

# Research to Policy and Practice Forum: Periodontal Health and Birth Outcomes

## Secretary's Advisory Committee on Infant Mortality – SACIM

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M . Ann Drum, DDS, MPH, Director  
Division of Research, Training and Education

Health Resources and Services Administration (HRSA)  
Maternal and Child Health Bureau (MCHB)



*Planned by MCHB in collaboration with:*

**Agency for Healthcare Research and Quality**

**Centers for Disease Control and Prevention**

**National Institute of Child Health and Human Development, NIH**

**National Institute of Dental and Craniofacial Research, NIH**

**NIH's Office of Research on Women's Health**

**Office of the Surgeon General**

**Office of Women's Health, Health Resources and Services Administration**

# Meeting Objectives

- Review evidence-based research relevant to the relationship between periodontal disease in pregnant women and birth outcomes
- Review current policies, programs, and practices within the public and private sectors to address the oral health needs of pregnant women and improve birth outcomes
- Offer public and private health leaders the opportunity to dialogue about future directions in research, policy, program and practice related to women's periodontal health and birth outcomes



# FORUM AGENDA

## ➤ Presentations

### Background Papers:

- *Review of Scientific Evidence Related to Periodontal Health and Birth Outcomes*
- *Policies, Programs and Practices Addressing the Oral Health Needs of Pregnant Women*

### Other Presentations:

- *Overview of Periodontal Health for Women of Reproductive Age*
- *The Gray Zone of Evidence-Based Research - Benefit or Harm?*
- *New Findings from Federally-Funded Clinical Research*

## ➤ Workgroup Discussions and Reports

- Future Directions for Policy and Programming (2 workgroups)
- Future Directions for Research (1 workgroup)

# PRESENTATION OUTLINE

- Overview of Background Papers
- New Findings from Federally-Funded Clinical Research
- Workgroup Discussions and Reports

# Review of Scientific Evidence Related to Periodontal Health and Birth Outcomes

Dr. Xu Xiong, Dr. Pierre Buekens, Dr. Sotirios Vastardis

## ➤ Purpose

- Explore the scientific evidence related to the possible association between periodontal health and adverse birth outcomes

## ➤ Methods

- Conducted a systematic review of the literature
- Research builds upon previously published systematic review
- 44 studies (26 case-control, 13 cohort, and 5 controlled trials) met inclusion criteria

# Review of Scientific Evidence Related to Periodontal Health and Birth Outcomes

Dr. Xu Xiong, Dr. Pierre Buekens, Dr. Sotirios Vastardis

## Conclusions:

- There is evidence of an association between periodontal disease and some birth outcomes, but no definitive conclusion can be drawn due to potential biases, including:
  - Great variation in periodontal disease and pregnancy outcome definitions across studies
  - Insufficient control of confounding variables
  - Insufficient sample size
  - Limited number of randomized controlled trial studies

# Review of Scientific Evidence Related to Periodontal Health and Birth Outcomes

Dr. Xu Xiong, Dr. Pierre Buekens, Dr. Sotirios Vastardis

## Conclusions:

- There is insufficient evidence to support provision of treatment during pregnancy **for the purpose** of reducing adverse birth outcomes
- Several randomized controlled trials are underway to test the hypothesis that periodontal treatment can reduce rates of adverse birth outcomes
- More studies are needed to examine the association between periodontal disease and increased risk of maternal complications



# Policies, Programs, and Practices Addressing the Oral Health Needs of Pregnant Women

Dr. Burton Edelstein and Karen VanLandeghem

## ➤ Purpose

- Describe the policies, programs, and practices that have been implemented in response to evidence suggesting an association between periodontal health and adverse birth outcomes

## ➤ Methods

- Conducted document reviews and phone interviews with State oral health program staff
- Conducted web searches and obtained information from oral health experts

# Policies, Programs, and Practices Addressing the Oral Health Needs of Pregnant Women

Dr. Burton Edelstein and Karen VanLandeghem

## Key Themes:

- Eight major entities have addressed the link:
  1. Insurers
  2. Companies manufacturing consumer-oral-health products
  3. Health professional associations
  4. Consumer advocates
  5. Lay press
  6. Think tanks
  7. Federal government agencies
  8. State government agencies

