste twice daily in the morning and night. There is no need to rinse after brushing when using such a small amount.
  - Begin flossing when any two teeth touch.
  - Offer only water at bedtime after brushing.
  - Identify a dental home no later than age 1 or sooner if dental caries exist.
  - Maintain a dental record starting at age 1 with yearly updates addressing the child's oral health needs to include any special instructions given to the parent/caregiver.
- For children from ages 4 to 6:
  - Always brush or help brush the child's teeth with a pea-sized smear of fluoridated toothpaste in the morning and at night and help the child floss.
  - Teach the child to spit out–not swallow–the fluoridated toothpaste. Do not rinse with water immediately after brushing with fluoride toothpaste.
  - Schedule a dental appointment every 6 months for a cleaning/routine care (more often if indicated by dental team).
- Encourage caregivers to supervise children's brushing, including the use of the appropriate amount of toothpaste, until ages 7 or 8.
- Advise parents on protective factors of oral health care, including establishing a dental home, consistent source of fluoride, low cariogenic diet, and twice daily teeth brushing.
- Advise parents on age-appropriate injury prevention counseling (e.g., mouth guards) for oral facial trauma.



PROVIDE FLUORIDE ADVICE AND/OR TREATMENT

- In addition to the advice on brushing provided above, evaluate the child's sources and estimated levels of fluoride.
  - While fluoride provides protection against dental caries, ingestion of higher than recommended levels of fluoride is associated with increases in mild dental fluorosis in developing, un-erupted permanent teeth.
  - Encourage caregivers to have their children avoid rinsing after using toothpaste at night, and spit only (, in order to leave some protective fluoride on teeth overnight)..
  - For children under 6 years of age, applyApply fluoride varnish to the primary teeth starting at the age of primary tooth eruption, regardless of the levels

of fluoride in their water.
    - Fluoride varnish is recommended by the U.S. Preventive Services Task Force for children through the age of 5, and, therefore, is a mandated service covered by insurers.[24] and, therefore, is a mandated service covered by insurers.[37]
    - Several educational resources to assist pediatric providers in acquiring the supplies and skills to apply fluoride varnish in the office (for example, Smile for Life), are provided in Appendix 2.e.g., Smile for Life), are provided in Appendix 3.
    - MassHealth (Medicaid) currently reimburses medical providers to apply fluoride varnish up to the 21st birthday.
- Encourage the drinking of fluoridated water.
    - In 2015, the US Public Health Service (USPHS) updated its previous range of 0.7 to 1.2 mg/l for optimal fluoride concentration in drinking water to a uniform optimal level of 0.7 mg/l to reduce the risk of fluorosis in children.[38,39]
    - In 2020, the CDC reported that less than 60% of Massachusetts residents have access to fluoridated drinking water.40 In 2021, more than 4.2 million people in 119 fully fluoridated cities and towns in Massachusetts benefitted from community water fluoridation.[41,42] For public water supplies, the fluoride level can be verified by local or state boards of health.
    - Most bottled waters contain a less-than-optimal concentration of fluoride, and the fluoride content varies among brands. In April 20022, the Food and Drug Administration (FDA) revised the optimal concentration of fluoride in bottled water, by stating that bottled water which contains fluoride added by the manufacturer may not exceed 0.7 mg/l (0.7 ppm) which available data suggests provides an optimal balance between the prevention of dental caries and the risk of dental fluorosis. This action will not affect the allowable levels for fluoride in bottled water to which fluoride is not added by the manufacturer (such bottled water may contain fluoride from its source water). Bottled-water products that are marketed as "purified," "distilled," "deionized," "demineralized" or "produced through reverse osmosis" typically have concentrations of fluoride much lower than those of products marketed without these claims.[43]

- For children living in areas without optimal levels of fluoride in their community drinking water, provide oral fluoride supplementation, and encourage long-term daily use of the supplements.
    - Use the ADA approved dosage schedule below.
    - Tablets are preferable for children old enough to chew because they gain an additional topical benefit to the teeth through chewing.
    - Liquid supplements are recommended for younger children and should be added to water or put directly into the child's mouth.
    - Addition of the fluoride supplement to milk or formula is not recommended because of the reduced absorption of fluoride in the presence of calcium.[39]

See Appendix 8 for additional fluoride resources.

