Oral Health: A Maternal and Child Health Priority for Massachusetts

Sarah Lederberg Stone, PhD, MPH
CDC/ CSTE Applied Epidemiology Fellow
Office of Data Translation
Massachusetts Department of Public Health
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Disclosure Statement

• I have no conflicts of interest to disclose.
Objectives

- Describe history of oral health problems

- Describe how Title V selects maternal and child health (MCH) priorities and assures MCH services delivery for women and children

- Describe how the Pregnancy Risk Assessment Monitoring System (PRAMS) data are used to inform the MCH Needs Assessment

- Present oral health experiences among women in the perinatal period

- Outline next steps for developing and implementing perinatal oral health guidelines in Massachusetts
The Surgeon General’s Report provided the nation with an alert in 2000

“Oral health is essential to the general health and well-being of all Americans and...improved oral health can be achieved by all Americans...

Great progress has been made in reducing the extent and severity of common oral diseases ...however, not everyone is experiencing the same degree of improvement.”
Themes of Report

• Profound disparities in the oral health of the nation
• “Silent epidemic” of dental and oral diseases
• General health risk factors also affect oral and craniofacial health
• National efforts needed to improve oral health among all Americans
Themes of Report

• Oral health is much more than healthy teeth
• Oral health is integral to general health: Mouth as a “mirror for general health and well being”
• Safe, effective, and easy to adopt disease prevention measures exist
Barriers to Dental Care

• Perception that dental care is not important
• Financial issues
• Availability of dentists
• Fear of dental treatment
• Concerns about harm to fetus
• Lack of practice guidelines
Oral Health During Pregnancy

- Pregnancy is a unique period characterized by physiological changes, which may adversely affect oral health.
- Oral health is key to overall health and well-being during pregnancy.
- Preventive, diagnostic, and restorative dental treatment is safe throughout pregnancy.
Oral Health During Pregnancy

In 2006, NY State Dept. of Health released landmark work: *Oral Health Care During Pregnancy and Early Childhood Practice Guidelines*

Impetus: Fatal Event
- NY woman, 29 weeks pregnant was in severe pain from dental problems and took ‘excessive doses’ of Tylenol because she could not find a dentist who would treat her
- Her fetus died from liver toxicity, and the patient suffered acute liver failure and took months to recover

<table>
<thead>
<tr>
<th>Experience</th>
<th>Weighted %</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tooth problems during pregnancy</td>
<td>26.4</td>
<td>0.41</td>
</tr>
<tr>
<td>Sought dental care during pregnancy</td>
<td>44.2</td>
<td>0.47</td>
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<tr>
<td>Received dental counseling during pregnancy</td>
<td>41.2</td>
<td>0.46</td>
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<td>Ever had teeth cleaning</td>
<td>94.3</td>
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<td>Teeth cleaning during pregnancy</td>
<td>39.9</td>
<td>0.48</td>
</tr>
<tr>
<td>Teeth cleaning after pregnancy</td>
<td>33.3</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Hwang SS, Smith VC, McCormick MC, Barfield WD. Matern Child Health J. 2011
### Dental Care for Pregnant Women in California: 2004-2006

<table>
<thead>
<tr>
<th>Dental problems during pregnancy</th>
<th>53.3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No dental care during pregnancy</td>
<td>65.5%</td>
</tr>
<tr>
<td>No dental care during pregnancy among women with a dental problem</td>
<td>62%</td>
</tr>
</tbody>
</table>
Common Perinatal Oral Health Problems

Gingivitis

Pregnancy Granulomas

Periodontal Disease and Adverse Pregnancy Outcomes

Meta-analysis of 44 studies:
  • 26 case-control, 13 cohort, and 5 controlled trials

Outcomes:
  • Preterm low birth weight, low birth weight, preterm birth, birth weight by gestational age, miscarriage or pregnancy loss, preeclampsia, and gestational diabetes mellitus

Periodontal Disease and Adverse Pregnancy Outcomes

• 29 studies suggested an association between periodontal disease and increased risk of adverse pregnancy outcome (OR: 1.10-20.0).

