



# Michigan Perinatal Oral Health Conference

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# Disclosures

- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity.
- I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.

# Objectives

- To describe the process of guideline development in NYS
- To discuss the process of creating the national consensus statement
- To report implementation of guidelines including outcome data
- To suggest ways to utilize existing documents for perinatal state programs including Michigan



Friday, March 23, 2001

To Whom It May Concern:

This letter is in support of a Dental Clinic for Medicaid patients and or for other patients who can not afford dental care in the Owego area.

I am a family practice resident physician from the Guthrie Clinic in Sayre, PA. A patient of mine who was also pregnant was in need of urgent dental care. The urgency centered around her prior lack of routine dental preventive care - she had two cavities that had become infected and this resulted in a painful abscess. She was unable to get any urgent care in the area. My understanding was that the closest clinic was in Binghamton, NY. Because of the pain she was in, she treated herself with Tylenol. However, because the pain was so great she took 'excessive doses' resulting in toxicity to her and her baby.

At the time she was approximately 29 weeks pregnant. The baby died from liver toxicity from Tylenol ingestion. My patient, suffered acute liver failure and was flown to Pittsburgh expecting a liver transplant. Fortunately she recovered, did not need a transplant and has since had a normal healthy child. However, she still suffers from the trauma of losing her child and almost her life.

I personally feel that a dental clinic in the Owego area that was available to her could have prevented the death of her unborn child and prevented her acute illness and expense associated with that.

Thank you,

Sincerely,

John S. Burnett, MD

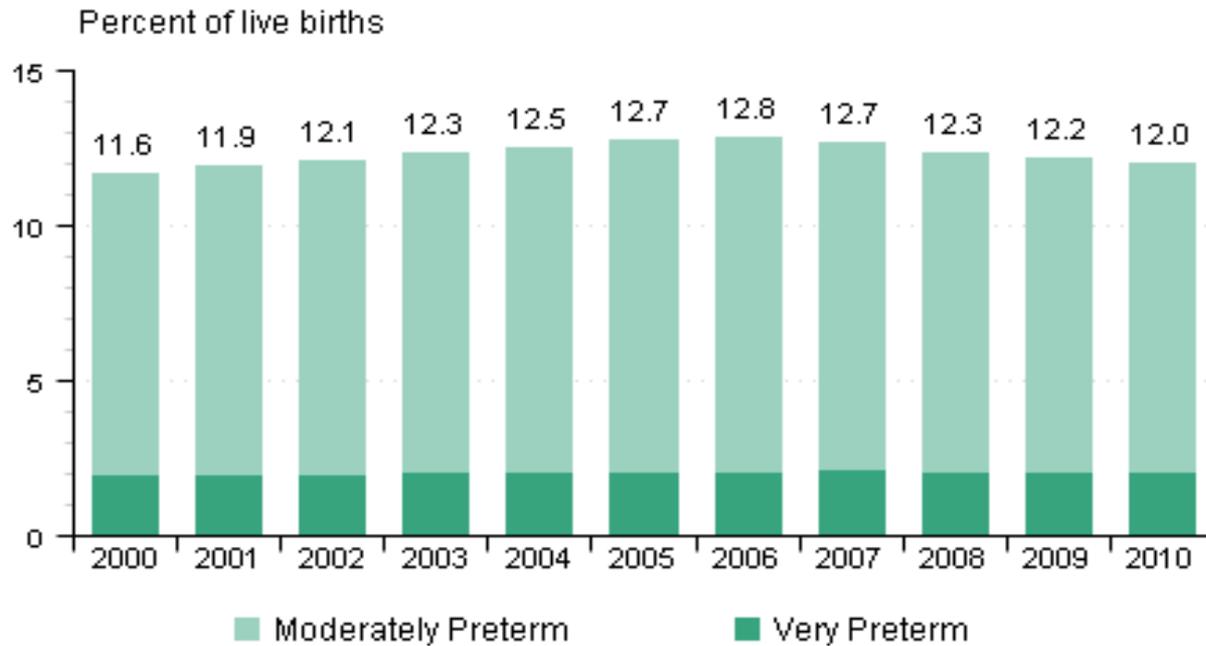
“Because pain was so great she took ‘excessive doses’ (Tylenol) resulting in toxicity to her and her baby. At the time she was approximately 29 weeks pregnant. The baby died from liver toxicity. My patient suffered acute liver failure and was flown to Pittsburgh expecting a liver transplant.”

# Periodontal Disease and Perinatal Outcomes 1996

- Offenbacher et al., published case-control study of 124 women Journal of Periodontology
- Cases: women with LBW infants and one or more of the following: GA < 37 weeks, PTL or PPRM
- Controls: normal birth weight >2500 grams
- Multivariate logistic regression models, controlling for other risk factors and co-variates, demonstrated that periodontal disease is a statistically significant risk factor for PLBW with adjusted OR of 7.5