Recommended Fluoride Dosages for Children by Age Group			
Age	**Fluoride Ion Level in Drinking Water (PPM)***		
	<0.3	**0.3-0.6**	**>0.6**
Birth-6 months	None	None	None
6 months-3 years	0.25 mg/day**	None	None
3-6 years	0.50 mg/day	0.25 mg/day**	None
6-16 years	1.0 mg/day	0.50 mg/day	None
*1.0 part per million (ppm) = 1 milligram per liter (mg/l)			
** 2.2 mg sodium fluoride contains 1 mg fluoride ion			

Source: Approved by the American Dental Association Council on Scientific Affairs[27]

- It is essential that pediatricians work with oral health professionals to establish effective oral health care for infants and children. According to the AAP policy statement, pediatricians should support families in identifying a dental home for all children (See Appendix 2). A dental home should be identified within 6 months of the eruption of the first tooth and before the first birthday. For children who do not have a dental home, assist the family to locate one in their community.
- In assisting patients to locate a dental home, determine the child's type of dental coverage and refer them to a participating provider (e.g., MassHealth).
- Establish relationships with oral health professionals who see children in the community to facilitate referrals.
- Consult with oral health providers for high-risk situations, including those with heart disease, complex medical conditions, and patients on multiple medications.
- Develop a formal referral process with oral health professional offices to facilitate timely appointments.
- Complete a referral form for the oral health providers (See Appendix 10 for a sample referral form).
- Make referrals to other health professionals, such as nutritionists, as needed.

GUIDELINES FOR ORAL HEALTH PROVIDERS

ASSESS ORAL HEALTH STATUS

- Take a full history and assess for risks.
  - Primary reason or concern for visit
  - General health information including but not limited to primary care provider's name and contact information, medications, including their sugar content and whether they cause xerostomia, and tobacco exposure (including secondhand smoke and smokeless tobacco products)
  - Social history including socioeconomic status, parental employment status and education, current access to social services, cultural status, literacy level, primary language, medical and dental insurance, home stability, members of household, child's caretakers, presence of family/personal violence, substance use exposure, and child's school/day environment
  - Take oral health history:
    - » Habits (e.g., digit sucking, pacifier use, bruxism)
    - » Issues to date, including current acute issues
    - » Professional dental care and home care received to date
    - » Perform a caries risk assessment.
    - » Past or current caries experience of siblings, parents, and other household members
    - » Diet (e.g., use and frequency of sugary food and drinks, nighttime feeding of anything except water)
    - » Fluoride exposure, including fluoride varnish in other settings, systemic and topical fluoride and community water fluoridation (See Appendix 8 for a list of fluoridated communities in Massachusetts.)
- Perform examination.

A photo shows the proper positioning of knee-to-knee examination. Parent and dental care provider sit facing each other, with knees nearly touching. Young child sits on parent's lap and leans backward so child's head is in lap of dental provider, who can then examine the child's mouth while child can see parent and hold parent's hands. Provider, child, and parent all wear eye protection. Provider also wears facemask, gown, and gloves.

Photo courtesy of Dr. John Zdanowicz, DMD

- Assess growth and development, eruption sequence, hard and soft tissue (extra-oral and intra-oral) injuries, and signs of child abuse or neglect.
  - Take radiographs as needed.
- Answer concerns/questions about treatments raised by the caregivers.