• 15 found no evidence of an association (OR: 0.78 to 2.54).
Possible Mechanisms Leading to Preterm Birth

**Periodontal Infection**
- Reservoirs of gram-negative anaerobes

**Host Response**
- Elevated levels of chemical modulators (PG, IL, TNF)

**Premature Labor**
- Mediators of parturition (PG, IL, TNF) that consequently may induce low birth weight, preterm babies

PG = Prostaglandins, IL = Interleukins, TNF = Tumor Necrosis Factor
12 cavities filled over 4 dentist appointments!
Massachusetts Department of Public Health (MDPH)
Title V Agency for Massachusetts

The Maternal and Child Health Services Block Grant

Pregnant Women, Mothers and Infants

Children and Adolescents

Children and Youth with Special Health Care Needs

Direct services provided to 714,144 individuals in FY 12
Title V Needs Assessment

- Requires a 5-year comprehensive needs assessment

- Last needs assessment conducted in 2010

- A Steering Group guided the process
CDC Health Impact Pyramid

Factors that Affect Health

- Counseling & Education
  - Examples: Eat healthy, be physically active
- Clinical Interventions
  - Examples: Rx for high blood pressure, high cholesterol, diabetes
- Long-lasting Protective Interventions
  - Examples: Immunizations, brief intervention, cessation treatment, colonoscopy
- Changing the Context
t  - to make individuals’ default decisions healthy
  - Examples: Fluoridation, trans fat, smoke-free laws, tobacco tax
- Socioeconomic Factors
  - Examples: Poverty, education, housing, inequality

Adapted from T. Frieden, AJPH, April 2010
Life Course Perspective

- Prenatal Care
- Primary Care for Children
- Primary Care for Women
- Prenatal Care
- Internatal Care

Age: 0, 5

Poor Birth Outcome

White
African American

Puberty
Pregnancy

Lu 2003
Health Equity Model

Disparities exist in the health outcomes due to differential access to economic opportunities, community resources and social factors.
Impact vs. Feasibility

What is the likely impact?
- Incidence & prevalence
- Degree of long-term outcomes
- Disparities whether socio-economic, cultural, geographic, racial, or ethnic.
- Preventable/actionable
- Increases or enhances collaboration

What is the feasibility of success?
- DPH subject matter competency
- Political and organizational will
- Resource availability
- Closeness to the core mission of MCH
- Availability of partners & external resources
- Synergy effect between priorities
- Increases or enhances collaboration
Healthy weight leads in both feasibility and impact.

What is the likely impact?

What is the feasibility of success?
1 Change IMPACT level?
, 10/29/2014
• Held Focus Groups in areas all over state
• Review of Findings and Needs
• Open Comments Collected and Reviewed
The Status of Oral Diseases in Massachusetts: A Great Unmet Need, 2009

- 57% of women did not have their teeth cleaned during their pregnancy
- 17% of the state’s 3rd graders had untreated decay
- 71% of non-Hispanic Black 3rd graders did not have dental sealants
- 90% of residents between ages 25 and 44 living in dental health professional shortage areas have lost at least one tooth
- 59% of nursing home residents have untreated decay
- 93% of public schools did not have a school-based oral health prevention (dental sealant) program
- Massachusetts ranks 36th in the nation for water fluoridation status
- 66% of licensed dentists with a Massachusetts address are not MassHealth (Medicaid) providers
Pregnancy Risk Assessment Monitoring System

- Surveillance system of the CDC and state-health departments
- Information on maternal attitudes, behaviors, and experiences before, during and shortly after pregnancy
- Initiated in 1987 and adopted by Massachusetts in 2007
- Includes national and state-specific questions

PRAMS Goals
- Reduce maternal morbidity and infant morbidity and mortality by impacting:
  - Maternal behaviors
  - Maternal and infant health programs
  - Policies

PRAMS Objectives
- Promote collection of population-based data of high scientific quality
- Conduct comprehensive analyses
- Translate results into useable information
- Build state capacity for collecting, analyzing, and translating data
All but 10 States Currently Participate in PRAMS Survey Distribution and Data Collection

