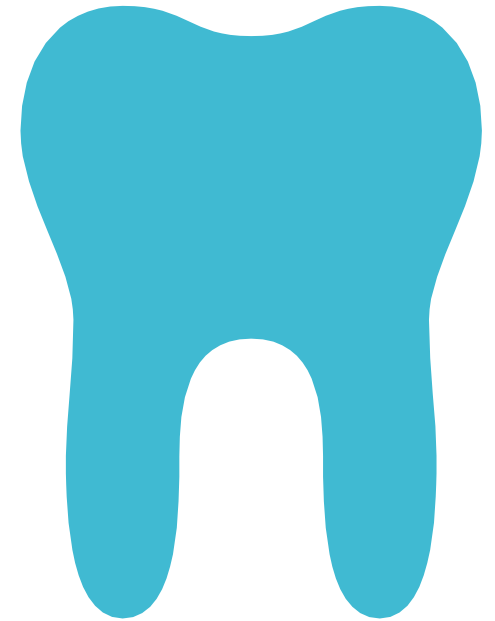


# Perinatal Oral Health

Emily Norrix, MPH

Perinatal Oral Health Consultant



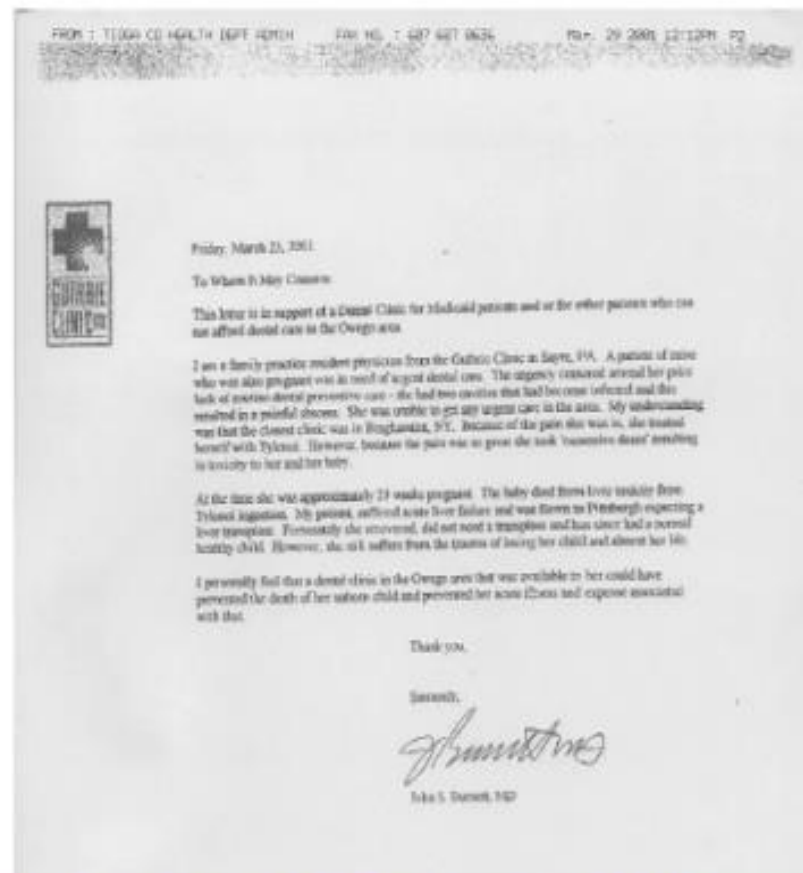
# Pregnancy and Oral health

Question: When is it safe for a pregnant woman to see a dentist?

**Why do we  
want  
pregnant  
women to  
see the  
dentist?**

# Group Discussion

This is not a drug over-dose story or an accidental death story, but rather a perinatal oral health story



"Because pain was so great she took 'excessive doses' (Tylenol) resulting in toxicity to her and her baby. At the time she was approximately 29 weeks pregnant. The baby died from liver toxicity. My patient suffered acute liver failure and was flown to Pittsburgh expecting a liver transplant."

# A Michigan Issue

## Putnam: 'I want to live,' says triple amputee, 25, with will to survive

Judy Putnam , Lansing State Journal Published 12:14 p.m. ET June 28, 2017 | Updated 12:49 p.m. ET June 28, 2017



**Lansing State Journal**  
PART OF THE USA TODAY NETWORK

The diagnosis was serious: Endocarditis, an infection in her heart, traced to bacteria from an abscessed tooth.

"She was so critically ill that I think she was close to death numerous times," Romano said.

In 2018, the MDHHS Oral Health Program moved from the Bureau of Health and Wellness (Chronic Disease) into the Bureau of Family Health Services

We are now in the Division of Child and Adolescent Health.

# MDHHS Oral Health Program

# Perinatal Oral Health Program

- Launched January 2013
- Housed under Michigan's Infant Mortality Reduction Plan ( Now rebranded as the Mother Infant Health Improvement Plan)
- Goal: Develop Comprehensive Perinatal Oral Health System for State of Michigan





Perinatal Advisory  
Committee that provides  
guidance and advocacy

Composed of medical, dental,  
and public health  
professionals



Day to Day operation overseen by Perinatal  
Consultant



Technical Assistance

Identify opportunities for  
medical/ dental integration  
and facilitate methodology  
Education! Education!  
Education!