ADVISE AND EDUCATE

- Reassure parents about the importance and safety of oral health prevention and treatment in early childhood and throughout life. Furthermore, the AAP's Project Tiny Teeth Toolkit to educate birthing parents and caregivers on the importance of oral healthcare during pregnancy and its benefits to the lifespan oral health of newborns (See Appendix 3).[45]
- Remind parents of the importance of a medical home and refer when necessary.
- Discuss oral hygiene, water fluoridation, fluoride treatment, good diet and nutrition, and dental visits.
  - Oral hygiene considerations:
    - » Instruct the parent to lift the child's lip to inspect the teeth and gums at the time that the child brushes.
    - » Brush teeth with fluoride toothpaste after breakfast and before going to sleep.
    - » Caregivers should brush child's teeth until they are confident that child is brushing effectively (age 7-8) and not swallowing toothpaste. A child who ties their own shoes has the dexterity to brush and floss effectively.
    - » Recommend flossing when proximal tooth surfaces are in contact, only after parent has been trained to do so correctly (to avoid gingival trauma). Initially, the care provider should floss the child's teeth. As the child matures, supervise flossing until the child masters the skill.
    - » Confirm availability of a soft toothbrush, fluoride toothpaste, and clean water
  - Discuss fluoride:
    - » Discuss safety and benefits of community water fluoridation.
    - » Encourage drinking optimally fluoridated tap or bottled water.
    - » If access to fluoridated water is not possible, prescribe fluoride drops or tablets supplements for children in sub-optimally fluoridated communities[46]
    - » For infants less than 6 months old who are not breastfed, discuss mixing powdered or concentrated infant formula with non-fluoridated water to decrease the possibility of a child developing questionable or very mild fluorosis.
      - › The ADA suggests that powdered formula continue to be reconstituted with optimally fluoridated drinking water, but for caregivers who are concerned with the potential for fluorosis, ready-to-feed formula or reconstituting formula using fluoride-free water can be suggested. Fluoride-free water is water that is labeled as "purified," "demineralized," "deionized," "distilled," or "produced through reverse-osmosis."[47]
      - › Supervise use of fluoride toothpaste on toothbrush, a smear from eruption of the first tooth to age 3 and a pea-size amount until age 6.[44,48]
      - › Discuss the application of fluoride varnish every three to six months. Varnish is the only professionally applied topical fluoride

A child who is able to tie his/her own shoes has the dexterity to brush and floss effectively.

recommended for use on children from eruption of the first tooth to age 6. The following providers can apply varnish with the appropriate training:
    - Dentists
    - Dental Hygienists
    - Dental Assistants
    - Physicians
    - Physician Assistants
    - Nurse Practitioners
    - Registered Nurses
    - Licensed Practical Nurses
    - Medical Assistants
    - Community Health Workers
  - Fluoride varnish is recommended by the U.S. Preventive Services Task Force for children through the age of 5, and is a mandated service covered by insurance.
  - MassHealth (Medicaid) reimburses fluoride varnish services up to the 21st birthday (See Appendix 7 for MassHealth coverage.).
- Nutrition:
    - Encourage and support families in breastfeeding their child.
    - Diet recommendations:
      - Give only breast milk or formula during the first 6 months.
      - After 6 months, only fill bottles with breast milk, formula, or water.
      - Ideally a bottle should not be used for sleeping; if necessary, fill the bottle with water only.
      - Recommend planned meal and snack times; avoid sugary snacks and drinks.
    - American Academy of Pediatrics does not recommend any juice before age 1 and no more than 4-6 ounces after age 1. If juice is consumed, it should be from an open cup ideally as part of a meal.
  - Dental visits:
    - Establish a dental home with the first dental visit occurring within 6 months of the eruption of the first tooth or by age one, whichever occurs first. Continue regular preventive oral health visits as recommended by ADA and AAPD.
  - Other oral health topics:
    - Discourage saliva-sharing behaviors between parent and child, such as sharing spoons and cleaning pacifiers in the mouth.
    - Discuss teething remedies such as cold teething rings and the use of acetaminophen/ibuprofen only as needed.
    - Discourage topical anesthetic products due to risk of toxicity.
    - Discuss oral habits such as digit, pacifier or toy sucking, bruxism, and abnormal tongue thrust; infants should be weaned from these habits before malocclusion occurs.
    - Provide age-appropriate injury prevention counseling (e.g., mouth guards, childproofing home)