Note: PRAMS represents approximately 78% of all US live births
The 2007-2011 PRAMS Surveys Include Four Oral Health Questions

2007-2008 Questions
• Have you ever had your teeth cleaned by a dentist or dental hygienist?
  • No
  • Yes

• When did you have your teeth cleaned by a dentist or dental hygienist?
  • Within a year before I became pregnant (Y/N)
  • During my most recent pregnancy (Y/N)
  • After my most recent pregnancy (Y/N)

2009-2011 Questions
• At any time during the 12 months before you got pregnant with your new baby, did you do any of the following things?
  • I had my teeth cleaned by a dentist or dental hygienist (Y/N)

• Did you have your teeth cleaned by a dentist or dental hygienist during the time period listed below?
  • During my most recent pregnancy (Y/N)
  • After my most recent pregnancy (Y/N)
Very Low Rates of Dental Cleaning Before, During, and After Pregnancy

Proportion* of women who reported having their teeth cleaned by time of dental cleaning, MA PRAMS, 2007-2009 (n = 4,385)

* All percentages are population-weighted
Black, non-Hispanic and Asian Women Have Lower Rates of Dental Cleaning

Proportion* of women who reported having their teeth cleaned by race/ethnicity, MA PRAMS, 2007-2009

* All percentages are population-weighted
Nativity, Poverty Level, and Insurance are Risk Factors for Lack of Dental Cleaning

Proportion* of women who reported having their teeth cleaned during pregnancy by select characteristics, MA PRAMS, 2007-2009

* All percentages are population-weighted
The 2012-14 PRAMS Survey Will Include More Extensive Dental Health Questions

Survey Questions in PRAMS Relating to Oral Health:
• Dental cleaning before pregnancy

One new question:

31. This question is about the care of your teeth **during your most recent pregnancy**. For each item, check **No** if it is not true or does not apply to you or **Yes** if it is true.

a. I knew it was important to care for my teeth and gums during my pregnancy
b. A dental or other health care worker talked with me about how to care for my teeth and gums
c. I had my teeth cleaned by a dentist or dental hygienist
d. I had insurance to cover dental care during my pregnancy
e. I **needed** to see a dentist for a problem
f. I **went** to a dentist or dental clinic about a problem
Summary of Maternal Characteristics Associated with Low Dental Cleaning Rates

Factors associated with a lower rate of dental cleanings before pregnancy:

- Black non-Hispanic and Asian race/ethnicity
- Less than college education
- No insurance
- Having 6+ life stressors
- Fair general health
- No multivitamin use

Reference group: White non-Hispanic, college graduate, privately insured, US-born, in excellent health, taking multivitamin daily, and having no life stressors.
Summary of Maternal Characteristics Associated with Low Dental Cleaning Rates

Factors associated with a lower rate of dental cleanings during pregnancy:

- Black non-Hispanic and Asian race/ethnicity
- Less than college education
- MassHealth or no insurance
- Non-US born
- Having 6+ life stressors
- Fair and poor general health
- No multivitamin use

Reference group: White non-Hispanic, college graduate, privately insured, US-born, in excellent health, taking multivitamin daily, and having no life stressors.
Needs Assessment Components

Assess Needs → Select Priority Needs → Implement Programs → Measure Performance: National and State Measures → Improve Health Outcomes → Start Again

Sample Massachusetts Data Sources
- Tracking Data/Trends using:
  - Vital records
  - Census
  - Registries
  - Hospital discharges
  - Linked data sets
  - Adult and youth health surveys
  - Program participant/payer information
  - Community assessments
  - Special studies
  - Data from other agencies and external studies
- Input from Parents and Consumers
- Input from Providers, Academics, Others
- Input of DPH and Other State Agency Staff
- Surveys of target populations
- Focus Groups

Massachusetts Priorities 2010-15
1. Promote healthy weight
2. Promote emotional wellness & social connectedness
3. Coordinate preventive oral health measures
4. Enhance screening for and prevention of violence and bullying
5. Support reproductive and sexual health
6. Improve the health and well being of women in their childbearing years
7. Reduce unintentional injury and promote healthy behavior
8. Expand medical home efforts
9. Support effective transitions for CYSHCN
10. Improve data capacity