Initiative  
Structure



# Statewide Strategies

Guidelines

Perinatal Protocol

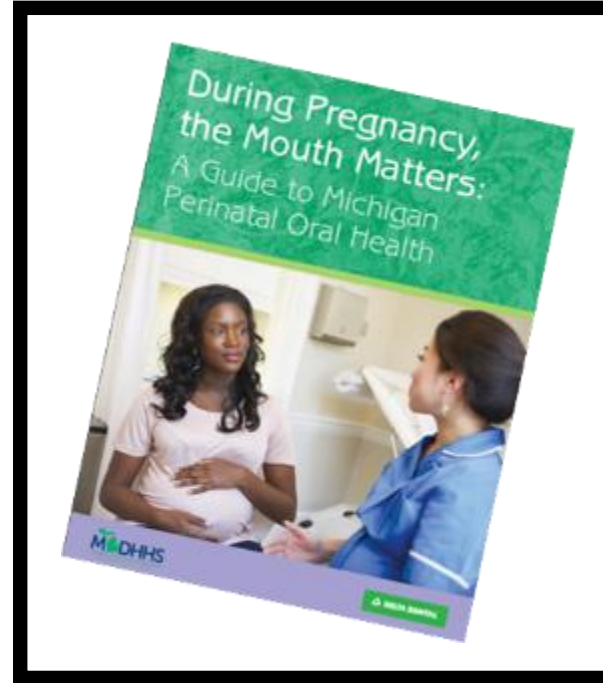
Interprofessional Education

Curriculum Assessment

Diverse Partnerships

WIC Module

Grace Health Model and MIMIOH Project



**Give You and Your Baby A Lifetime Of Healthy Teeth**

Starting in pregnancy, there are simple things you can do to help your child (and yourself!) have healthy teeth and gums for a lifetime. If you're pregnant now or have a baby under one year old, this lesson will help you learn more about oral health and why it's so important.



# Wichealth Module

As 2018, nearly  
10,000 women in 14  
states have  
completed the  
module.



## Give You and Your Baby A Lifetime Of Healthy Teeth

Starting in pregnancy, there are simple things you can do to help your child (and yourself!) have healthy teeth and gums for a lifetime. If you're pregnant now or have a baby under one year old, this lesson will help you learn more about oral health and why it's so important.

**Table 1. Healthy Teeth User Demographics, 2017**

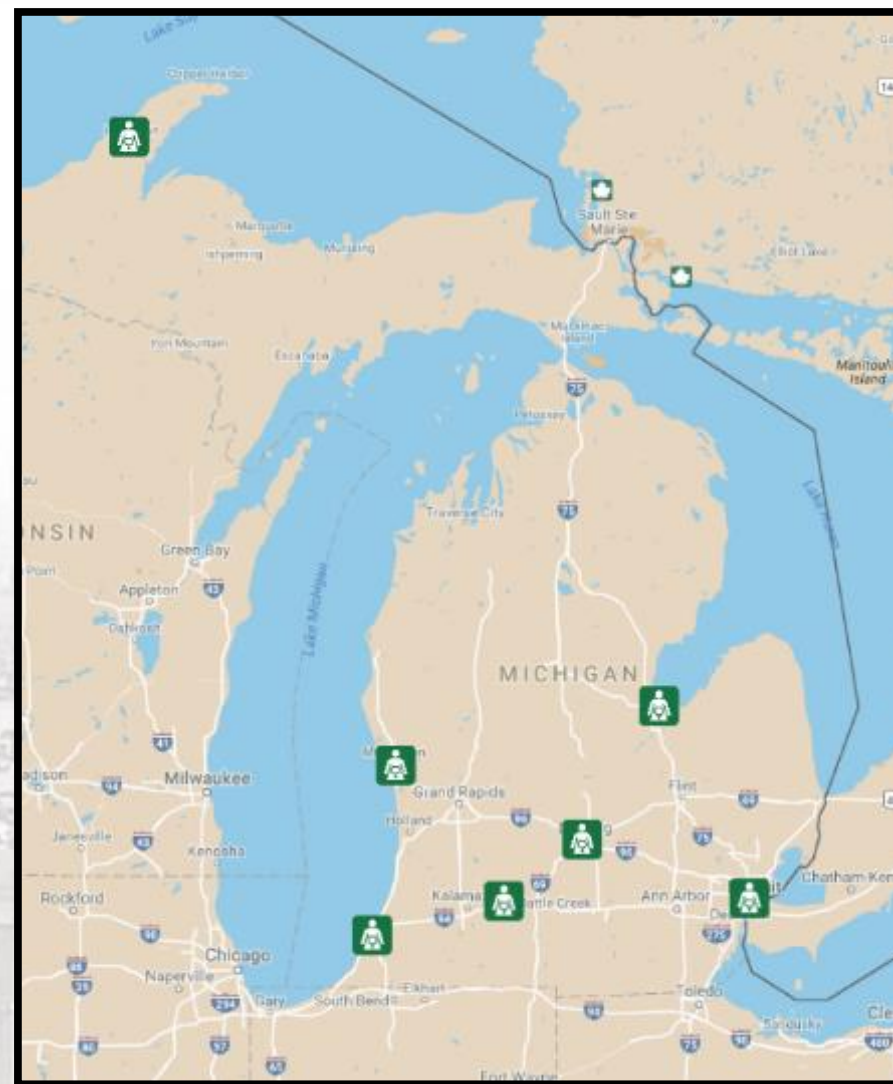
<b>Marital Status</b>	<b>(%)</b>
Single, never married	66%
Married	28%
Divorced	6%
Widowed	<1%
<b>Educational Level</b>	
Did not finish high school	12%
High school degree or GED	37%
Some college	31%
Community college degree/ trade skills training	10%
4-year college or university	8%
Advance college degree	2%
<b>Race</b>	
White	61%
Black or African American	31%
Multiracial	5%
Asian	2%
American Indian or Alaskan Native	2%
Native Hawaiian or Pacific Islander	<1%

