

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

Sponsored by the Health Resources and Services Administration,
Maternal and Child Health Bureau (MCHB)

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Highlights of a Meeting of
Maternal, Child, and Oral Health Experts

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An Altarum Company

Planned by MCHB in collaboration with:

Agency for Healthcare Research and Quality

Centers for Disease Control and Prevention

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

National Institute of Dental and Craniofacial Research, NIH

National Institute of Child Health and Human Development, NIH

NIH's Office of Research on Women's Health

Office of the Surgeon General

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:

- Insurers
- Companies manufacturing consumer-oral-health products
- Health professional associations
- Consumer advocates
- Lay press
- Think tanks
- Federal government agencies
- 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 age

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

Forum Summary and Materials

National Maternal and Child Oral Health Resource Center Web Site

<http://www.mchoralhealth.org/Materials/Multiples/PerioForum/>