THE IMPORTANCE OF PRENATAL DENTAL CARE IN BIRTH OUTCOMES

“THE SMILING STORK”

Doyle Williams, DDS, Chief Dental Officer
Fact: There are systemic conditions that can be detected by an oral exam:

- More than 120 disease symptoms
- 25% of new diabetes cases annually
- Anorexia
- Respiratory and Vascular disease
- Bell’s Palsy
- Folic Acid deficiency
- Oral cancers
- Osteogenesis Imperfecta
DENTAL IS SECOND MOST EXPENSIVE DISEASE

AHRQ Medical Expenditure Panel Survey, 2008

Heart conditions
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
-$

All Dental Visits
Trauma-related...
Cancer
Mental disorders
Diabetes mellitus
Normal birth/live...
MOTHER-CHILD TRANSMISSION OF CAVITY CAUSING BACTERIA

- Children exposed to bacteria early in life have a higher incidence of tooth decay.
- Primary transmission of cavity causing bacteria is from mother to child.
- Transmission includes kissing and tasting the infant’s food before feeding them.
GUM DISEASE AND PREGNANCY

- 40% of pregnant women have periodontal disease
- 7 times more likely to have preterm low birth weight baby
- 25% of Pre term deliveries have no known risk factors
- 10% of women in US have preterm deliveries
- 60% of neonatal deaths
- 50% of perinatal health care costs
Preterm birth (delivery before 37 weeks gestational age) and low birth weight (LBW <2500 grams or 5 pounds 8 ounces) represent some of the most serious public health challenges facing South Carolina today.

In the short term, these infants require more medical interventions, ranging from antibiotics and phototherapy to mechanical ventilation and total parenteral nutrition.

The average daily cost for an infant admitted to the neonatal intensive care unit is $3,000.
The rate of preterm birth (<37 weeks gestation) in South Carolina is 15.4%, much higher than the national average of 12.8%.

Similarly, the rate of LBW in South Carolina is 9.9% which is also much higher than the national average of 8.2%.
<table>
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<th>Prenatal Care Utilization</th>
<th>Mother's Race/Ethnicity</th>
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<th>$P$-value</th>
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<tbody>
<tr>
<td></td>
<td>White, Non-Hispanic</td>
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<tr>
<td>Total</td>
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Figure 2a: Adjusted odds ratios and 95% confidence intervals comparing LBW deliveries to NBW deliveries. All races, 2005-2010 SC residents.

Sexually Transmitted Infection Present or Treated: STI vs No STI

Adequacy of PNC: Intermediate vs Adequate

Adequacy of PNC: Inadequate vs Adequate

Adequacy of PNC: Adequate Plus vs Adequate

Tobacco Use Before/During Pregnancy: Yes vs No

Previous Preterm Birth: Yes vs No

Prepregnancy Hypertension: Yes vs No

Gestational Hypertension: Yes vs No

Prepregnancy Diabetes: Yes vs No

Gestational Diabetes: Yes vs No

Mother's Age: <18 vs 18-24

Mother's Age: 35-55 vs 18-24

Mother's Age: 25-34 vs 18-24

Prepregnancy BMI: Underweight vs Normal

Prepregnancy BMI: Overweight vs Normal

Prepregnancy BMI: Obese vs Normal

Mother's Race/Ethnicity: NH African American vs NH White

Mother's Race/Ethnicity: Hispanic vs NH White

Method of Delivery Payment: Other vs Private Insurance

Method of Delivery Payment: Medicaid vs Private Insurance
WELLNESS PROGRAMS

EXPLORING THE LINK BETWEEN ORAL HEALTH AND OVERALL HEALTH

**Smiling Stork:** Promotes the importance of dental health during pregnancy. Aims to increase the number of pregnant women accessing dental care.

**Healthy Beginnings:** Provides regarding the importance of proper dental care for infants and children. Its goal is to instill good oral health habits at an early age.

**Rerouting Emergency Dental Care:** Educates members about alternatives in emergency situations. Too often, members use ERs as a walk-in dental clinic and do not see a dentist for proper dental care following the emergency room visit.

**One Less Worry:** Evidence suggests that by reducing the bacteria found in gum disease, seven out of nine diabetic patients need less insulin to control their blood sugar levels.
IMPACT OF UNTREATED PERIODONTAL DISEASE IN PREGNANT WOMEN

- Because of hormonal changes pregnant women have an increased risk for developing periodontal disease.
- Evidence shows that pregnant women with gum disease are 7 times more likely to have a preterm, low-birth-weight birth. (PLBW)
- When women receive treatment for the disease, the likelihood of PLBW births drops significantly.
THE LINK BETWEEN PERIODONTAL DISEASE AND PLBW DELIVERIES

- Scientific Studies have found a probable connection between periodontal disease and PLBW deliveries.
- Hypothesis is that the bacteria stimulates prostaglandins which could lead to premature labor.
COST IMPLICATIONS

- Data shows that each premature birth can add an additional $25,000 - $55,000 in immediate medical costs and up to $250,000 over a child’s life time.
- PLBW babies have increased risk of death and lasting disabilities such as mental retardation, cerebral palsy, lung and digestive problems, and vision and hearing loss.
SMILING STORK PROGRAM OBJECTIVES

Educate women of child bearing age on:

- The importance of being screened for periodontal disease during pregnancy and receiving appropriate treatment in the second and third trimester.
- The value of establishing good oral health habits for themselves and their babies/young children, and
- To help women access covered dental services during pregnancy.
INCORPORATING ORAL HEALTH EDUCATION INTO CURRENT CASE MANAGEMENT PROGRAM

- Include a few questions about oral health on the intake forms to members
  - Have you been to the dentist in the past year?
  - Do you know how to find a dentist?
  - Do you have any of the following symptoms?
RISK FACTORS OF PERIODONTAL DISEASE

- Poor Oral Hygiene Habits
- Tobacco Use
- Poor Nutrition
- Diabetes/AIDS
- Crowded Teeth
- Poor Restorations
- Stress
- Pregnancy & Female Hormonal Changes
- Genetics
MATERIALS FOR EDUCATING WOMEN IN CHILDBEARING YEARS

- A Pregnant Woman’s Guide to Healthy Gums
- A Guide to Your Young Child’s Oral Health
- In-Medical-Office Dental Reminder Notices
- Support finding a dental provider
It’s All One Body