# Preterm births

## US, 2000-2010



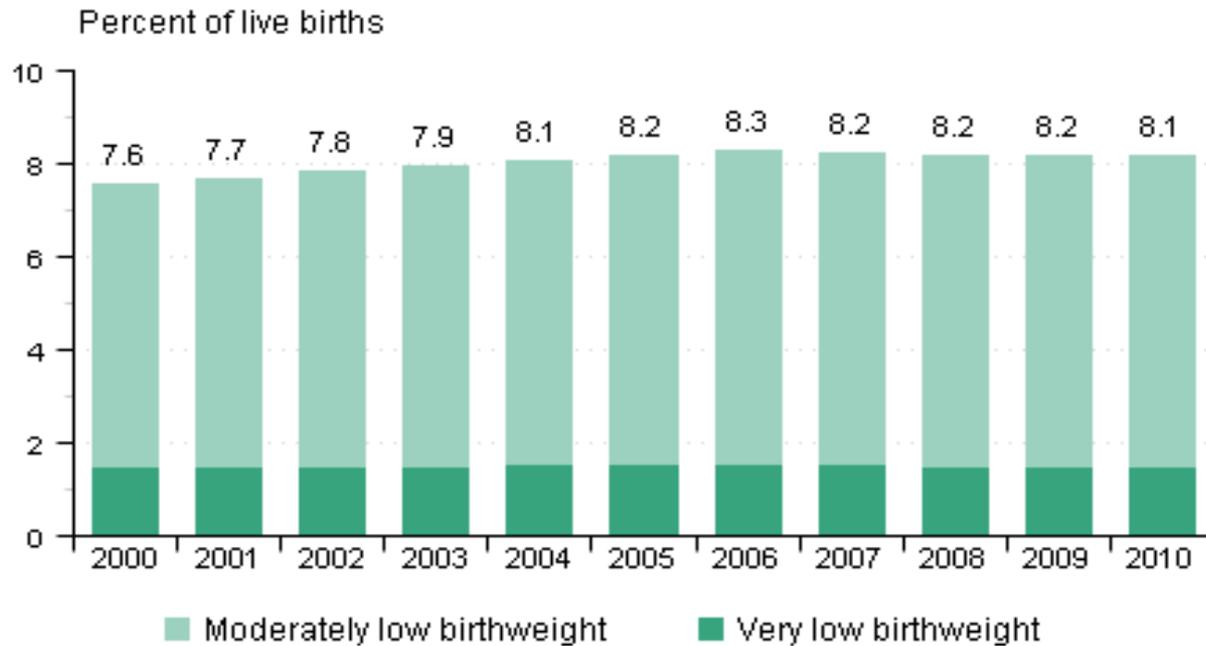
Peristats 2013

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Preterm is less than 37 completed weeks gestation. Very preterm is less than 32 completed weeks gestation. Moderately preterm is 32-36 completed weeks of gestation.  
Source: National Center for Health Statistics, final natality data. Retrieved January 29, 2013, from [www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats).

# Low birthweight births

US, 2000-2010



Peristats 2013

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Low birthweight is less than 2500 grams (5 1/2 pounds). Very low birthweight is less than 1500 grams (3 1/3 pounds). Moderately low birthweight is 1500-2499 grams.

Source: National Center for Health Statistics, final natality data. Retrieved January 29, 2013, from [www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats).



Jay R. Rulvick II

# The Surgeon General's Report provided the nation with an alert 2000

Oral health is essential to the general health and well-being of all Americans and... improved oral health can be achieved by all Americans...

Great progress has been made in reducing the extent and severity of common oral diseases ...however, not everyone is experiencing the same degree of improvement.”

Oral Health in America:  
A Report of the  
Surgeon General



Department of Health and Human Services

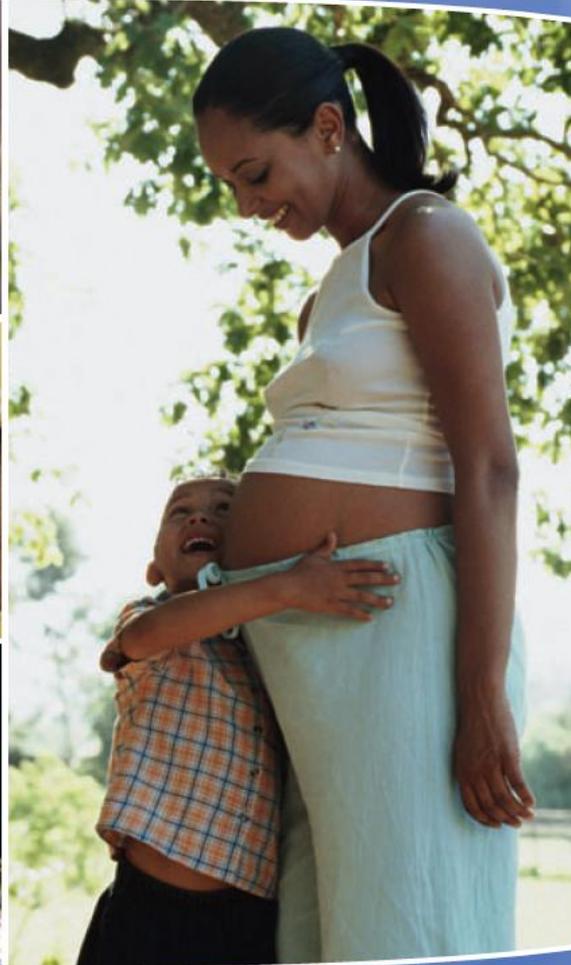
# Barriers to Dental Care

- Perception that dental care is not important
- Financial issues
- Availability of dentists
- Fear of dental treatment
- Concerns about harm to fetus
- Lack of practice guidelines

# Why should pregnant women receive oral health care?

- Oral health care is important for overall health.
- Maximizing maternal oral health improves oral health of their children.
- Poor oral health has been associated with poor pregnancy outcomes.

