Healthy Smiles:
Oral Health and the Perinatal Period

Presented by the Anderson Center for Dental Care
Center for Healthier Communities
Rady Children’s Hospital, San Diego
Full-Term Stillbirth Caused by Oral Bacteria, Gingivitis

- Upper respiratory tract infection at term, followed by stillbirth a few days later
- Bacteria from placenta, fetus only found in subgingival plaque
Oral Health, Systemic Health

Mouth and body share:

- Circulation
- Neural connections
- Immune connections
Essential human functions that engage the mouth and teeth

- Breathing
- Eating
- Speaking
- Expression
- Sensation
- Protection from external environment
Importance of Oral Health for Women and their Babies

Oral Health, Systemic Health

Maternal periodontal disease and associated adverse pregnancy outcomes

- Spontaneous preterm birth
- Low birth weight infant
- Preeclampsia
- Gestational Diabetes
- Fetal Loss

2 to 7 fold increase in risk

Improving Oral Health During Pregnancy

- Improves overall health
- Reduces child’s risk for ECC
- Denti-Cal available during perinatal period
Utilization of Oral Health Services During Pregnancy

In CA 79% pregnant women received NO dental care during pregnancy

*Pregnancy Risk Assessment Monitoring System; Maternal and Infant Health Assessment data 2002-2007*
Common Myths

**Myth:** Postponing dental treatment until after pregnancy is safer.
Perinatal Oral Health Practice Guidelines

Review of current science-based literature

Collaboration of

- CA Dental Assoc. Foundation
- American College of Obstetricians
- Feb 2010

Safety of Dental Care

Cleaning -- SAFE
X-rays -- SAFE
Periodontal Treatment -- SAFE
Restorative Treatment -- SAFE

Delaying needed treatment—Risk to Mother and Fetus
BEST PRACTICE = Prevention, diagnosis and treatment of oral diseases
Pregnancy and the Dental Visit

- Preventive care as **early** in pregnancy as possible

- Emergency/acute care at **any time** during pregnancy
Myth: X-rays during pregnancy are harmful to the fetus
Radiation Exposure

- 1 hour flight = 1 mrem ≈ 1 dental x-ray
- Panorex film = 2 mrem
- Medical chest xray = 10 mrems
- TV = 0.500 mrem/hour

Average U.S. exposure = 400 mrem per year
Common Myths

Myth: Bleeding in the mouth is normal during pregnancy
Pregnancy Gingivitis

- 60-75% of women during pregnancy

- Hormonal and vascular changes increase inflammation

- Nutritional component: low levels of vitamin C, folic acid and zinc

- Increased need for
  - Dental treatment to remove plaque buildup
  - Nutritional counseling
  - Oral hygiene education
Gingivitis

- Early stage of gum disease
- Bacterial plaque irritate the gums and cause redness, swelling, bleeding
- Risk factors:
  - poor oral hygiene
  - smoking
  - stress

Reversible with good oral hygiene!
Severe Periodontitis - Gingival Recession in Incisors
Periodontitis Progression

• Prevalence in women of childbearing age is up to 40%
Common Complications of Pregnancy

Preterm Birth

- Before 37 weeks
- One in 8 deliveries in U.S.

Associated with periodontal disease
Common Complications of Pregnancy

Preeclampsia

- pregnancy-induced hypertension (>140/90) plus proteinuria

- Affects 3-7% of pregnant women

Associated with periodontal disease
Common Complications of Pregnancy—

Gestational Diabetes Mellitus (GDM)

- Affects up to 7% of pregnant women
- Increases risk for periodontal disease
- Periodontal disease makes controlling GDM more difficult
Periodontal Treatment and Birth Outcomes

- Treating gum disease during pregnancy has no negative effect on birth outcomes

- Safe for the mother and fetus

- Best practice
Additional benefits to Improved Oral Health during Pregnancy

Improving mother’s dental health during pregnancy reduces child’s risk of tooth decay!
Tooth Decay is a Bacterial Infection

Initiated by pathogenic bacteria –

*Streptococcus mutans, lactobacillus, and Streptococcus sobrinus*
Transmission of Bacteria

- Primary caregiver
- Window of infectivity is first 2 years
- Early colonization increases risk
Colonization

Can begin even before the eruption of teeth
Acidogenic Bacteria

- Acids from simple carbohydrates—white flour and sugars
- Demineralization of enamel
- Visible tooth decay
Not Just What You Eat, But How Often

Acids persist 20-40 minutes
Frequency is more important than quantity!
Remineralization

- Calcium and phosphate in saliva remineralize teeth
- Enhanced by fluoride
- Ongoing process
Is Tooth Decay a Problem in California?

