

Promoting Collaborative Care During Pregnancy

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Objectives

- 1. Learn about Oral Health Care During Pregnancy: A **National Consensus Statement** and the guidance it offers for the integration of oral health into perinatal care for pregnant women
- 2. Recognize the common ground for the **non-dental health professionals** in promoting oral health during the perinatal period

- Acknowledge the leadership of Katrina Holt with the **National Maternal and Child Oral Health Resource Center** and its funders including MCHB
- Acknowledge the leadership of
 - Dr. Jay Kumar NYSDOH
 - Dr. Hiroko Ida UNC
 - ASTDD

Outline

- Background
- Consensus statement ADA/ACOG
- Evidence base
- Collaboration successes
- Best practices ASTDD

Need for Collaboration

- KJ was a 17 year old AA G1 who came for scheduled prenatal visit at 14 weeks gestation. She told her OB provider that two of her teeth were loose and she wondered whether that was because of the pregnancy. The OB provider arranged for her to be seen at the dental clinic that day.
- The OB provider received a call from the dentist; she explained that the loose teeth were the result of trauma, something that the OB provider had not considered. On further questioning KJ, the dentist successfully had her reveal that she was the victim of DV at the hands of her boyfriend. The dentist referred her to the domestic violence hotline after providing appropriate dental care. In addition, the OB provider agreed to administer appropriate tetanus prophylaxis.

Background



- Health professionals often do not provide oral health care to pregnant women
- Pregnant women often do not seek or receive oral health care
- Some pregnant women and health professionals do not understand that oral health care is an important component of a healthy pregnancy
- Early childhood caries is a preventable infectious disease

Conclusion of Three RCT's (n=3,000)

All studies reported that routine non-surgical periodontal therapy, dental care, or use of topical or local anesthesia has NOT been associated with adverse pregnancy outcomes

Periodontal treatment during pregnancy did not significantly decrease rate of premature delivery MOTOR, OPT, PIPS



ORAL HEALTH CARE DURING PREGNANCY: A NATIONAL CONSENSUS STATEMENT

Summary of an Expert Workgroup Meeting

Meta-analysis/Systemic Review

- Xiong et al 2006 and 2011, Polyzos et al 2010
- Uppal et al 2010, Chambrone et al 2011
- **INSUFFICIENT EVIDENCE** TO DETERMINE WHETHER OR NOT PERIODONTAL DISEASE INCREASES RISK FOR PRETERM BIRTH
- ACCUMULATED EVIDENCE DEMONSTRATES THAT AN **ASSOCIATION** EXISTS BETWEEN PERIODONTAL DISEASE AND ADVERSE PREGNANCY OUTCOMES

ASTTD 2012

Stillbirth Caused by Oral *f. nucleatum* (Han et al 2010)

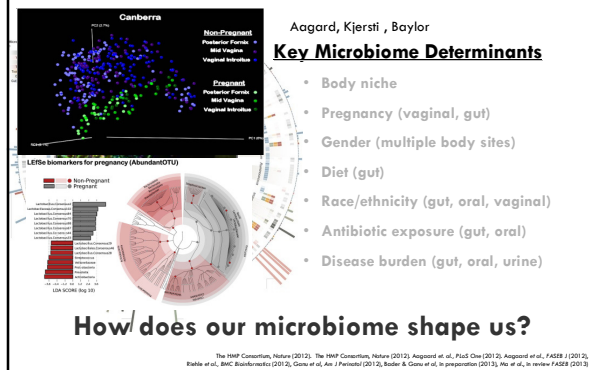
- 35 y/o Asian woman 39+ wks reported with decreased fetal movement. URI symptoms, T 100.
- FDIU diagnosed. AROM and foul smelling AF. 7+ pound infant girl delivered.
- Pathology – acute chorioamnionitis with severe deciduitis. Gram negative bacillus in membranes and culture positive for *f. nucleatum*.
- Fetopsy – *F. nucleatum* in lung and stomach pure culture
- Maternal samples from oral cavity, vagina, rectum. Same clone found in subgingival flora mouth but not in supragingival flora, vagina, rectum.

