Public and Private Sector Efforts
to Improve the Oral Health of Pregnant Women

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**Charge**

Describe
- a sampling of policies, programs, and practices
- in the public and private sectors
that typify how agencies have built upon the putative perio-preterm relationship.
### Timeline

- 1996 Offenbacher paper
- 2003 NIH Trial Start
- 2004 MCHB RIPP Planning Meeting
- 2006 NIH Trial report/ RIPP Meeting

* First report of policies, programs, and practices: to 2004
** Second report of policies, programs, and practices: 2004 -2006

### Methods

**Web searches**
- Sites: Google, Firstgov
- Terms: PD, Preterm, Pregnancy, Low Birth Weight, Combinations

**Observations & recruitment**

**State searches**
- Title V Info System
- AMCHP “Ask the Expert”
- CDHP Oral Health Plans Tool
- SOCHS Grantees
- Phone interviews
### Findings

<table>
<thead>
<tr>
<th>Insurers</th>
<th>Manufacturers</th>
<th>Health Professionals</th>
<th>Consumer Advocates</th>
<th>Lay Press</th>
<th>Think Tanks</th>
<th>Federal Government</th>
<th>State Government</th>
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### Insurers

[Insurers Image]
### Wall Street Journal Summary

Periodontal Disease and Pre-Term Low Birth Weight Monograph for Dental Network Providers

Research Studies with Columbia University

Intelihealth website
Drivers of Insurer Adoption

- Limiting erosion of Employer Sponsored Dental Insurance
- Reducing medical costs through dental care
- Market distinction at little potential liability with little marginal cost
- Oral-systemic health interaction promotion
- Wellness promotion
- Evidence-based care promotion

Consumer Products Manufacturers
Butler Campaign

- Cites Offenbacher study for PD-Preterm along with other health conditions

Listerine

- Print Campaign: Listerine bottle draped in stethoscope
Tom’s of Maine

Reproductive Tract

Women with advanced gum disease are more likely to give birth to underweight, preterm babies.

Also, oral microbes may cross the placental barrier and expose the fetus to infection.

Healthy Body Health Mind
PBS Segment on Oral Health

Colgate & ADA

Colgate & ADA

Colgate & ADA

Colgate & ADA
Professional Associations

AMA-ADA Media Briefing

Pregnancy Risks Associated with Periodontal Disease

Steven Offenbacher, DDS, PhD, MMSc
James D Beck, PhD
Center for Oral and Systemic Disease
Department of Periodontology
School of Dentistry
University of North Carolina at Chapel Hill
AGD – New Perspective on Focal Infection

GDA Call for Medicaid Coverage of Pregnant Women

NYS Consultation Form
Premature Births: Know the Facts and Stats

- Note: Recent studies have shown that women with periodontal disease are at three to five times greater risk of preterm birth than those who are periodontally healthy.

- In 2001, the preterm birth rate was 11.9%, reflecting more than 476,000 newborns and the highest rate ever reported for the U.S. This represents 1 in 8 babies in the U.S. born prematurely.

- The rate of preterm birth increased 27% between 1981 and 2001 from 9.4% to 11.9%.

- On an average day in the U.S., 1,305 babies are born preterm (before 37 weeks), 213 are born very preterm (before 32 weeks).

- Women with periodontal disease are at three to five times greater risk of preterm birth than those who are periodontally healthy.
American College of Nurse Midwives

QuickInfo

Oral Health

Oral health plays an important role in maternal and child health; animal and population-based studies have demonstrated an association between periodontal diseases and adverse pregnancy outcomes (1, 2). Though further research is needed to determine the extent to which these associations are causal or coincidental, it is clear that oral health is an important component of providing comprehensive women’s health care.

Consumer Advocates
HMHB – Sunstar Butler

HMHB - Sonicare
State Oral Health Collaborative

Lay Press
Gum disease bad for pregnancy

June 19, 2006 – letter to the editor

Re: "Get Healthy, Then Get Pregnant" [June 5]: I am disappointed that your article never advised women who are planning to get pregnant to get a dental examination to ensure that there is no periodontal [gum] disease.

Periodontal disease is caused by a chronic bacterial infection that can increase the risk of preterm birth. Overall, studies have concluded that pregnant women who have moderate to severe periodontal disease may be seven times more likely to deliver a premature child than women with healthy gums.

Bright Smiles for Kids

June 22, 2006

Karen Cody Carlson, chief executive officer of Dental Aid, says, "Studies show that if a pregnant woman has dental disease, the bacteria which cause that disease may travel through the bloodstream, cross the placenta and contribute to the birth of a premature or low birth-weight baby."
**Bleeding gums linked to many diseases**

June 23, 2006

Bleeding gums may indicate more than an oral health problem; U.S. studies have linked gum disease to heart attacks, strokes, pneumonia and diabetes.

Women with gum problems have more trouble because studies show that pregnant women with bleeding gums -- a common occurrence due to hormonal changes during pregnancy -- are seven times more likely to give birth prematurely, as well as deliver low-birth-weight babies.