Yes!

- Only 1 state of 25 surveyed ranked lower than CA in prevalence of tooth decay
- Children with history of tooth decay by Kinder: 50%
- By 3rd grade: 70%
- 4% have urgent needs due to pain or infection (26,000 in San Diego County)
- Most pervasive health problem for children in California

Early Childhood Caries

Most prevalent chronic disease of childhood

- 5 times asthma
- Can appear as soon as the first tooth erupts (around 6 months of age)

Almost completely preventable
The Effects of ECC

- Pain
- Infection
- Self-esteem
- Need for extensive dental treatment
Pain

- Children learn to live with the pain
- Missed preschool and school days: 156 million in U.S. annually
- Concentration, school readiness
- Sleep, overall health and well-being
Infection

- Spread of infection
- Difficulty chewing
- Poor weight gain
- Failure to thrive
RCHSD Dental Surgeries FY 2011

- 1,996 in operating room
- 80% ages 6 and under
- One yr. olds averaged 10 restorative procedures
Why are Baby Teeth Important?

- Eating and nutrition
- Holding space
- Proper speech development

And Smiling!
PREVENTION

Oral Disease

Oral Health
Prevention of Maternal Periodontal Disease

- Healthy snacking
- Regular brushing and flossing
- Regular dental exams and professional cleanings, SCRP
- Eliminating tobacco use (1-800-NO-BUTTS)
- Reducing stress
Limiting Frequency of Fermentable Carbohydrates

- Simple carbohydrates—white flour and sugar
- Juice, sweetened drinks, sodas
- Sticky foods
Healthy Snacks

- Fresh fruits
- Vegetables
- Proteins
Water Fluoridation

- “Community water fluoridation one of the 10 greatest public health improvements of the 20th century” CDC
- City of San Diego began optimal fluoridation in February 2011

See orange handout
Fluoridated Water

Tap water is safe to drink!
Topical Fluoride

- Decreases acid production
- Promotes remineralization of enamel
- Arrests or reverses early cavities
Fluoride Toothpaste

- Morning and evening
- Pea-sized dab for adults
- Small smear for children
Oral Hygiene

- Brush your teeth twice a day for two minutes
- Floss once a day
- Begin brushing baby’s teeth when first tooth erupts
- Floss when two teeth touch
- Kids need adult help until age: eight!
Fluoride Varnish

- Professionally applied
- Denti-Cal benefit for pregnant women, babies and children
- Trials show decay rate decreased by 50% in high risk population

Fluorosis

- Risk limited to children younger than eight
- Affects forming adult teeth
- Cosmetic
Decalcification
Tooth Decay
Severe ECC
Prenatal Professionals’ Role in Promoting Oral Health

**Encourage:**
- High level of oral hygiene
- Visit oral health professional
- Completion of all needed treatment during pregnancy

**Educate:**
- Importance of oral health for mom and baby
- Safety of dental care
Assessing Prenatal Oral Health--Two Simple Questions

1. Do you have:
   ✓ bleeding gums
   ✓ toothache
   ✓ cavities
   ✓ loose teeth
   ✓ teeth that do not look right
   ✓ other problems in your mouth

2. Have you had a dental visit in the last 6 months?
Providing Anticipatory Guidance

- Minimize risk of transmission
- Optimize oral hygiene
- Reduce dietary sugars/frequency of exposure
- Fluoride adequacy
- Oral habits
- Diet and nutrition
- Injury prevention
Referrals

1. Dentist/dental clinic
2. The Community Clinics Health Network, (619) 542-4310 to learn more about the Oral Health Initiative and community clinic dental services.
3. San Diego Co. Dental Society – (619) 275-0204
4. DentiCal –1 (800) 322-6384
5. Rady Children’s Healthcare Referral, (800)788-9029 for referral to Rady Children’s affiliated dentist, for children ages 0-17
Small Steps

Choose a few key messages

Multiple triggers over time
Working together for the health of our families
Questions?

Comments?

Concerns?
Thank You for all that you do for San Diego’s Children and Families

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