- Infection accounts for 10 to 25% of stillbirths
- *F. nucleatum* is one of the most prevalent species in intrauterine infection
- Possible that *F. nucleatum* translocated from mother's mouth hematogenously
- Patient had pregnancy-associated gingivitis which can result transient bacteremia
- URI may have weakened mother's immune system

Oral Health and Adverse Pregnancy Outcomes Han 2010

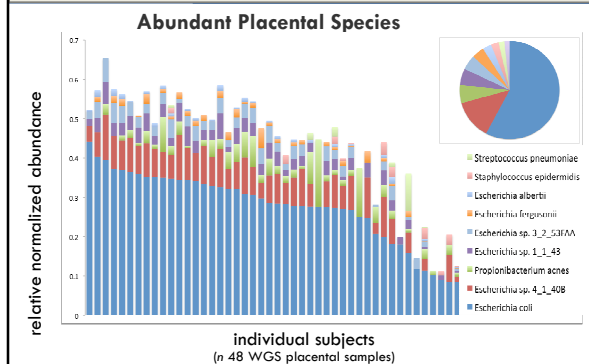
- Periodontal disease is believed to affect the maternal and fetal immune response systemically leading to premature labor OR
- Oral bacteria may translocate directly into the pregnant uterus, causing localized inflammation and adverse outcome in the presence or absence of clinical periodontitis
- Oral-uterine transmission is not limited to well-recognized periodontal pathogens but instead may also involve commensal species

What Shapes our Microbiome?

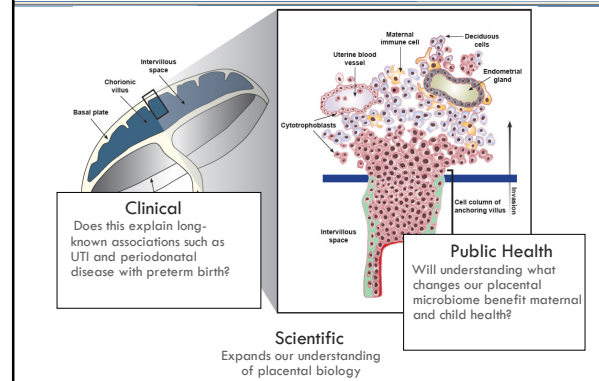


Researchers in the HMP are sampling and analyzing the genome of microbes from five sites on the human body: nasal passages, oral cavities, skin, gastrointestinal tract, and urogenital tract.

The Placenta Harbors a Nonpathogenic Commensal Microbiome



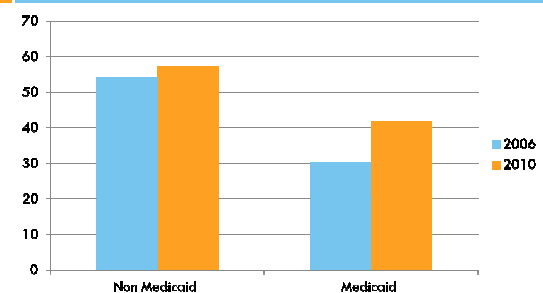
Implications and Future Research



Improving Birth Outcomes and Maternal Oral Health in Malawi with Xylitol

- Dr. Agard's proposal to evaluate effect of maternal use of xylitol and birth outcomes
- Saving Lives at Birth initiative launched by the U.S. Agency for International Development, the Government of Norway, the Bill & Melinda Gates Fndn, Grand Challenges Canada, and The World Bank to improve maternal-newborn health in developing countries
- Data from Finland demonstrated that mothers who chewed xylitol gum while breastfeeding preventing gum disease and caries in themselves and in their children
- Mechanism – ? affecting the oral microbiome and the utero-placental microbiome

Went to a dentist or dental clinic during pregnancy. Pregnancy Risk Assessment Monitoring System (PRAMS) Report. New York State excluding New York City, 2006 and 2010.