*\*Categories may not total to 100%  
due to rounding*

# What is the Michigan Initiative for Maternal & Infant Oral Health (MIMIOH)

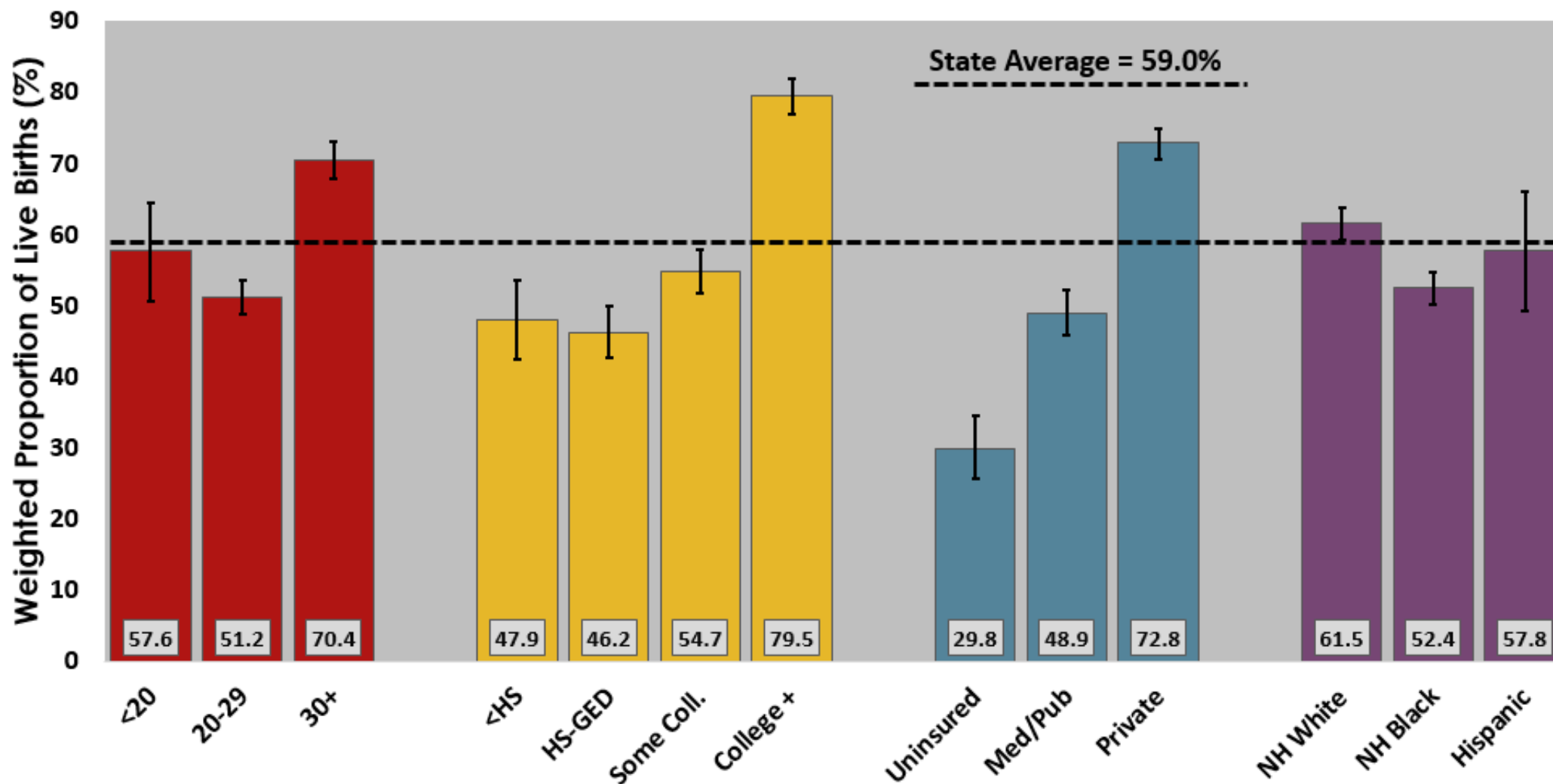
- A grant funded, one year project and partnership between the Detroit Mercy Dental, the Michigan Primary Care Association (MPCA), and the Michigan Department of Health and Human Services (MDHHS)
- Places dental hygienists within the OBGYN departments of 7 Federally Qualified Health Centers. Sites were selected by competitive process and UDS data.
- Operating under Michigan's PA161 program, these hygienists become part of the OBGYN care team and provide education, preventative care, and referrals for needed dental treatment.

- Grace Health
- Great Lakes Bay
- Ingham County Health Department
- Muskegon Family Care
- Intercare
- Upper Great Lakes
- Covenant Community Care