Oral Health Care during  
Pregnancy and Early Childhood  
**Practice Guidelines**



Conceived 2004  
Birth 2006

# Does Treatment of Periodontal Disease Prevent Adverse Pregnancy Outcomes?



- Obstetrics & periodontal therapy OPT  
Michalowicz 2006 (n=823)
  - Intervention before 21 weeks or after delivery
  - Gestational age at delivery
- Maternal oral therapy to reduce obstetric risk MOTOR  
Offenbacher 2008 (n=1760)
  - Intervention 3 to 6 months or after delivery
  - Birth at less than 37 weeks
- Periodontal infection and prematurity study PIPS  
Macones 2010 (n=756)
  - Intervention 6 - 20 weeks gestation or after delivery
  - Birth at less than 35 weeks

# Summary % Preterm Delivery RCT

	OPT	MOTOR	PIPS
Outcome	< 37 weeks	<37 weeks	<35 weeks
N	823	1760	756
Treatment	12.0%	13.1%	8.6%
Control	12.8%	11.5%	10.3%
p	0.70	0.316	0.11

# Results of Randomized Clinical Trials



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

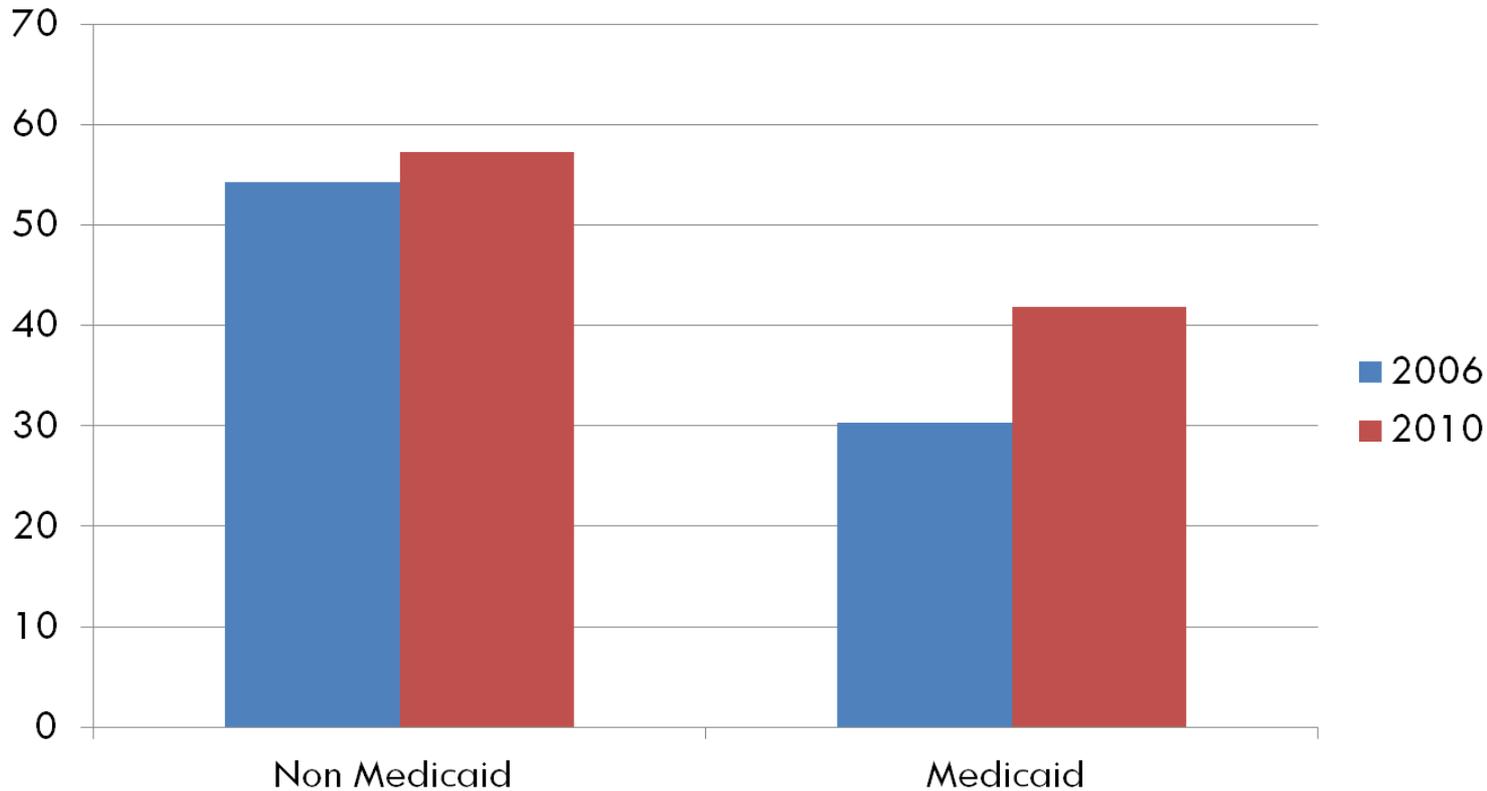
Periodontal treatment during pregnancy did not significantly decrease rate of premature delivery.