Direct Services
- Gap-filling personal services to MOH populations
  - Ex: Family Planning, Community-Based Services for Women and Adolescents

Enabling Services
- Help to access health care information
  - Ex: Outreach, Children with Special Health Care Needs (CYSHCN) Family Support and Care Coordination, SSU Benefits Outreach, Pedi Palliative Care

Population-Based Services
- Preventive or personal health services available to all pregnant women, mothers, infants or children
  - Ex: Newborn Metabolic, Hearing and Lead Screening, Injury and Violence Prevention, Oral Health, Poison Control Center

Infrastructure Services
- Develops, maintains and supports access to MOH services

National Performance Measures
- NPM 1 - Screening & followup for metabolic disease
- NPM 2 - CYSHCN family partnership/satisfaction
- NPM 3 - CYSHCN with Medical Home
- NPM 4 - CYSHCN with adequate insurance
- NPM 5 - CYSHCN community systems ease of use
- NPM 6 - Transition services for youth with CYSHCN
- NPM 7 - Immunization
- NPM 8 - Teen Births ages 15-17
- NPM 9 - Dental Sealants
- NPM 10 - Motor vehicle deaths ages 10-14
- NPM 11 - Breastfeeding
- NPM 12 - Newborn Hearing Screening
- NPM 13 - Children without health insurance
- NPM 14 - WIC child BMI over 85th percentile
- NPM 15 - Smoking in last trimester
- NPM 16 - Suicide deaths ages 15-19
- NPM 17 - VLBW at facilities for hi risk
- NPM 18 - First trimester prenatal care

State Performance Measures
- SPM 1 - Intended pregnancy
- SPM 2 - Emotional wellness
- SPM 3 - Female binge drinking
- SPM 4 - Teeth cleaning for women
- SPM 5 - Teen partner violence
- SPM 6 - Healthy weight strategy
- SPM 7 - Asthma disparity
- SPM 8 - Motor vehicle deaths 15-24
- SPM 9 - School safety
- SPM 10 - Youth substance use

National Outcome Measures
- OM 1 - Infant Mortality (IM)
- OM 2 - Disparity Black and White IM
- OM 3 - Neonatal Mortality
- OM 4 - Post Neonatal Mortality
- OM 5 - Perinatal Mortality Rate
- OM 6 - Child Death Rate
Ten 2010 – 2015 MCH Priority Needs

1. Promote healthy weight

2. Promote emotional wellness and social connectedness across lifespan

3. Coordinate preventive oral health measures and promote universal access to affordable dental care

4. Enhance screening for and prevention of violence and bullying

5. Support reproductive and sexual health by improving access to education and services
Ten 2010 – 2015 MCH Priority Needs (con’t)

6. Improve the health and well-being of women in their childbearing years

7. Reduce unintentional injury and promote healthy behavior choices for adolescents

8. Expand medical home efforts to systems building and securing access & funding for children and youth

9. Support effective transitions from (1) early childhood to school and (2) adolescence to adulthood for CYSHCN

10. Improve data availability, access and analytical capacity
Ten 2010 – 2015 State Performance Measures

1. % of pregnancies that are intended

2. Promotion of emotional wellness

3. % of females aged 18 – 45 years reporting binge drinking

4. % of women with a recent live birth reporting that they had their teeth cleaned recently

5. % of school based health center clients for whom an assessment for intimate partner/teen dating/sexual violence was done
Ten 2010 – 2015 State Performance Measures

6. Development of a comprehensive healthy weight strategy and performance measure

7. The rate of hospitalizations due to asthma among Black, non-Hispanic and Hispanic children aged 0-4 years

8. The rate of motor vehicle deaths among youth aged 15-24 years

9. % of HS students missing school due to feeling unsafe at or on the way to school

10. % of HS students reporting no current use of either alcohol or illicit drugs.
Improvement…Slowly