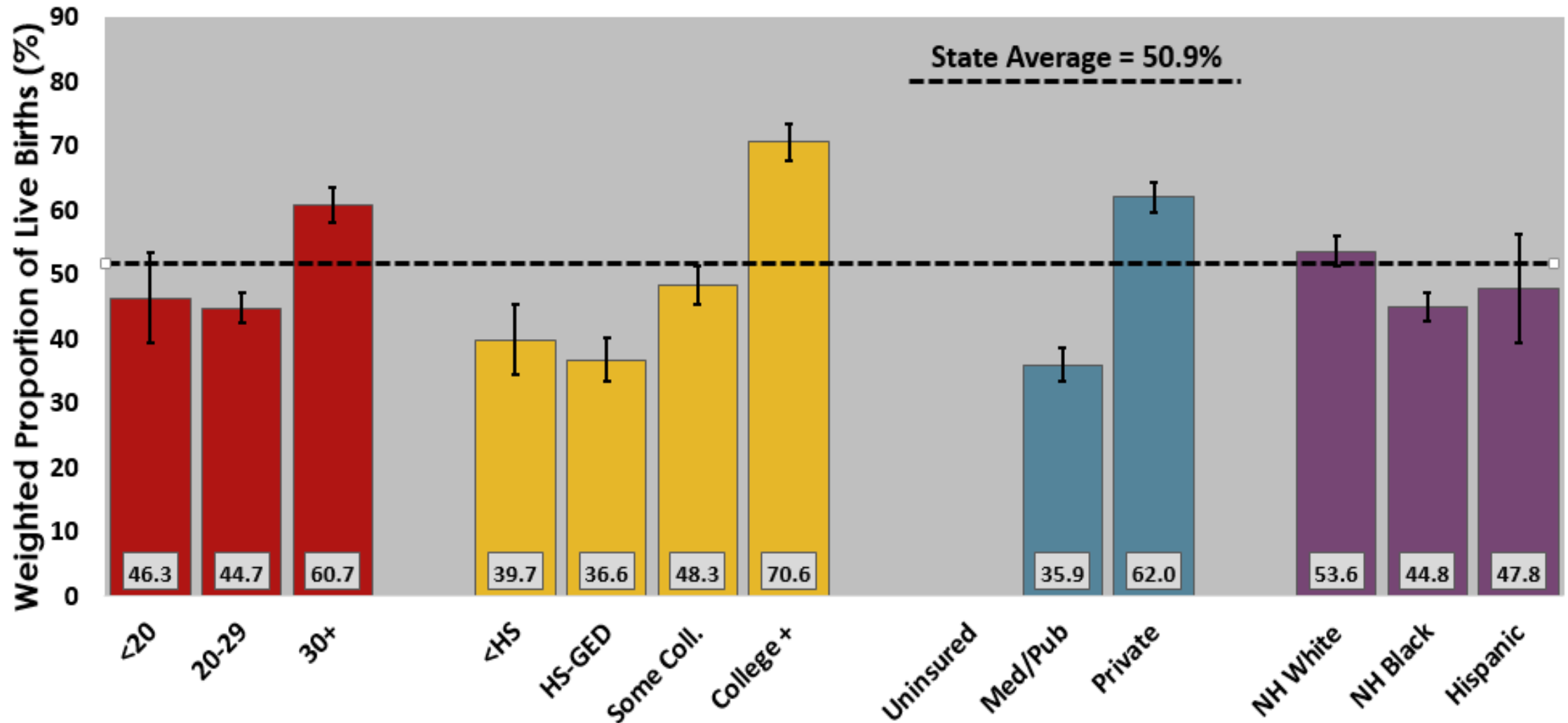




## Teeth Cleaned 12 Months Before Pregnancy = YES by Maternal Demographics; Michigan PRAMS 2012 - 2014



## Teeth Cleaned During Pregnancy = YES by Maternal Demographics; Michigan PRAMS 2012 - 2014



# Observations from MI PRAMS (2012-2014)

- Many women are not getting their teeth cleaned before or during pregnancy.
- The proportion of women getting their teeth cleaned before pregnancy decreases during pregnancy.
  - 59.0% before pregnancy
  - 50.9% during pregnancy

# Observations from MI PRAMS (2012-2014)

- **Past behavior helps describe future behavior**
  - Among mothers who had their teeth cleaned before pregnancy, most (75.5%) also had their teeth cleaned during pregnancy.
  - Among mothers who did NOT have their teeth cleaned before pregnancy, only 15.4% went on to have their teeth cleaned during pregnancy.
- **Insurance is not always a barrier**
  - Most women (76.0%) report having dental insurance during pregnancy.
  - Over half of mothers (60.3%) who did not have a cleaning during pregnancy had dental insurance.



## Michigan Data: Obstetric Providers

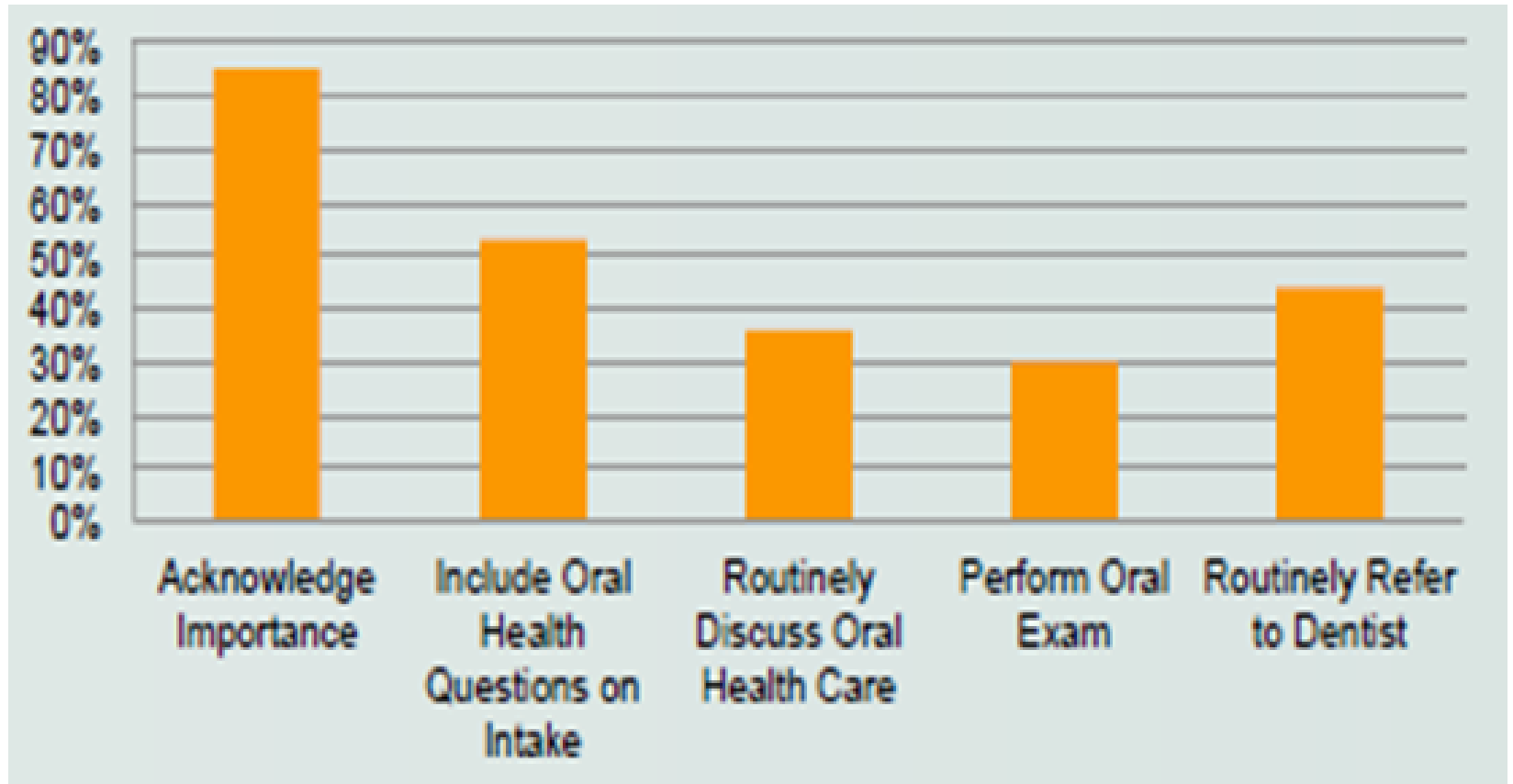
85% of providers considered perinatal oral health as an important consideration for optimal prenatal care.