# EFP / AAP Workshop on Periodontitis and Systemic Disease 2013

- Epidemiology of association between maternal periodontal disease and adverse pregnancy outcome – systematic review – modestly associated with LBW, preterm birth, and pre-eclampsia
- Effects of periodontal treatment on pregnancy outcomes – SRP does not improve birth outcomes in pregnant women with periodontitis

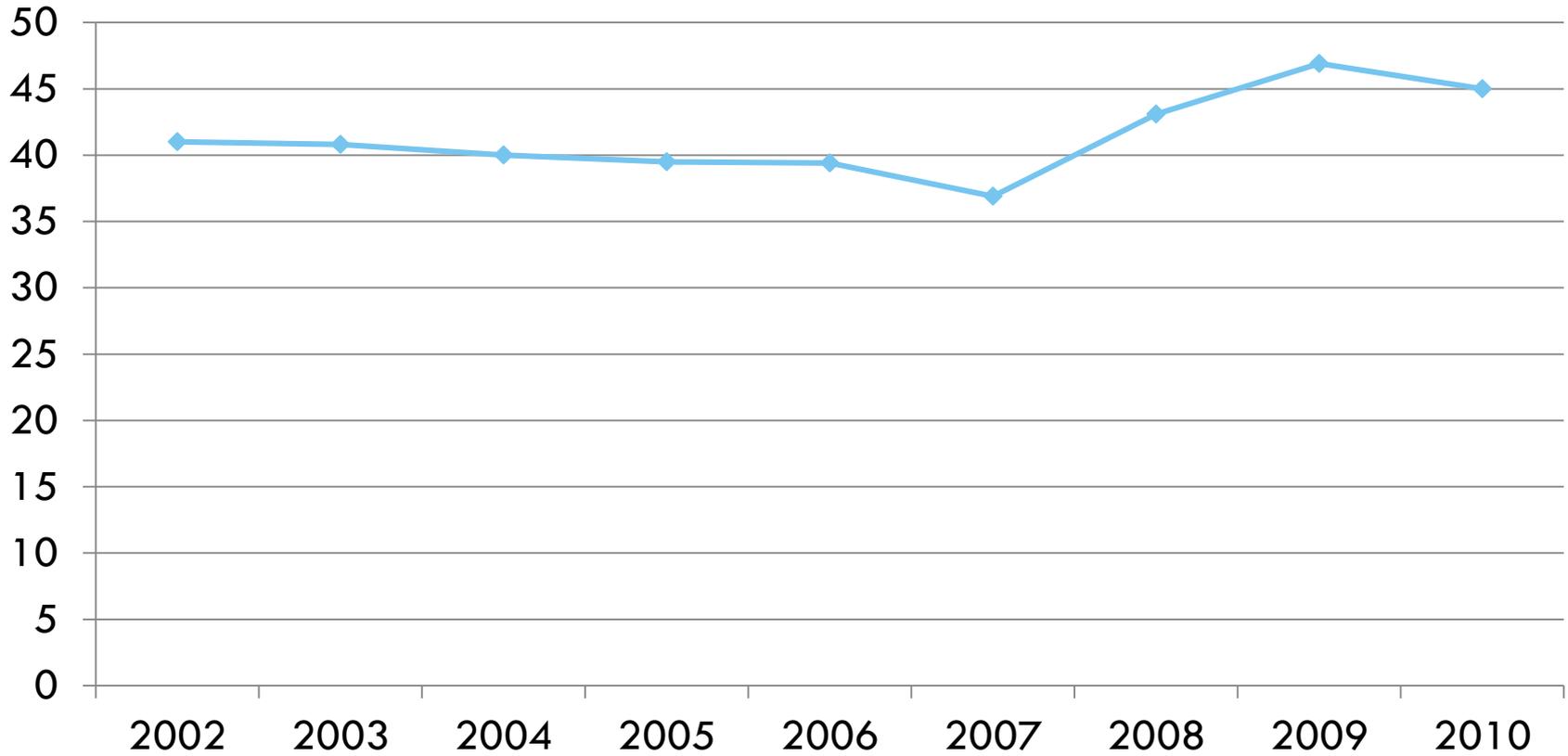
# PRAMS: Went to a dentist or dental clinic during pregnancy (%)

New York State excluding New York City, 2006 and 2010.