NYS Medicaid Managed Care Prenatal Study Care Studies 2011

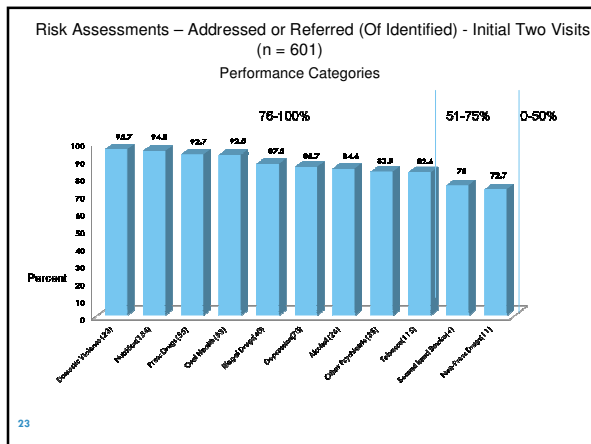
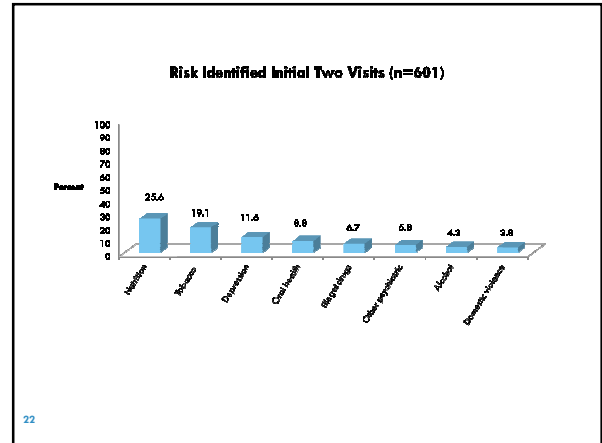
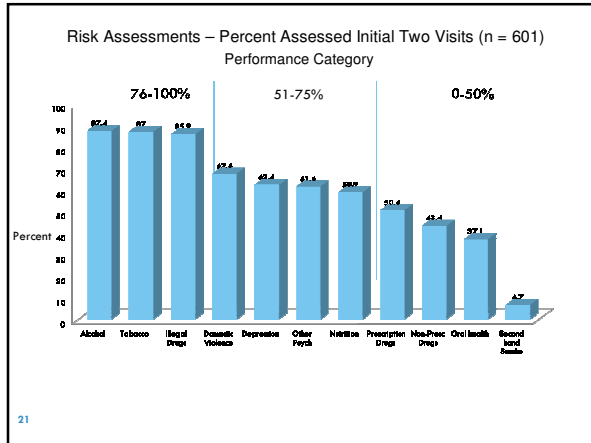
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- Baseline to assess compliance with the newly-enacted prenatal care standards
- Evaluate geographic and demographic disparities in the receipt of perinatal care relative to the new standards
- Target opportunities for improvement
- Identify which subsets of pregnant women receive augmented services

Methodology

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- Delivered a live birth in 2009
- Included both Medicaid Managed Care (MMC) and Fee For Service (FFS) Medicaid
 - Sample: MMC - 478 FFS- 123
- Information source: prenatal/postpartum care records
 - 10 months prior to and 6 weeks post delivery
 - NYSDOH data
- Includes data from multiple prenatal providers for a pregnancy where available



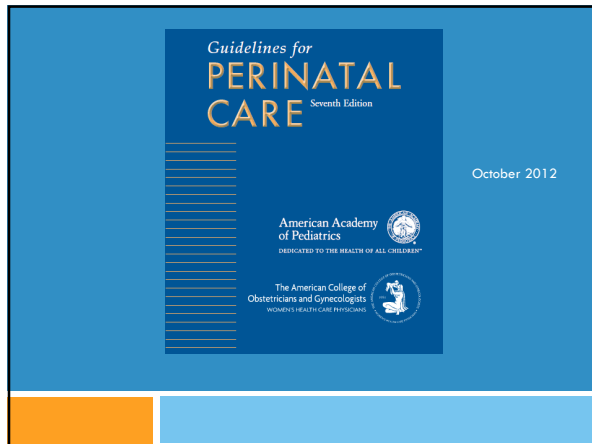
APPENDIX A: Consultation Form for Pregnant Women to Receive Oral Health Care

This patient may have routine dental evaluation and care, including but not limited to:

- Oral health examination • Dental x-ray with abdominal and neck lead shield
- Dental prophylaxis • Local anesthetic with epinephrine
- Scaling and root planing • Root canal
- Extraction • Restorations (amalgam or composite) filling cavities

Patient may have: (Check all that apply)

- Acetaminophen with codeine for pain control
- Alternative pain control medication: (Specify) _____
- Penicillin
- Amoxicillin
- Clindamycin
- Cephalosporins
- Erythromycin (Not estolate form)