Proportion* of women who reported having their teeth cleaned by time of dental cleaning, MA PRAMS, 2007-2009 (n = 4,385)

* All percentages are population-weighted
Very Low Rates of Dental Cleaning Before, During, and After Pregnancy

Proportion* of women who reported having their teeth cleaned by time of dental cleaning, MA PRAMS, 2009-2011 (n = 4,437)

- **Ever Before Pregnancy**: 90.3%
- **Before Pregnancy**: 67.7%
- **During Pregnancy**: 49.5%
- **After Pregnancy**: 36.3%

*All percentages are population-weighted
Race is a Risk Factor for Lack of Dental Cleaning during pregnancy

Data from Massachusetts Births 2011, 2012, 2013

Data from Massachusetts Births 2011, 2012, 2013
Black, non-Hispanic and Asian Women Have Lower Rates of Dental Cleaning

Proportion* of women who reported having their teeth cleaned by race/ethnicity, MA PRAMS, 2007-2009

* All percentages are population-weighted
Race is a Risk Factor for Lack of Dental Cleaning before and during pregnancy

Proportion* of women who reported having their teeth cleaned by race/ethnicity, MA PRAMS, 2009-11 (n=4,437)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Before Pregnancy</th>
<th>During Pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Hispanic</td>
<td>72%</td>
<td>57%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>53%</td>
<td>34%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>62%</td>
<td>40%</td>
</tr>
<tr>
<td>Asian</td>
<td>56%</td>
<td>37%</td>
</tr>
<tr>
<td>Other</td>
<td>58%</td>
<td>31%</td>
</tr>
</tbody>
</table>

* All percentages are population-weighted
Nativity, Poverty Level, and Insurance are Risk Factors for Lack of Dental Cleaning

Proportion* of women who reported having their teeth cleaned during pregnancy by select characteristics, MA PRAMS, 2007-2009

* All percentages are population-weighted
Nativity and Insurance are Risk Factors for Lack of Dental Cleaning

Proportion* of women who reported having their teeth cleaned during pregnancy, MA PRAMS, 2009-2011 (n=4,437)

* All percentages are population weighted
However, still large gaps

- Mass Health reported 250,000 children have never seen a dentist FFY2013
While 70% of Massachusetts residents (only 65% of children under age 18) have access to fluoridated water, those towns without community-wide fluoridation are responsible for the majority of ER visits for dental caries, representing a significant financial burden.
Accomplishments, part 1

• Presentations to medical, dental, and public health schools

• Oral Health Steering Committee

• Provider Surveys
Provider Surveys

Objectives:
- To determine current opinions, practices, barriers and referral patterns of providers in Massachusetts regarding dental care during pregnancy
- Increase awareness and education about the importance of good oral health during pregnancy

Methods: 4 Surveys were sent to providers, 16 questions each

Physicians:
- OB/GYN (146 responses, 12.9%)
- Family Medicine (132 responses, 7.5%)

Dental Providers:
- Dentists (140 responses, 5.5%)
- Dental Hygienists (120 responses, 5.6%)
Do you agree with the following statement about oral health during pregnancy?
The presence of active periodontitis during pregnancy may increase the risk of adverse pregnancy outcomes like preterm birth and low birth weight.
How often do you refer reproductive-aged patients to an oral healthcare professional?

PATIENTS WHO ARE CURRENTLY PREGNANT

- Frequently (daily or weekly): Fam Med 25, OB/GYN 16
- Occasionally (monthly): Fam Med 49, OB/GYN 53
- Never: Fam Med 25, OB/GYN 31

Fam Med N=126, OB/GYN N=141
How often are pregnant patients referred to you by OB/GYN or FAMILY MEDICINE physicians in your community?