53% reported having oral health questions on their intake documents.

36% regularly discuss the importance of oral health.

30% routinely perform an oral cavity exam.

44% consistently recommend oral health assessment by a dentist if the patient is not already receiving care.



**Why do we  
want  
pregnant  
women to see  
the dentist?**

Poor Oral Health and Preterm Birth

Passing of Cavities from Mom to Baby

Pregnancy Related Oral Health Issues

Insurance Coverage

# Periodontal Disease and Preterm Birth

Numerous studies have documented an association between maternal periodontal disease and preterm birth and low birth weight.

## Bacteremia: Direct Mechanism

- Periodontal infection in the mouth may have direct effects on the uterus through bacteremia.
- Some bacteria have been found in amniotic fluid cultures.
- Updated literature has indicated there may be a bacterial link

## Systemic Inflammatory Response: Indirect Mechanism

- Likely that preterm birth results from a systemic inflammatory response to periodontal infection that increases prostaglandins and interleukins and affects labor initiation.
- Inflammatory response may lead to placental blood flow restrictions, placental necrosis, and consequent low birth weight.
- A similar mechanism has been proposed to explain the association seen between periodontitis and increased rates of heart disease and diabetes.

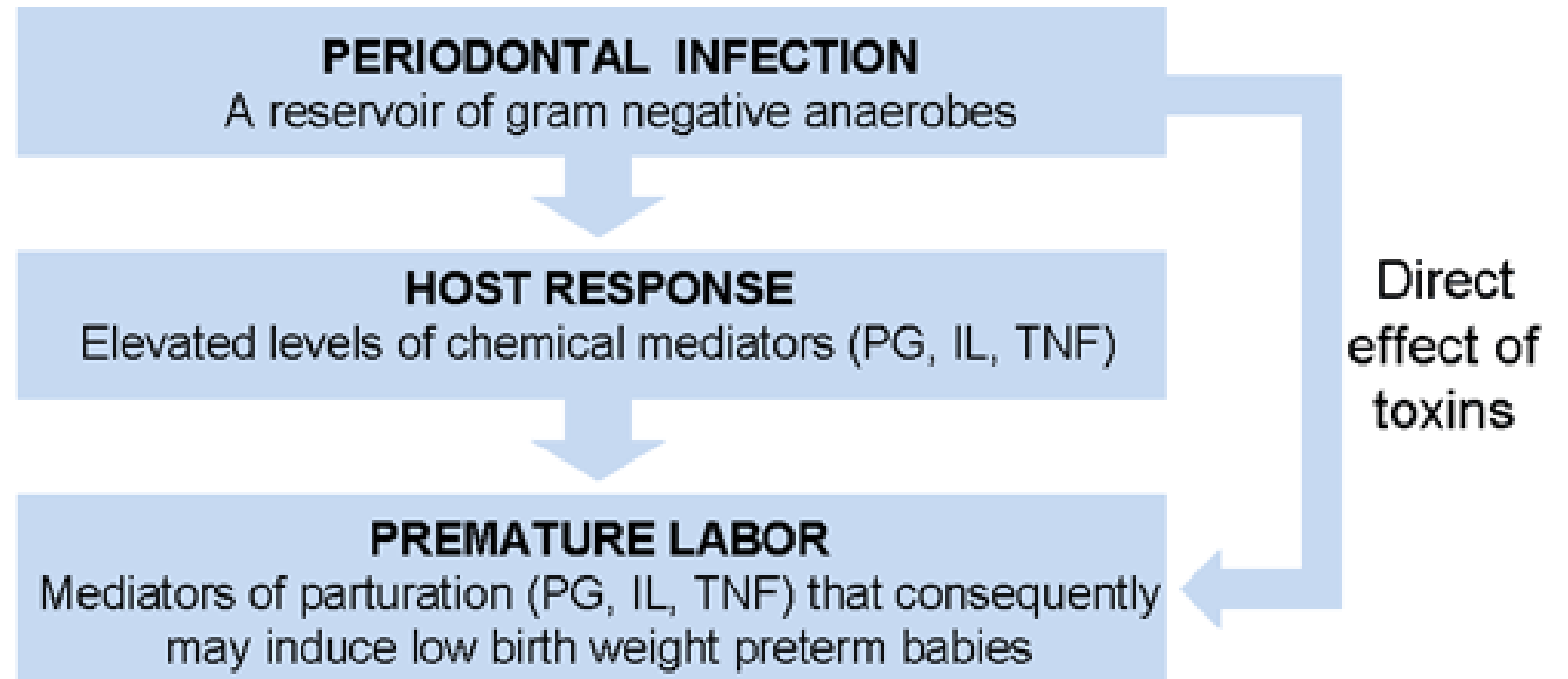
*Boggess KA, Edelstein BL. Oral health in women during preconception and pregnancy: Implications for birth outcomes and infant oral health. Matern Child Health J 2006;10:S169-174.*