PROVIDE TREATMENT AND MANAGEMENT

- Develop a comprehensive management plan by providing a dental home for your patients.
  - Beginning 6 months after the eruption of first primary tooth or by age 1, provide oral preventative care as recommended by caries risk assessment.
  - Assess the barriers for oral health care for young children.
    - » Socioeconomic issues (e.g., transportation, financial)
    - » Competing health issues especially for those with special needs.
    - » Fear and fatalistic attitudes, such as "they are only baby teeth"
    - » Health providers' awareness of the recommendation to begin dental visits by age 1
  - Complete sealants on all permanent molar teeth as soon as possible and according to current evidence-based guidelines.
  - Perform comprehensive treatment of caries:
    - » Use minimally invasive care such as evidence-based brush on therapies where clinically appropriate, such as silver diamine fluoride (SDF)
    - » Restoration or extractions as needed
    - » Amalgam and resins are both acceptable
    - » Use of a rubber dam and high-volume evacuation is recommended
    - » Include space management and growth and development monitoring within treatment planning
  - Follow up with office staff to check that patients follow through with home care; schedule follow up visits.
  - Consider the use of teledentistry or portable/mobile care to provide an additional modality for access to care if and when indicated and clinically appropriate.
  - Documentation of the above is important. Modify record keeping system to include all of the above.
  - Make your office accessible to patients that require accommodations to be able to access care.

COLLABORATION

- Assist patients in finding a medical home if they do not have one.
- For children who need fluoride prescription, coordinate the prescription with the pediatric provider.
- Consult with medical providers for high-risk situations, including those with heart disease, complex medical conditions, and patients on multiple medications.
- Update child health providers with pertinent management plans especially for high-risk patients, as needed.
- Communicate with pediatric health providers about available oral health services for children.
- Collaborate with community providers as possible (e.g., presenting at inter-professional rounds or a local medical office).

APPENDICES

APPENDIX 1

MEDICATIONS USE DURING PREGNANCY

MEDICATIONS		
Acceptable	**Use Caution**	**Avoid**
Antibiotics **Amoxicillin** **Cephalosporins** **Clindamycin** **Metronidazole** **Penicillin**	**Antibiotics** Sulfas (Avoid 1st and 3rd trimesters)	**Antibiotics** Ciprofloxacin Clarithromycin Levofloxacin Moxifloxacin Tetracycline
Analgesics **Acetaminophen** **Codeine*** **Hydrocodone*** **Morphine*** **Oxycodone***	**Analgesics** Avoid 1st and 3rd trimesters; limit use to 48 to 72 hours. Aspirin Ibuprofen Naproxen	
Anesthetics **Local anesthetics with epinephrine (e.g., bupivacaine, lidocaine, mepivacaine)**	**Anesthetics** Limit use. Ideally consult with prenatal care provider prior to use. Nitrous oxide – 30% Intravenous sedation General anesthesia	
*Use caution with opioids (including codeine, hydrocodone, morphine and oxycodone) in 3rd trimester due to risk for dependency by fetus.		

Source: Briggs G and Freeman R. Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk, 12th Ed. 2021.

Learn more about oral health during pregnancy at the American Dental Association: Pregnancy.

APPENDIX 2

ORAL HEALTH POLICIES AND GUIDELINES

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APPENDIX 3

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Smiles for Life: The Oral Examination Course 7. Accessed July 9, 2023 at: The Oral Examination | Smiles for Life Oral Health

APPENDIX 4

HEALTHY PORTION SIZE DURING PREGNANCY

How much should you eat each day when you're pregnant? Here are some guidelines:

Grains

Eat 6 ounces perday in the first trimester, 7 ounces in the second trimester, and 8 ounces in the third trimester. Make half of your grains each day whole grains.