Guidelines for Women's Health Care

- ACOG identifies components for periodic assessments across the life span
- Ages 13 to 18, 19 to 39, 40 to 64, 65 and older
- Oral health assessment included for women 40 and older
- ACOG to publish committee opinion, Oral Health During Pregnancy and Beyond, written by Committee on Obstetric Practice and Committee on Health Care for Underserved Women

Progress of Non-oral Health Professionals

- National Interprofessional Initiative on Oral Health (NIIOH)
- Smiles for Life: A National Oral Health Curriculum
 - ▣ Endorsed by AAP, AAFP, ACNM, PA and Nursing Associations
- Association American of Medical Colleges (AAMC) 2008
- HRSA – inter-professional oral health core clinical competencies
- State of Michigan's Infant Mortality Reduction Plan includes integration of oral health promotion and treatment into medical home as one of the goals

Michigan's Infant Mortality Reduction Plan - Key Concepts

- Social and environmental community: our families, our schools, workplaces, playgrounds, parks, in the air we breathe and the water we drink, in the ability to buy affordable nutritious foods and to live in communities with low crime and violence
- Economic: Families must have the financial resources to support a healthy home and community
- Education: The importance of parents having a high school diploma will bring opportunity to a family
- Access to quality health: It is essential that families have access to a medical and **dental** home and receive services

ASTDD Best Practices Perinatal 2012

CUBS surveillance	AK
Oral health professional training	
Guidelines	CA
OB collaborative	NJ
Oral Health initiatives	NY
Mini residency	RI
Childhood oral health project	WV
Oral health care and systems coordination	
MAYA project/Infant program	CA
Promotion: Healthy Teeth, Happy Babies	CO

ASTDD POHC ACTIVITIES 2013

- Obtain funding for projects to enhance adoption of the guidelines – mini-residency programs
- Promote level of collaboration between state oral health programs and Title V programs
 - ▣ Nurse family partnership
 - ▣ RFP for local perinatal projects

Overview 31



Program Goals

- Improve pregnancy outcomes
- Improve child health and development
- Improve parents' economic self-sufficiency

Key Program Components

- First-time, at-risk mothers
- Registered nurses
- Intensive services (Intensity, duration)
- Focus on behavior
- Program fidelity (Efforts to Outcomes, ETO)

Why Nurses?

- Knowledge, judgment and skills
- High level of trust, low stigma
- Credibility and perceived authority
- Nursing theory and practice at core of original model




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Research 32

Trials of the Program


Dr. Olds' research & development of NFP continues today...



1977
 Elmira, NY
 Participants: 400
 Population: Low-income whites
 Studied: Semi-rural area



1988
 Memphis, TN
 Participants: 1,139
 Population: Low-income blacks
 Studied: Urban area



1994
 Denver, CO
 Participants: 735
 Population: Large portion of Hispanics
 Studied: Nurse and paraprofessionals



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Monetary Benefits to Society 33



Nurse-Family Partnership is Cost-Effective

- The RAND Corporation estimates Nurse-Family Partnership can return up to \$5.70 for each \$1 spent on the program.*

Savings accrue to government from **decreased spending** on:

health care	criminal justice
child protection	mental health
education	public assistance

And **increased taxes** paid by employed parents

- Nurse-Family Partnership returns more than \$18,000 over and above program costs for each family enrolled.** (*Washington State Institute for Public Policy 2008*)

* RAND Corporation 1998, 2005; return for highest risk families
 ** Savings related to low birth weight, child injuries and immunizations not included



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ASTDD Policy Statement

- 1) Assess and monitor perinatal oral health
- 2) Enhance infrastructure and build partnerships
- 3) Inform and empower the public to mobilize support
- 4) Ensure adequate oral health workforce and systems for perinatal oral health
- 5) Promote and support research and evidence-based practices
- 6) Integrate perinatal oral health program into the Patient-Centered Medical Home

Conclusions

- Pregnant women and their families benefit from oral health care.
- Lack of knowledge and anecdotal concerns influences dental practice.
- Evidence base shows appropriate dental care is necessary and safe during pregnancy.
- Expanded collaboration and efforts to change the culture/ expectations will further promote and facilitate delivery of oral health care.
- Research must continue to better understand the relationship between oral health and pregnancy outcomes - microbiome