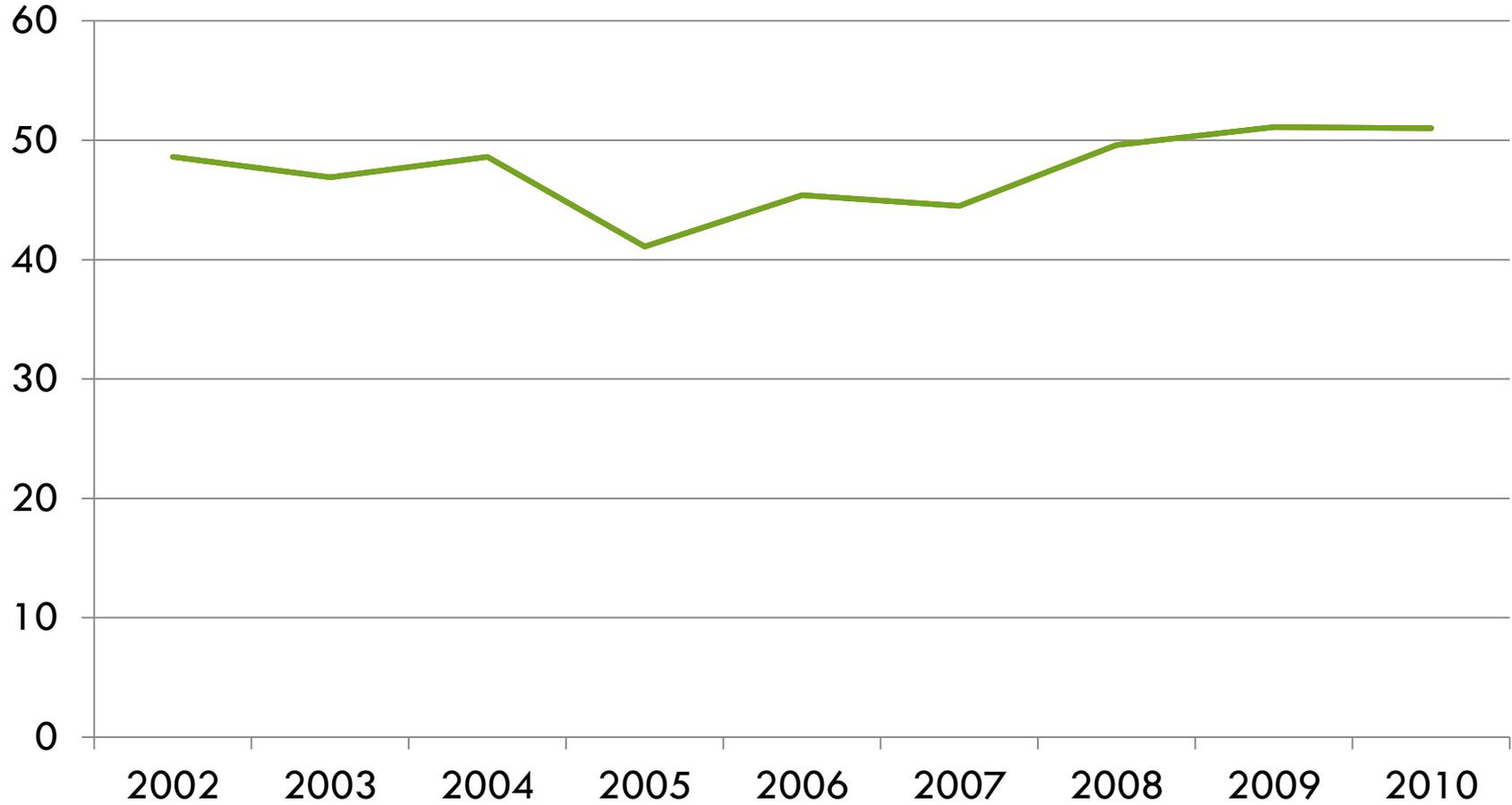


# PRAMS: Talked to a dentist or health care worker about care of teeth and gums during pregnancy (%)

Percent



# PRAMS: went to dentist or dental clinic during pregnancy (%)

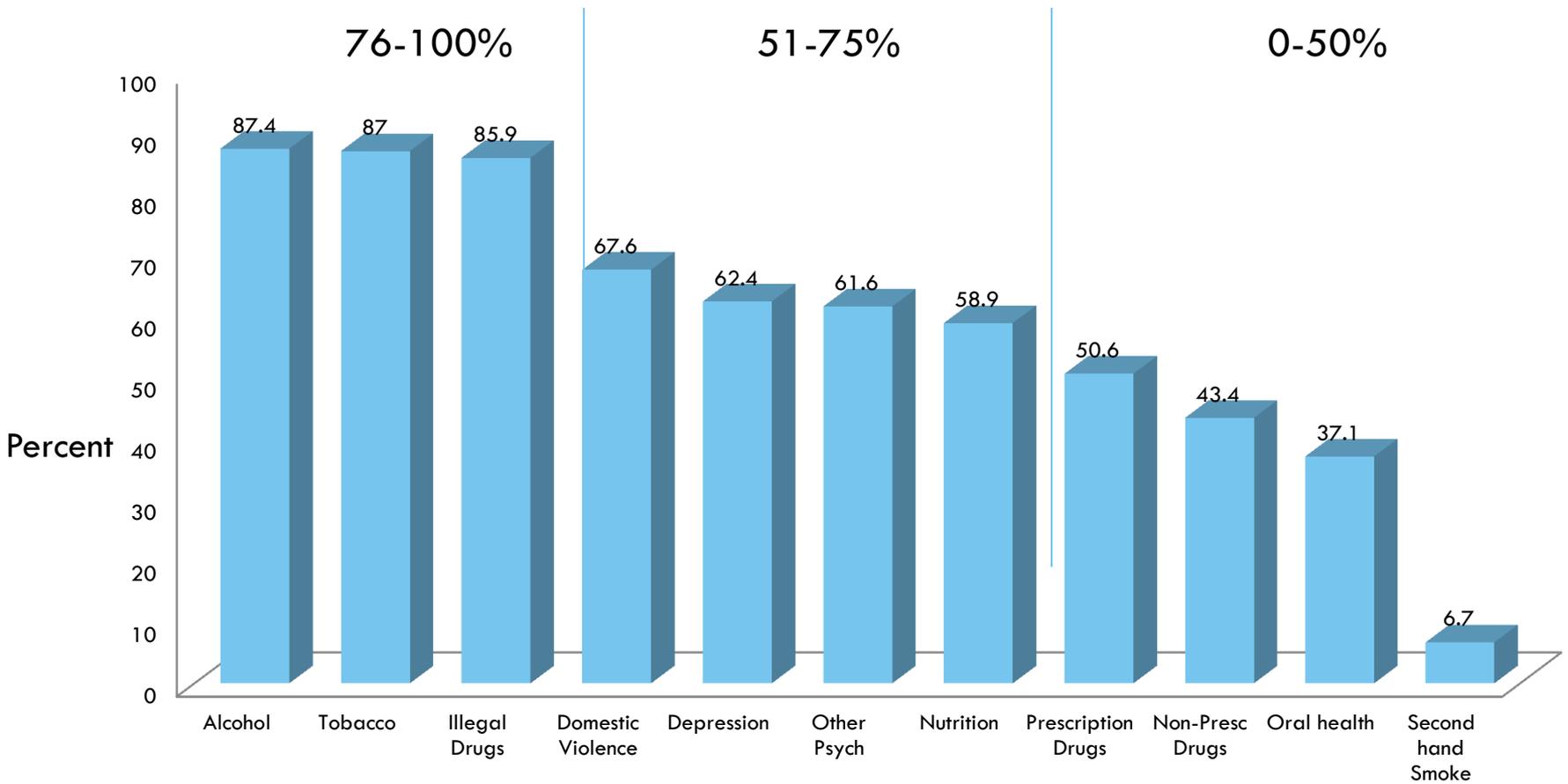


# NYS Medicaid Managed Care Prenatal Study Care Studies—2011

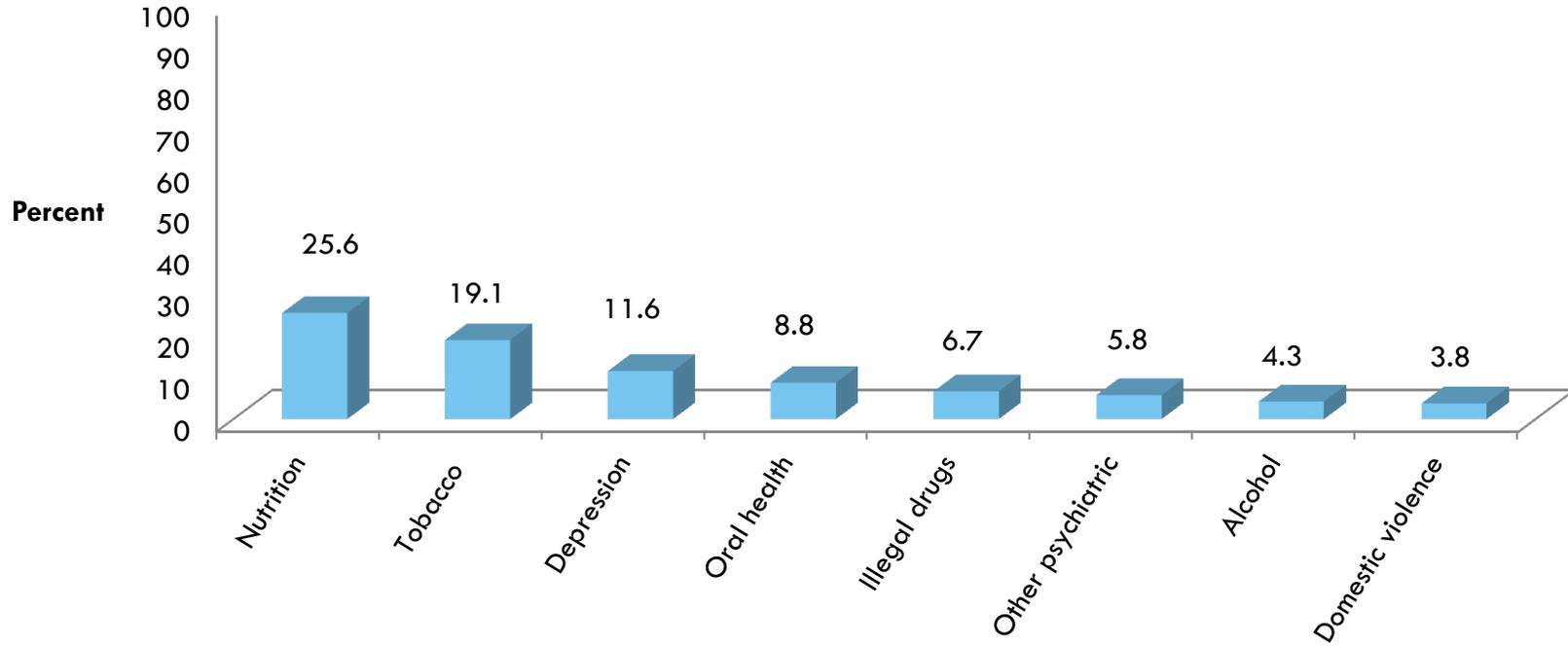
- Delivered a live birth in 2009
- Included both Medicaid Managed Care (MMC) and Fee For Service (FFS) Medicaid
  - ▣ Sample: MMC - 478 FFS- 123
- Information source: prenatal/postpartum care records
  - ▣ 10 months prior to and 6 weeks post delivery
  - ▣ NYSDOH data
- Includes data from multiple prenatal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