- 1 ounce of grains is equal to:
- 1 slice of bread
- 1 cup ready-to-eat cereal
- ½ cup cooked rice, pasta, or cereal
- 1 small pancake (4 ½ inches in diameter)
- 1 small tortilla (6 inches in diameter)

Vegetables

Eat 2½ cups per day in the first trimester and 2 cups per day in the second and third trimesters.

- 1 cup of vegetables is equal to:
- 1 cup raw or cooked vegetables
- 1 cup vegetable juice
- 2 cups raw, leafy greens
- 1 medium baked potato

Fruits

Eat 1½ to 2 cups per day in the first trimester and 2 cups per day in the second and third trimesters.

- ½ cup of fruit is equal to:
- ½ cup 100% fruit juice
- ½ cup fresh, frozen or canned fruit
- ½ a fruit (small orange, apple or banana)
- 16 grapes

Dairy Products

Eat 3 cups per day all throughout pregnancy (low-fat or skim dairy are best).

- 1 cup of milk product is equal to:
- 1 cup of milk
- 1 cup yogurt
- 2 small slices of cheese
- ½ cup shredded cheese

Proteins

Eat 5 ounces per day in the first trimester, 6 ounces in the second trimester, and 6 ½ in the third trimester.

- 1 ounce of protein is equal to:
- 1 tablespoon peanut butter
- ¼ cup cooked beans or tofu
- 1 ounce lean meat, poultry, or fish
- 1 egg
- ½ ounce nuts (12 almonds or 24 pistachios)

Knowing how big each of these serving sizes is can be tricky. Here are some everyday items that can help:

- 1 cup is about the size of a baseball
- 1/3 cup is about as much as you can fit in your hand (a rounded or full handful)
- ½ cup is about the size of ½ a baseball
- ¼ cup is about the size of a golf ball
- 1 tablespoon is about the size of ½ a ping-pong ball
- 1 ounce of meat (chicken, pork, beef, fish, etc.) is about the size of two thumbs
- 3 ounces of meat is about the size of a deck of cards or the palm of your hand
- A small fruit (orange or apple) is about the size of a tennis ball

APPENDIX 5

EATING HEALTHY DURING PREGNANCY

It's important to eat healthy foods during pregnancy and in the right amounts. Here are some tips:

How many calories do you need per day when you're pregnant?
Most pregnant people only need about 300 extra calories per day. The exact amount depends on your weight before pregnancy. If you're underweight before pregnancy, you may need more calories. If you're overweight, you may need less. Talk to your health care provider about what's right for you.

Is it okay to eat fish when you're pregnant?
Yes, as long as you eat the right kinds! Most fish are low in fat and high in protein and other nutrients your body needs.

Why are some fish not safe for pregnant people to eat?
Some fish contain mercury, a metal that can harm your baby. Fish get mercury from water they swim in and from eating other fish that have mercury in them. If you eat fish that have a lot of mercury in them, you can pass the metal to your baby during pregnancy.

If you're pregnant, thinking about getting pregnant or breastfeeding, eat 8 to 12 ounces each week of fish that are low in mercury. These include:

- Shrimp
- Salmon
- Pollock
- Catfish
- Canned light tuna
- Albacore (white) tuna (Avoid consuming more than 6 ounces of this type of tuna in 1 week)

How can you make sure you're making healthy meals?
Use these tips when planning your meals:

- Eat foods from the five food groups at every meal.
- Choose whole-grain bread and pasta, low-fat or skim milk and lean meat, like chicken, fish and pork.
- Try to make half of your plate fruits and vegetables. Put as much color on your plate as you can.
- Try eating four to six smaller meals a day instead of three bigger ones. This can help relieve heartburn and discomfort you may feel as your baby gets bigger.
- Make sure your whole meal fits on one plate. Don't make huge portions.
- Drink six to eight glasses of water each day
- Take a prenatal vitamin each day. This is a multivitamin made just for pregnant people.