*Dörtbudak O, Eberhardt R, Ulm M, Persson GR. Periodontitis, a marker of risk in pregnancy for preterm birth. J Clin Periodontol 2005;32:45-52.*

*Goepfert AR, Jeffcoat MK, Andrews WW, Faye-Petersen O, Cliver SP, Goldenberg RL, et al. Periodontal Disease and Upper Genital Tract Inflammation in Early Spontaneous Preterm Birth. Obstetrics & Gynecology 2004;104:777-783.*

*Xiong X, Buekens P, Fraser WD, Beck J, Offenbacher S. Periodontal disease and adverse pregnancy outcomes: A systematic review. BJOG 2006;113:135-143.*

# Periodontal Disease and Preterm Birth A Proposed Mechanism



Kumar J and Samelson R. Oral Health Care During Pregnancy and Early Childhood: Practice Guidelines. Albany, NY. New York State Department of Health. 2006. P. 23.

# Caries Transmission



**The germs that cause cavities (*strep mutans*) can be passed from mother (OR sometimes caregiver) to baby.**

- We Are NOT born with cavity causing germs (*Strep mutans*); We get them from our environment.
- Transmission happens even before children develop teeth.
- Transmitted through kisses, pacifiers, bottles, spoons, forks, etc.

# Caries Transmission

**Early transmission of microbes is a significant risk factor for future caries experience.**

**Mothers with higher salivary levels of Streptococci mutans are more likely to infect their infants early in life.**

**Controlling these levels through preventive care for the mother has shown a reduction in the transmission.**

**Presents an opportunity for education and motivation**

# Let's Get Clinical

Common oral  
health  
conditions  
during  
pregnancy

## A healthy mouth



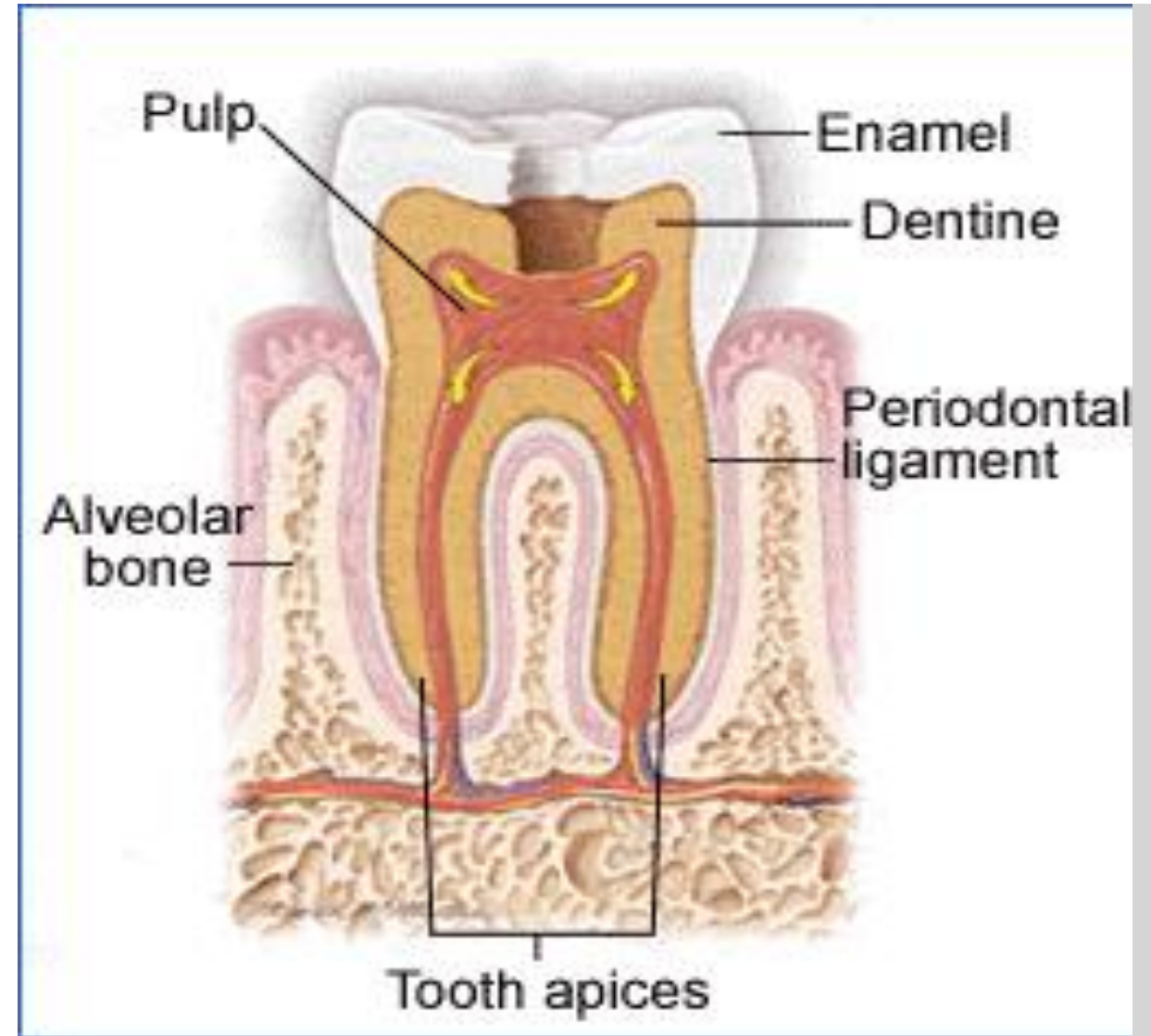
# Anatomy of the Tooth

The outer protective layer of the tooth is enamel, which is extremely hard.