# Policies, Programs, and Practices Addressing the Oral Health Needs of Pregnant Women

Dr. Burton Edelstein and Karen VanLandeghem

## Key Themes:

- Perio-preterm relationship has been subsumed under the oral-systemic health rubric
- Public and private insurance coverage of periodontal benefits for pregnant women has increased
- Scientific statements regarding the perio-preterm relationship vary significantly
- Competition and marketing is a key driver of public awareness in the private sector
- The absence of national professional guidelines appears to hinder efforts in all sectors

# New Findings from Federally Funded Clinical Research

Dr. Bryan Michalowicz and Study Team

## ➤ Purpose

- Test the effect of periodontal treatment on birth outcomes

## ➤ Methods

- Women 13-17 weeks of gestation randomly assigned to two groups:
  - Treatment group (413 patients) – scaling and root planing **before 21 weeks** and monthly tooth polishing and oral hygiene instruction
  - Control group (410 patients) – scaling and root planing **after delivery**
- Primary outcome was gestational age, secondary outcomes were birth weight and small-for-gestational

# New Findings from Federally Funded Clinical Research

Dr. Bryan Michalowicz and Study Team

## Key Findings:

- Although periodontal treatment improved clinical measures of periodontal disease, it did not significantly change risk for any birth outcome
  - Results inconsistent with those of previous studies
  - Direct comparisons difficult due to varying methodology
- Periodontal therapy delivered 13-21 weeks of gestation was found to be safe and effective in treating periodontal disease

# Workgroup Discussions: Future Directions for Policy and Programming *Overarching Themes*

- Good oral health is important across the lifespan. Pregnancy is an opportune time to promote oral health and healthy behaviors, including education about the prevention of dental caries.
- There is growing evidence of a possible association between periodontal disease and increased risk of several adverse birth outcomes, especially in economically disadvantaged populations.
- More studies are needed to example possible associations between periodontal disease and birth outcomes.
- Scaling and root planning are safe for pregnant women with periodontal disease.

# Future Directions for Policy and Programming

## Health Education and Training Themes

- Health professional education should be a key strategy and should utilize multi-pronged approaches and concise messages
- Education and training should be targeted to a wide range of health professionals
- Education and training should address underlying disease processes and effective ways to promote oral health

# Future Directions for Policy and Programming

## Outreach and Public Education Themes

- Identify consistent messages tailored to specific audiences, such as:
  - Uninterrupted oral health care is important across the lifespan
  - Oral health care is safe and beneficial for pregnant women
  - Oral diseases and infectious and preventable
- Utilize high-level oral health champions to promote messages
- In absence of evidence proving link between periodontal disease and birth outcomes, frame messages around women's oral health and dental caries prevention



# Future Directions for Policy and Programming

## **Policies and Programs Themes**

- Incorporate oral health into state prenatal care regulations and enforce compliance
- Establish national guidelines on addressing periodontal health in pregnant women

## **Work Force Development Themes**

- Redistribute the current oral health work force
- Integrate practice incentives such as loan forgiveness
- Integrate new types of oral health professionals into the work force

# Future Directions for Policy and Programming

## Access-to-Care Themes

- Develop guidance for state Medicaid programs to roll oral health into reimbursable coverage of family-planning services
- Identify more dentists willing to serve pregnant women
- Train health professionals to conduct oral health risk assessments on pregnant women

# Future Directions for Research

- Determine which, if any aspects, of periodontal disease are most strongly associated with risk for adverse birth outcomes
- Determine which populations with periodontal disease are most at risk for adverse birth outcomes
- Develop a reliable and rapid method for screening pregnant women for periodontal disease
- Partner with existing clinical and research networks

# Closing Remarks

- Creation of a research agenda that supports multiple strategies to improve the oral health of pregnant women
- Development and dissemination of practice guidelines for providing oral health care to pregnant women
- Increased investment in oral health promotion and prevention
- Implementation of strategies that increase access to oral health care

# ANY QUESTIONS?

M. Ann Drum, DDS, MPH  
Director, Division of Research,  
Training and Education  
301-443-2340

*or*

**Research to policy and practice forum: Periodontal health and birth outcomes—Summary of a meeting of maternal, child, and oral health experts.** 2007. Washington, DC: National Maternal and Child Oral Health Resource Center.

<http://www.mchoralhealth.org/PDFs/PeriodontalSummary.pdf>