**HEALTH PLAQUE ATTACK**

September 19, 2006

Periodontitis and other gum diseases have now been linked to premature birth, low birth weight, higher sugar levels, diabetes, immune problems, anaemia, respiratory disease, liver and cholesterol problems and rheumatoid arthritis, as well as stroke and heart disease.
Mom's Oral Health Affects Newborn's Health

September 4, 2006:

Staying healthy begins at your mouth - not just the food you eat, but how you care for your teeth and gums.

Emerging science suggests a link between a healthy mouth and a healthy body. That's why paying attention to oral health can improve the health of mothers, their families and even their newborn babies.

Think Tanks & Scholarly Efforts
IOM Preterm Birth Study

Preterm Birth: Causes, Consequences, and Prevention
Richard E. Behrman, Adrienne Stith Butler, Editors, Committee on Understanding Premature Birth and Assuring Healthy Outcomes

Center for Health Care Strategies
Best Clinical and Administrative Practices

New Jersey Collaborative to Improve Birth Outcomes and Health Status of Children
Start Date: February 2008

To improve birth outcomes in urban New Jersey areas – Trenton, Newark, Paterson, and Camden – and connect infants and children ages 0-5 to preventative care services, CHCS is partnering with Children’s Learning, a 40-city program of the New Jersey Coalition for Healthy Childhoods. CHCS is focused on extending the delivery of evidence-based care to all New Jersey children, and on improving the clinical and administrative practices (COP) included in a program to improve the quality of health services for people served under publicly funded care.

Major partners in this project include the state Medical Society and each of the five Medicaid-eligible health plans in New Jersey, including:
- Children’s Learning, Inc.
- Bon Secours Health System
- Catholic Health Association
- Enfocare Health
- Robert Wood Johnson Foundation

Other partners include the New Jersey Department of Health and Senior Services, Trenton Health Department, and other municipal public health agencies, and federally qualified health centers.
NYS DOH Practice Guidelines

Federal Agencies
U.S. Senate Resolution 483

May 2006: Senator Cochran (R-MI)

“Whereas the Surgeon General has identified numerous oral-systemic disease connections, including possible associations between chronic oral infections and diabetes, heart and lung diseases, stroke, low-birth-weight, and premature births; … Whereas oral health diseases, including dental caries and periodontal disease, are largely preventable; Whereas the effective treatment and prevention of those diseases are substantially aided by access to highly trained dental primary care professionals;…

Now, therefore, be it Resolved, That it is the sense of the Senate that…access to oral health care services and the prevention of oral health care disease is integral to achieving and maintaining good health; …

NIDCR Periodontal Disease Brochure
CDC Preconception Project

CDC MMWR on Preconception Care
Over 1-in-4 States Report OH Activities for Women

Agencies involved: Title V, Oral Health, Medicaid, Healthy Start
Range of Policy & Programmatic Activities

1. Data collection, monitoring, and tracking

- Inclusion of performance measure in state Title V MCH Services Block Grant
  - “Number of women who receive at least one dental visit during the second trimester of pregnancy.”
- Tracking of oral health services for pregnant women
  - 21 states with oral health supplement in PRAMS
- Inclusion of question on state birth certificate

Range of Policy and Programmatic Activities

2. Medicaid program initiatives

- Coverage and expansions
  - Coverage of oral health services for pregnant women
  - Medicaid coverage of oral health services for adults, including pregnant women
  - Inclusion of oral health coverage expansions in state Medicaid reform proposals
- Contract requirements
  - to provide oral health and promotion activities (e.g., video, brochure)
- Identification of dentists to serve pregnant women in Medicaid
Range of Policy and Programmatic Activities

3. Oral health promotion and education

- Public service announcements
- Videos
- Brochures
- Health fairs
- “Community baby showers”

Range of Policy and Programmatic Activities

4. Provider education and awareness initiatives

Activities:
- Professional guidelines
- Surveys of dentists to establish databases for physician-to-dentist referrals
- Development and distribution of anticipatory guidance

Targets:
- Providers: dentists, OB/GYNs,
- Programs: e.g. WIC, Early Head Start
- Systems: e.g., local health departments
Range of Policy and Programmatic Activities

5. Research
Medicaid Evaluation Study
   Utah review of Medicaid
   Records for Utilization

Healthy Start Data Analysis
   West Virginia review of
   Healthy Start Data for
   Pregnancy Outcomes

Drivers of State Efforts

- Varies by state
- Reasons cited:
  1. Direct response to early research
  2. Increase access to oral health services for pregnant women
  3. Indirect response to early research
     - Address oral health of young children by targeting pregnant women
Impact of NICDR Study on States’ Efforts

- Too soon to tell
- Not likely to dramatically change direction
- Some possible impact on policy activities (e.g., Medicaid expansions) but not on programmatic activities
- States indicate that promotion of oral health for pregnant women is an important goal for its own sake.