# Risk Assessments –Percent Assessed Initial Two Visits (n = 601)

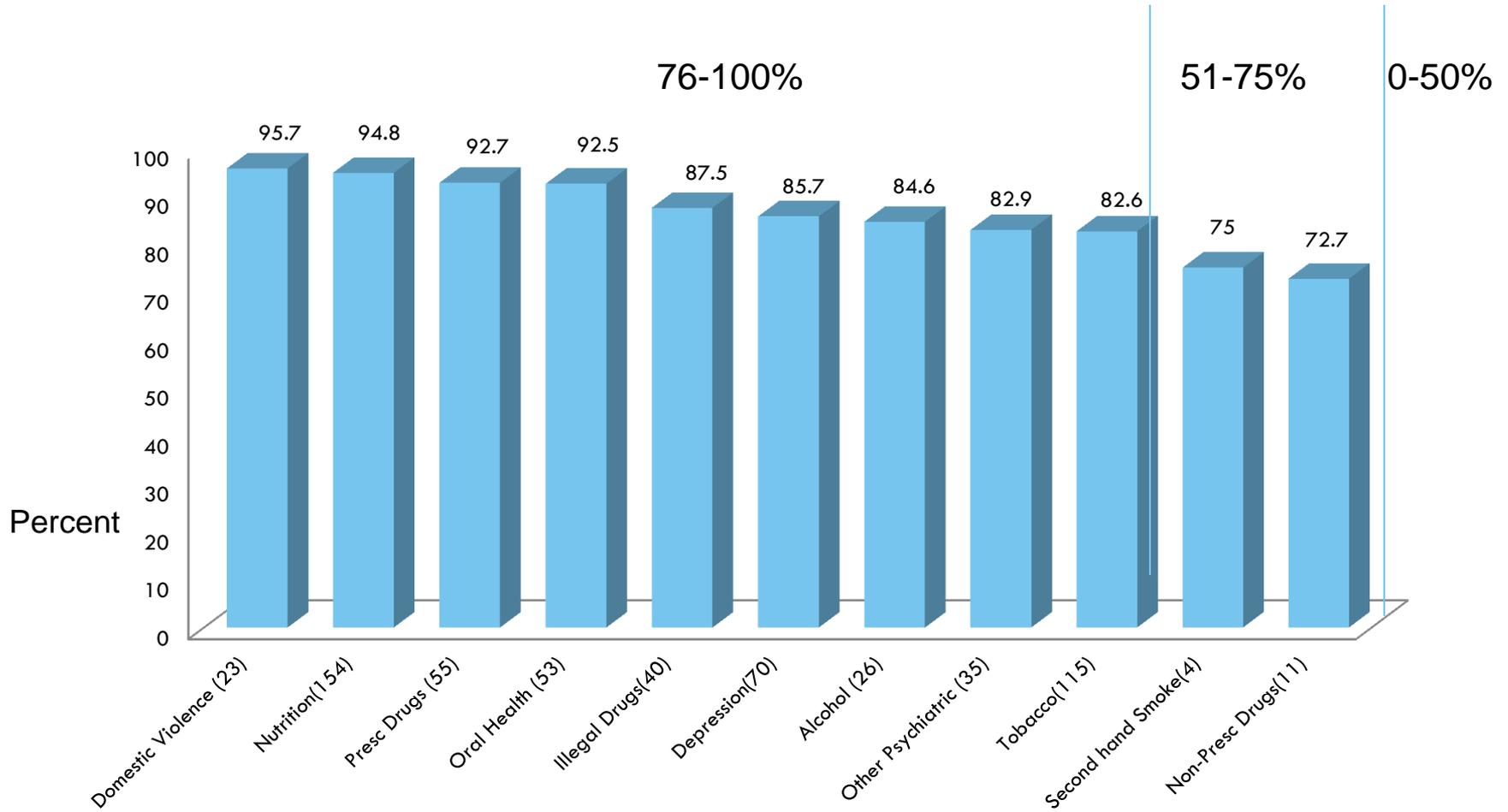
## Performance Category



## Risk Identified Initial Two Visits (%)



# Risk Assessments – Addressed or Referred (Of Identified) - Initial Two Visits



# An Examination of Periodontal Treatment, Dental Care, & Pregnancy Outcomes in an Insured Population in U.S.

Albert et al. 2010

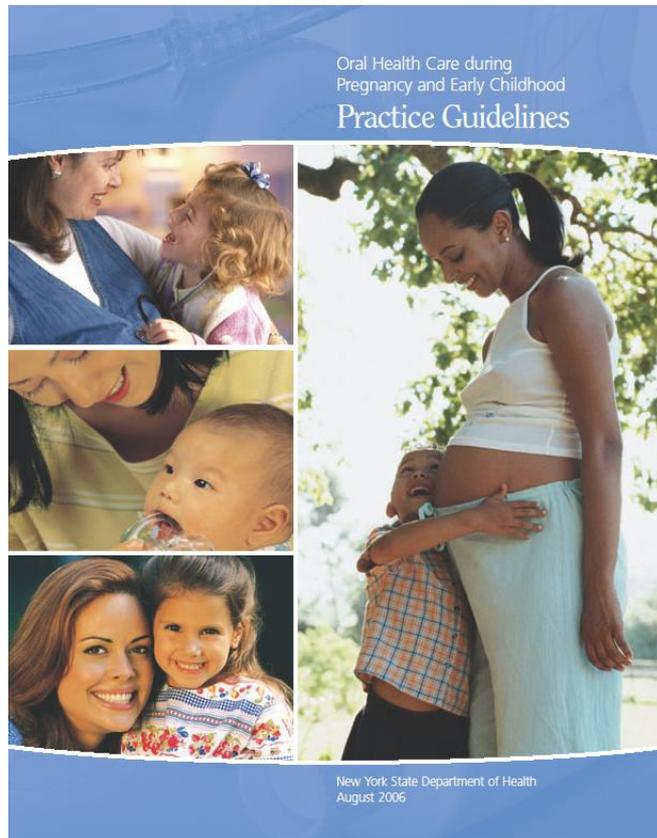
- Retrospective cohort study of 23,441 women enrolled in **Aetna** delivered 2003 – 2006
- Compared rates of LBW and PTB among 5 groups with respect to timing and type of dental treatment.
- Women who received preventive dental care had better birth outcomes than did those who received no treatment ( $p < .001$ )
- No evidence of increased odds of adverse birth outcomes from dental or periodontal treatment
- Am J Public Health