- Try to avoid the following foods:
    - Unpasteurized milk or juice
    - Soft cheeses like feta and brie
    - Unheated deli meats and hot dogs
    - Refrigerated, smoked seafood
    - Undercooked poultry, meat or seafood

Source: March of Dimes. (2014). Eating healthy during pregnancy. Accessed July 9, 2023

APPENDIX 6

SAMPLE REFERRAL FORM FOR PREGNANT PEOPLE TO ORAL HEALTH PROVIDERS

Referral Form For Pregnant People to Receive Oral Health Care

Referred To: _____
Date: _____
Patient Name (Last/First): _____
Date of Birth: _____
Estimated Delivery Date: _____
Week of Gestation Today: _____
Known Allergies: _____
Precautions: _____
None ___
Specify (if any):
_____
_____

Reason(s) for Referral: _____

This patient may have routine dental care, including but not limited to: oral health examination, prophylaxis, scaling and root planning, extraction, dental x-ray with abdominal and neck shield, local anesthesia with epinephrine, root canal and restorations (amalgam or composite).
The patient may have: (Check all that apply)
__ Acetaminophen with codeine for pain control
__ Alternative pain control medication: (Specify) _____
__ Penicillin
__ Amoxicillin
__ Clindamycin
__ Cephalosporins
__ Erythromycin (not estolate form)

Prenatal Care Provider: _____
Phone: _____
Signature: _____
Date: _____

DO NOT HESITATE TO CALL WITH QUESTIONS

Dentist's Report for the Prenatal Care Provider

Diagnosis: _____
_____
_____

Treatment Plan: _____
_____
_____

Name: _____
Date: _____
Phone: _____

Signature of Dentist: _____

APPENDIX 7

LEARN ABOUT MASSHEALTH DENTAL BENEFITS

https://www.mass.gov/info-details/learn-about-masshealth-dental-benefits

APPENDIX 8

LIST OF MASSACHUSETTS FLUORIDATED CITIES/TOWNS AND RESOURCES

https://www.mass.gov/community-water-fluoridation-resources

https://www.mass.gov/info-details/community-water-fluoridation-status

APPENDIX 9

PYOGENIC GRANULOMA AND GINGIVITIS DURING PREGNANCY

FIGURE 1
Pregnancy oral tumor (pyogenic granuloma)

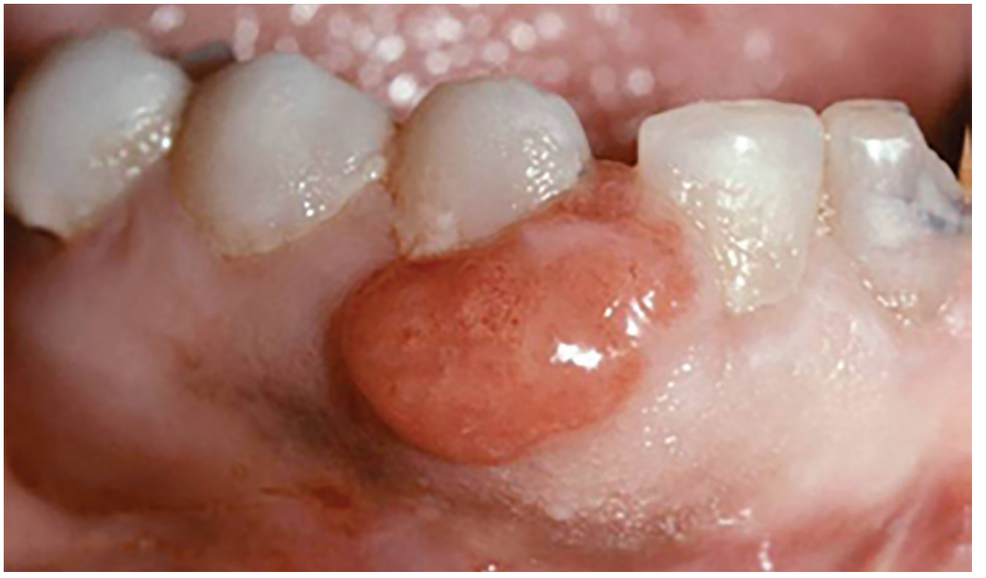

Photo courtesy of Drs. Douglass, Douglass and Silk, A Practical Guide to Infant Oral Health, American Family Physician, 2004 Dec 1;Vol 70(11):2113-2020