Case Studies

- Idaho Perinatal Oral Health Project
- Louisiana Medicaid and the State Title V MCH Programs
- West Virginia Healthy Start Program
- Alabama Medicaid “Maternity Care” Program
Googled “Periodontal disease AND preterm birth”

Hits: 137,000

Top 10:
- 6 target public, 4 target professions
- Public sites all updated in 2005 or 2006
- Recommendations to consumers
  - Preconception attention to oral health
  - Pregnancy care inclusion of dental visits
  - Claims that perio treatment “may” “will” and “will not” reduce unfavorable birth outcomes
**Analysis**
Arguments
Scientific claims
Adoption modeling
Framing for public promotion
Themes and observations
Recommendations

From “they’re off and running” to “the cat is out of the bag”

**Arguments for Pregnant Women’s Dental Care**

<table>
<thead>
<tr>
<th>Solo:</th>
<th>Dental</th>
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<tbody>
<tr>
<td>For women’s oral health</td>
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<tr>
<td>Duo:</td>
<td>Systemic</td>
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<tr>
<td>“Healthy teeth for you and your baby (AL)”</td>
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<tr>
<td>Generic:</td>
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<tr>
<td>“Do it for your mouth. Do it for life” © Listerine</td>
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<tr>
<td>Oral-systemic:</td>
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<tr>
<td>“Evidence that preventive dental services improve overall health (WSJ)”</td>
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<tr>
<td>Specific:</td>
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<tr>
<td>“This dental professional helps deliver healthy babies” (© Butler); “Brush for Two: For Baby and You (HMHB)”</td>
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<tr>
<td>Categorical:</td>
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<tr>
<td>“PD &amp; other causes of systemic inflammation are promising areas for research (IOM)”</td>
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“Scientific” Claims 1: Definitive Relationship

1. “research indicates that pregnant women benefit from early periodontal care”
2. “studies have shown that women with PD are at 3 to 5 times greater risk of preterm birth than those who are…healthy”
3. “progressive PD during pregnancy causes greater risk of preterm delivery”
4. “studies have shown a relationship between PD and preterm, low birth weight babies…proper periodontal treatment can have a beneficial effect on the health of …babies”
5. “bacteria responsible for PD can enter a woman’s bloodstream and easily spread to her developing fetus…can trigger … prostaglandin, which is believed to cause premature labor.”
6. “because of the direct links between a mother’s oral health and her offspring’s risk for dental caries, dental interventions can reduce the risk of prematurity and low birth weight”

“Scientific” Claims 2: Potential Relationship

1. “delay in necessary [dental] care during pregnancy could result in significant risk to the mother and indirectly to the fetus”
2. “even infections far away from the reproductive organs, such as PD, may contribute to premature delivery”
3. “periodontal treatment during pregnancy may reduce premature birth”
4. “mounting research indicates an increased probability of preterm birth for those with gum disease”
5. “studies are ongoing to determine if there is a link between PD and an increased risk of delivering preterm, low birth weight babies. In the meantime, it’s a fact that controlling periodontal disease can save your teeth – a very good reason to take care of your teeth and gums.”
“Scientific” Claims 3: 
Equivocal Relationship

1. research “suggests that gum disease…can lead to premature and low birth weight babies and increase the chance of toxemia in expectant mothers”
2. “good oral health habits affect the health of your unborn child”
3. “when you are pregnant, what you do to take care of your own…oral health affects the health of your developing baby”

Framing for Public Promotion

- “Healthy Pregnancies: Healthy Babies” CIGNA
- “Premature Births: Know the Facts and Stats” ADHA
- “Baby Steps to Healthy Pregnancy and On-time Delivery” AAPerio
- “Want a Healthy Body? Start with a Healthy Mouth” MI DA
- “Healthy Gums, Healthy Life” Butler
- “Do it for your mouth. Do it for life” Listerine
- “Healthy Mouth, Healthy Body” Colgate
- “Brush for Two – For Baby and You” Sonicare
- “Healthy Teeth for You and Your Baby” AL
- “Bright Smiles for Bright Futures” Dental Aid CO
Roger’s Model

Alternative hypothesis: Progression of adoption would be suspended pending additional & definitive studies.
Finding: Hypothesis rejected

Key Themes and Observations

1. Perio-preterm is framed within “oral-systemic health” paradigm
2. Public awareness of perio-preterm/oral-systemic may be increasing
3. Professional belief in perio-preterm is increasing
4. “Science” is sometimes corrupted / sometimes respected
5. Commercial competition & marketing are driving public awareness
6. Few campaigns attend to oral health for its own sake
7. Except in XIX, populations at risk for PD are not frequently targeted
8. Absence of professional guidelines hinders adoption
9. Public & private sectors won’t await research & may not be significantly impacted by current Michalowicz study
Authors’ Recommendations

1. Conduct additional perio-preterm research
2. Promote maternal oral health for its inherent value to women
3. Develop and promote authoritative clinical guidelines by key professional organizations (ACOG, ADA)
4. Conduct a RIPP meeting to assess current views
5. Identify & promote state-level best practices on women’s oral health
6. Issue a authoritative federal statement (e.g. from Chief Dental Officer / USPHS / or DHHS multi-agency) with input from key professional groups on the current status of the literature – and particularly the implications of the first NIDCR intervention trial.