The middle layer is dentin.

The pulp is composed of nerves and blood vessels that exit the tooth via the apices.

The root connects to alveolar bone via the periodontal ligament.





## Pregnancy Gingivitis: An Inflammatory Response

### Mild Gingivitis



### Moderately Severe Gingivitis



**Pregnancy Gingivitis:** An increased inflammatory response to plaque during pregnancy causes the gingivae to swell and bleed more easily. Peaks in 3<sup>rd</sup> trimester. Women with gingivitis before pregnancy are more prone to exacerbation during pregnancy. Rinsing with saltwater may help, along with dental care.

Severe gingivitis, pyogenic granuloma, and caries



Photo courtesy of Dr. Shin-Mey Rose Yin Geist, Associate Professor, University of Detroit Mercy School of Dentistry

- **Pyogenic Granuloma:** Occurs in 5% of pregnancies. Vascularized and hyperplastic lesion up to 2 centimeters in diameter. NOT malignant and usually recedes after pregnancy. Also may be known as a “pregnancy tumor”
- **Caries:** Higher risk in pregnancy due to dry mouth and decreased saliva production, increased acidity in the mouth from vomiting or increased sugar intake from food cravings.

## Periodontitis

Caused by untreated gingivitis.

Inflammatory response to plaque.

Plaque adheres to teeth and releases toxins to create pockets of infection.

Unlike Gingivitis, can destruct the periodontal ligament or bone.

Teeth may be lost and bacteremia can result.



# Oral Disease

Abscessed tooth



Photo courtesy of Dr. Francisco Plaza, Clinical Assistant Professor and Dr. Nahid Kashani, Clinical Associate Professor, University of Detroit Mercy School of Dentistry

- **Localized collection of pus associated with a tooth**
- **HIGHLY painful, may be described as a throbbing or shooting pain**
- **Treatment with antibiotics and root canal/extraction**
- **If the infection spreads unchecked it can spread to the bone and soft tissue (osteomyelitis and cellulitis.) It can also be deadly (Septicemia, brain abscess etc.)**

# Tooth Mobility



- **Ligaments and bone that support teeth may temporarily weaken during pregnancy, which can lead to some tooth mobility.**
- **Typically, not a cause for concern unless other risk factors are present.**



# Tooth Erosion

- Can be caused by increased acid in the mouth from vomiting/ gastric reflux.
- Advise **AGAINST** brushing teeth immediately after vomiting.
- Rinse mouth with water or a water/ baking soda solution to neutralize acid. Wait 10 to 15 minutes to brush.
- Immediately brushing teeth after vomiting rubs acid directly into teeth, contributing to erosion.
- Tooth erosion can also can be a sign of Bulemia.



# Health Insurance Changes



# Medical Services Administration BULLETIN MSA

**Bulletin Number:** MSA 18-18

**Distribution:** Dentists and Dental Clinics, Practitioners, MIHP Providers, Medicaid Health Plans (MHPs), Tribal Health Centers (THCs), Federally Qualified Health Centers (FQHCs), Local Health Departments (LHDs), Rural Health Clinics (RHCs)

**Issued:** June 1, 2018

**Subject:** Expanded Access to Dental Benefits for Pregnant Women

**Effective:** July 1, 2018

**Programs Affected:** Medicaid, Healthy Michigan Plan

# Pregnant Women Dental (PWD)

- Healthy Michigan Plan and Healthy Kids Dental beneficiaries
- Administered through a contracted Medicaid health Plan (MHP) dental vendor in the beneficiary's service area
- Expected to have a positive impact on pregnant beneficiaries





# Benefits and Eligibility

- Effective July 1, 2018
- The PWD benefit will mirror the Healthy Michigan Plan (HMP) dental benefit
- MHPs can make individual decisions to extend/add to the benefit



[This Photo](#) by Unknown Author is licensed under [CC BY-NC-ND](#)

# Eligibility

- Plans should provide dental benefits for the woman from the first day of the month on which the plan becomes aware of the pregnancy through three months following end of month of due date
- CHAMPS will also be utilizing this calculation when adjudicating claims from FFS providers to determine if the claim should be paid by FFS or by the health plan
- MHPs will follow published Medicaid policy related to completing dental treatment for loss/change of eligibility

# How can MIHP Providers Help

- MIHP providers should be directing their MHP enrolled pregnant women to the MHP online provider directory or directly to the MHP to choose a contracted/network dental provider
- MDHHS will be also be adding dental benefit contact information to the MIHP contact list
- If Mom has not reported her pregnancy to her caseworker the MIHP provider should assist her in that process

# Barriers to Receiving Care

## Patient Barriers

- Women don't understand why oral health care is important
- Oral Health may be perceived as a luxury
- Not always a standard of prenatal/ pregnancy care
- Fear
- Socioeconomic Barriers etc



# Dental Community

**Lack of dentists who accept Medicaid**

**Dentists may be siloed in their community with a lack of interprofessional practice.**

**Unsure of pharmaceutical considerations**

**Unwillingness of dentists to treat pregnant women; many were taught to defer treatment.**

**Originally: NO dental treatment during pregnancy....**

**Then: Only in 2<sup>nd</sup> trimester and only if urgent.....**

**Then: All dental care in 2nd trimester.....**

**Current National Consensus: Treat ASAP**

Barriers to  
Receiving  
Care

# Barriers to Receiving Care

## Dental Community

- Misperception as unsafe during pregnancy; unfounded concerns over safety and litigation
- There have been NO valid lawsuits against dentists regarding dental care and subsequent pregnancy complications in Michigan.
- Consensus: If a woman has pregnancy complications due to the refusal of her dentist to treat oral health conditions, that dentist is MUCH more liable than if he/she did not treat!