![Bar chart showing the frequency of referrals by dentists and hygienists in the community. The chart indicates that a significant number of dentists and hygienists report never receiving referrals from OB/GYN or FAMILY MEDICINE physicians.]
Oral Health Guidelines

• A handful of states already have guidelines or policy briefs for perinatal oral health care

• New York
• California
• South Carolina
• Washington
• Michigan
• Oregon
• Connecticut
Accomplishments, part 2

• Oral Health Summit - June, 2013

• Massachusetts Health Quality Partners organization issued *Perinatal Care Recommendations* that included oral health care during pregnancy – released July, 2013

• Oral Health Grant – November, 2013
2013
Perinatal Care Recommendations

First Prenatal Visit
(Six to 12 weeks)
Note: If a patient’s first visit is before the eighth week, make every effort to at least schedule a “mini-visit” for blood work before 12 weeks.

• Before you knew you were pregnant, did you drink any beer, wine, or liquor, or use drugs?
• In the past month, have you drunk any beer, wine, or liquor, or used drugs?
* Consider behavioral health referral if indicated

Oral Health
• Ask about oral health status, including oral health history and last dental visit.
• Check mouth for problems (e.g., swollen or bleeding gums, dental decay, signs of infection).
• Document oral health history and status in medical record.
• If last dental visit took place more than six months ago or if any oral health problems identified, advise to schedule an appointment with dentist.

For more information, go to www.mchoralhealth.org.
Massachusetts Oral Health Guidelines for Pregnancy and Early Childhood

Obstetricians/ Prenatal Care Providers

Assess Oral Health Status:
• Take oral history
• Provide brief oral exam
• Document oral health issues

Advise and Educate:
• Importance of oral health including visits every 6 months
• Reassurance of safety of dental care and fluoridation

Refer and Collaborate:
• Make referrals to oral health provider
• Provide written consultations for the oral health provider and include list of safe medications
Massachusetts Oral Health Guidelines for Pregnancy and Early Childhood

Pediatric Health Care Providers:

Assess Oral Health Status:
- Perform oral health risk assessment and examination
- Determine if child lives in fluoridated community

Advise and Educate Parents/caregivers:
- Help families identify dental home no later than 12 months
- Eat healthy foods, avoid high sugar drinks, offer only milk or water
- Practice good oral health care and hygiene

Provide Fluoride advice/treatment:
- Encourage drinking fluoridated water
- Provide oral fluoride supplementation if needed

Refer and Collaborate:
- Establish relationships with pediatric oral health care professionals
- Refer, and provide written consultations
Massachusetts Oral Health Guidelines for Pregnancy and Early Childhood

Oral Health Care Providers, for Pregnant Women:

Assess Oral Health Status:
- Full medical history, include prenatal information and social history
- Conduct examination: take blood pressure
- Take radiographs as needed using ADA-FDA 2012 guidelines

Advise and Educate:
- Reassurance of safety of fluoridation and of dental care
- Provide information on common oral health conditions, pregnancy-related changes, healthy foods and how mother’s oral health affects child’s oral health

Provide Treatment and Management:
- Provide dental home
- Oral Health conditions that require immediate attention, such as extractions, root canals, restorations, can be safely addressed during pregnancy
- Avoid temporary materials when possible
Massachusetts Oral Health Guidelines for Pregnancy and Early Childhood

Oral Health Care Providers, for Pediatric Patients:

Assess Oral Health Status:
- Full medical and oral history
- Perform caries risk assessment, including fluoride exposure
- Growth and development, eruption sequence, hard and soft tissue injury

Advise and Educate:
- Reassure parents about importance and safety of oral hygiene, oral health care, fluoride and proper nutrition
- Educate parents on proper brushing techniques for their infant/child
- Confirm availability of toothbrush, fluoride toothpaste and clean water

Provide Treatment, Management and Collaboration:
- Provide dental home and treat as needed
- Assess barriers for oral health care for young children
- Consult with pediatric providers for high risk or complex situations
- Communicate with pediatric providers about available oral health services
Acknowledgements

• Oral Health Advisory Committee (36 Organizations and DPH)
• MA Title V Program
• Office of Oral Health
• MassHealth
• CDC PRAMS
• MA PRAMS Advisory Committee
Thank you
How often do you provide the following services to reproductive-aged women?

**RECOMMENDATION FOR DENTAL CLEANING EVERY 6 MONTHS TO A YEAR**
Do you agree with the following statement about oral health during pregnancy?