FIGURE 2
Gingivitis

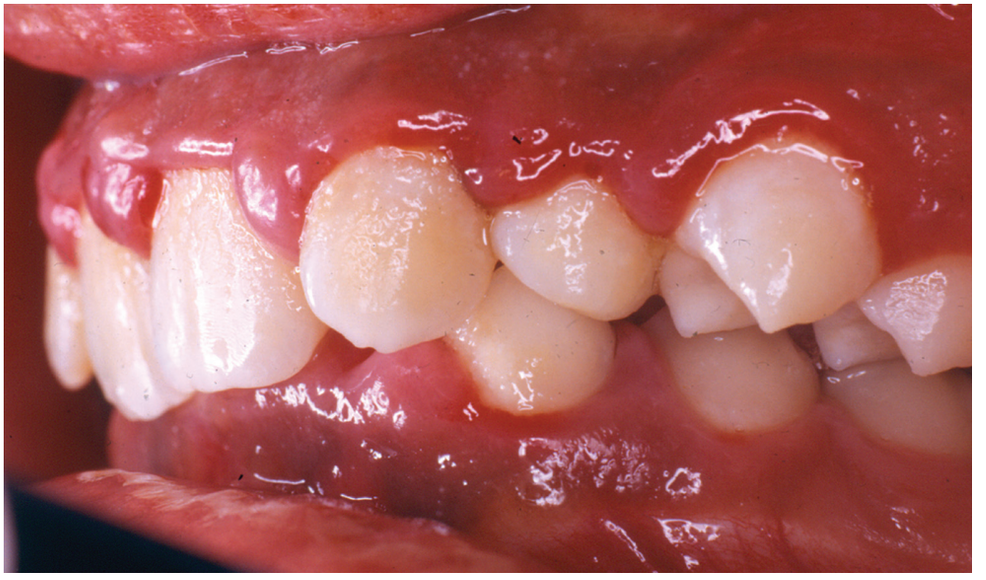

Photo courtesy of Dr. Joanna Douglass, DDS, BDS

APPENDIX 10

SAMPLE REFERRAL FORM FOR PREGNANT PEOPLE TO ORAL HEALTH PROVIDERS

Referral Form For Children to Receive Oral Health Care

Referred To: _____
Date: _____
Patient Name (Last/First): _____
Date of Birth: _____
Estimated Delivery Date: _____
Week of Gestation Today: _____
Known Allergies: _____
Precautions: _____
None _____
Specify (if any):
_____
Reason(s) for Referral: _____
This patient may have routine dental care, including but not limited to: oral health examination, prophylaxis, scaling and root planning, extraction, dental x-ray with abdominal and neck shield, local anesthesia with epinephrine, root canal and restorations (amalgam or composite).
The patient may have: (Check all that apply)
__ Acetaminophen with codeine for pain control
__ Alternative pain control medication: (Specify) _____
__ Penicillin
__ Amoxicillin
__ Clindamycin
__ Cephalosporins
__ Erythromycin (not estolate form)

Prenatal Care Provider: _____
Phone: _____
Signature: _____
Date: _____

DO NOT HESITATE TO CALL WITH QUESTIONS

Dentist's Report for the Prediatric Provider

Diagnosis: _____
_____
_____

Treatment Plan: _____
_____
_____

Name: _____
Date: _____
Phone: _____

Signature of Dentist: _____

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INFORMATION FOR PATIENTS

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