## Strategies to Integrate and Overcome Barriers

Ask the right questions!

DO NOT only ask “ Do you have a dentist/ dental home?”

*If a woman saw a dentist at an office 12 years ago, she still may say yes.....*

Instead:

When was the last time you went to the dentist?

Are they local?

Could you call them tomorrow and make an appointment if you needed to?



# Establish a protocol

- Make sure that you are consistent and develop a referral/ case management system that works for you and your clients.
- Ensure ALL staff know this protocol.
- This will look different for everyone!



# Strategies to Integrate and overcome barriers

Use this as an opportunity to discuss other important topics

**For example:**

- Smoking cessation and reducing oral cancer risk
- HPV vaccination
- Nutrition
- Obesity

When should a child see  
a dentist for the first  
time?

## Age One Dental Visits

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Dental home established by 12 months of age OR when the first tooth erupts.

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Many dentists are not up to date on this recommendation, aren't comfortable, or simply think it's unnecessary

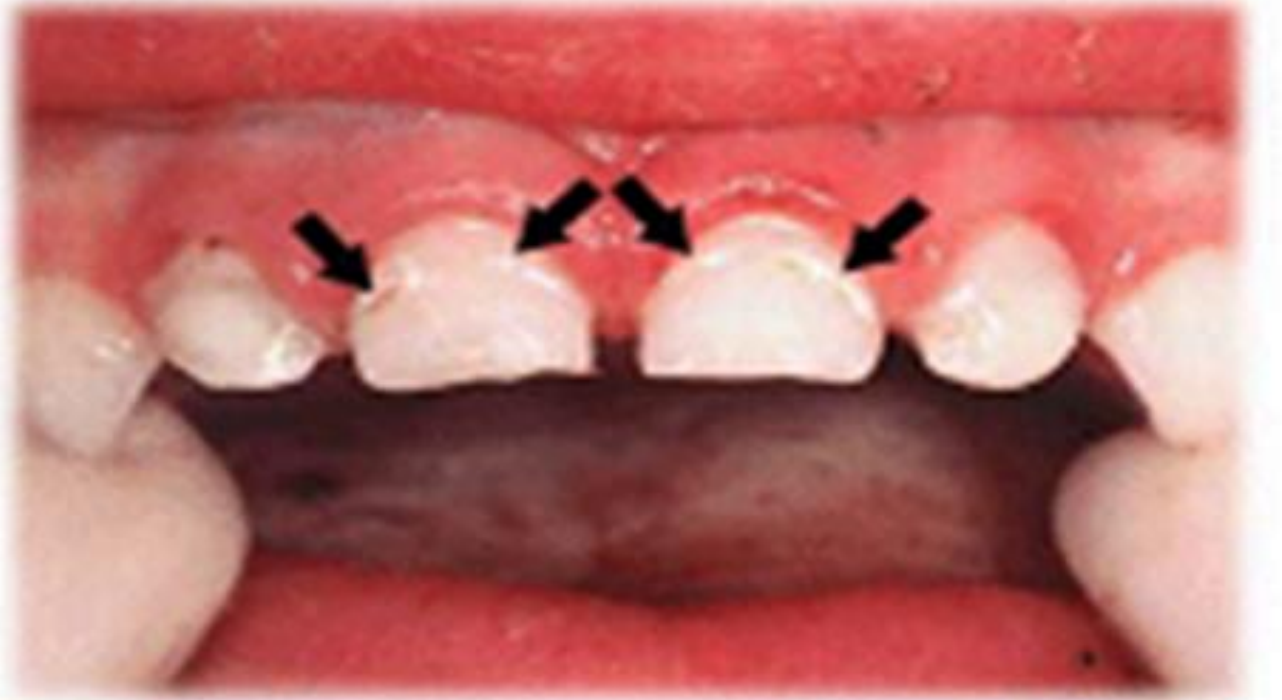
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Studies indicate that children with an established dental home by age 1 have less dental decay through childhood.

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Dental decay is the most common chronic childhood disease in the United States.

# Dental Decay: White Spot Lesions



# Dental Decay- Early Childhood Caries

## Progress of Early Decay



Healthy primary (baby) teeth



Mild decay



Moderate decay



Severe (rampant) decay



Upon eruption, children should brush with a **smear** of fluoride toothpaste

From ages 3 thru 6, children should brush with a **pea-sized** amount of fluoride toothpaste

What does  
this picture  
show?







After treatment there will be a small dark scar on the tooth.



The medicine is put directly on the cavity.

Then covered with a Fluoride to help keep it in place.



# Silver Diamine Fluoride (SDF)



**Low cost and easy to use**

**No shots or anesthesia**

**Patient still has to manage their caries risk by known EBD means (FV, sealants, etc.).**

**Arrest cavitated lesions**

**Issues.....**

**Black stain on tooth**

**Parental consent and understanding is very important.**

**Patients may not seek other needed care after application**



# Resources for YOU!

- **FREE Materials for Patients.**
  - <https://www.mchoralhealth.org/publications/list.php#>
  - Available in multiple languages
  - Written at lower grade level
- **State of Michigan Guidelines**
  - [www.Michigan.gov/oralhealth](http://www.Michigan.gov/oralhealth)
  - [Michigan Guidelines](#)
- **ACOG Guidelines**
  - [ACOG committee opinion](#)
- **Fluoridation information**
  - [www.ilikemyteeth.org](http://www.ilikemyteeth.org)

# Contact Information

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