The presence of active periodontitis may increase the risk of cardiovascular disease and diabetes.
Do you agree with the following statement about oral health during pregnancy?

Periodontal disease is associated with an increased risk of gestational diabetes mellitus.
Do you agree with the following statement about oral health during pregnancy?

Maternal oral flora is one of the best indicators of oral flora of infants and children.

N=137  N=117  N=141  N=125
How often do you provide the following services to reproductive-aged women?

**ORAL HEALTH COUNSELING DURING THE ANNUAL VISIT**
How often do you provide the following services to reproductive-aged women?

**VISUAL ORAL HEALTH EXAM**

<table>
<thead>
<tr>
<th>Always</th>
<th>Often</th>
<th>S'times</th>
<th>Rarely</th>
<th>Never</th>
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<tr>
<td>36</td>
<td>40</td>
<td>13</td>
<td>13</td>
<td>13</td>
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<td>28</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>34</td>
<td></td>
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</table>

**Fam Med N=128**

**OB/GYN N=142**
What is your comfort level in providing visual oral health exams?
How often do you provide the following services to reproductive-aged women?

**PATIENT EDUCATION MATERIALS ON ORAL HEALTH DURING PREGNANCY**

![Bar graph showing the percentage of providers who provide patient education materials on oral health during pregnancy. The graph includes data for different types of providers, such as Family Medicine (Fam Med N=127), OB/GYN (OB/GYN N=144), Dentists (Dentists N=138), and Hygienists (Hygienists N=119). The categories are Always, Often, S'times, Rarely, and Never.](image-url)
How often do you refer reproductive-aged patients to an oral healthcare professional?

PATIENTS WHO HAVE NO PLANS TO BECOME PREGNANT WITHIN THE NEXT YEAR

![Bar chart showing the percentage of patients referred to oral healthcare professionals]

- Frequently (daily or weekly): Fam Med 38, OB/GYN 6
- Occasionally (monthly): Fam Med 41, OB/GYN 33
- Never: Fam Med 21, OB/GYN 60

Fam Med N=128, OB/GYN N=141
How often do you refer reproductive-aged patients to an oral healthcare professional?

PATIENTS WHO ARE PLANNING TO BECOME PREGNANT WITHIN THE NEXT YEAR

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Frequently (daily or weekly)</td>
<td>32%</td>
</tr>
<tr>
<td>Occasionally (monthly)</td>
<td>31%</td>
</tr>
<tr>
<td>Never</td>
<td>59%</td>
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Fam Med N=127  
OB/GYN N=141
Younger Populations have Lower Rates of Dental Cleaning Before and During Pregnancy

Proportion* of women who reported having their teeth cleaned by age, MA PRAMS, 2007-2009

* All percentages are population weighted

<table>
<thead>
<tr>
<th>Age</th>
<th>Before Pregnancy</th>
<th>During Pregnancy</th>
</tr>
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<tbody>
<tr>
<td>&lt;20</td>
<td>62%</td>
<td>32%</td>
</tr>
<tr>
<td>20-29</td>
<td>58%</td>
<td>37%</td>
</tr>
<tr>
<td>30-39</td>
<td>70%</td>
<td>51%</td>
</tr>
<tr>
<td>40+</td>
<td>76%</td>
<td>60%</td>
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* All percentages are population weighted
Age is a Risk Factor for Lack of Dental Cleaning

Proportion of women who reported having their teeth cleaned by age, MA PRAMS, 2010-2011

- Before: <20 (65.7%), 20-29 (59.2%), 30-39 (75.6%), 40+ (78.3%)
- During: <20 (43.7%), 20-29 (39.8%), 30-39 (58.2%), 40+ (52.6%)
Guiding Principles

• Promote health and well-being of MCH populations
• Eliminate disparities by targeting the increasingly diverse MCH populations in MA
• Integrate life course perspective and social determinants of health into all programs
• Ensure community engagement through essential allies and others
• Ensure parental involvement, including fathers
• Target interventions as early as possible and focusing on teachable moments
• Be nimble