# Oral Health During Pregnancy 2009

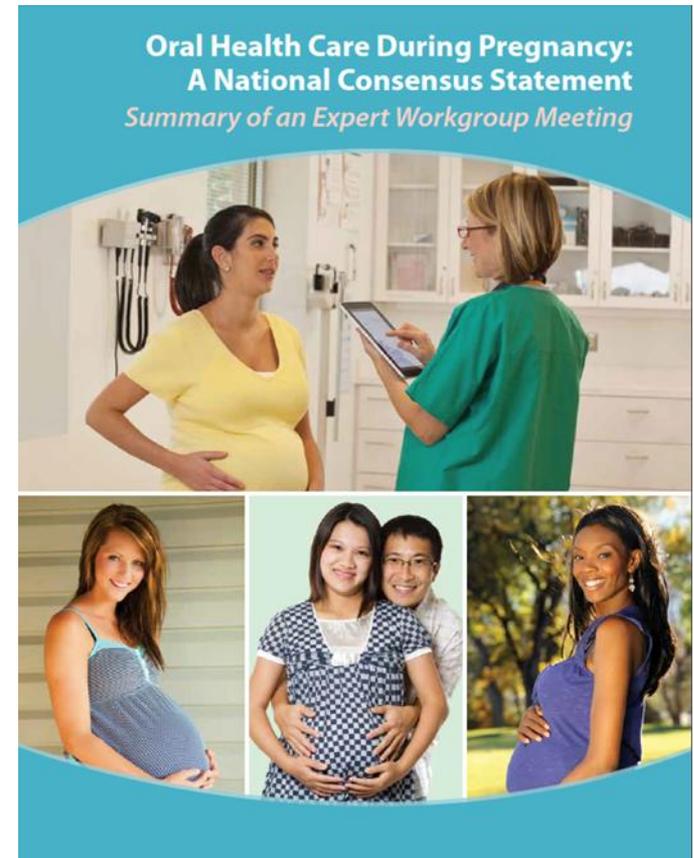
## Survey of OB-GYNs

- OB-GYN's largely recognize the importance of receiving routine dental care during pregnancy (80%) and agree that treatment of periodontal disease has a positive impact on pregnancy outcome.
- Yet, most do not ask about oral health (70%), do not provide patients with information about oral care, do not advise all pregnant patients to receive routine dental care (33%), and do not ask pregnant patients if they have seen a dentist in the past 12 months (50%).
- **75% of OB-GYN's reported a patient who was declined treatment from the dentist because of pregnancy.**
- This data suggests that encouraging Ob-gyns to advise patients about the importance of oral health during pregnancy might be well received.
- Morgan et al. J Matern Fetal Neonatal Med 2009

# Practice Guidelines and Consensus Statement



2006



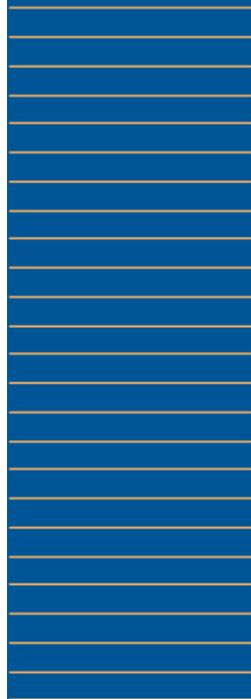
2012

# National Consensus Statement Purpose 2012

- Help professionals improve the provision of oral health care services during pregnancy
- Bring about changes in the health-care-delivery system
- Improve overall standard of care



*Guidelines for*  
**PERINATAL  
CARE** Seventh Edition



American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

The American College of  
Obstetricians and Gynecologists

WOMEN'S HEALTH CARE PHYSICIANS



October 2012

# Progress of Non-Oral Health Professionals

- National Interprofessional Initiative on Oral Health (NIIOH)
- Smiles for Life: A National Oral Health Curriculum
  - ▣ Created by Society of Teachers of Family Medicine
  - ▣ Endorsed by AAP, AAFP, ADA, ACNM, multiple PA and Nursing Associations
- Association of American Medical Colleges (AAMC) 2008
- American College of Obstetrics and Gynecology (ACOG) August 2013 committee opinion: *Oral Health During Pregnancy and Beyond to be just published*
  - ▣ Written by the Committee on Obstetric Practice and Committee on Health Care for Underserved Women

# Where are we going?

- Health Resources and Service Administration (HRSA)—primary Federal agency for improving access to health care services for people who are uninsured, isolated, or medically vulnerable—is developing **inter-professional oral health core clinical competencies**
- Incorporation of oral health into programs to improve outcomes.
  - ▣ Healthy Babies are Worth the Weight (HBWW) Kentucky
  - ▣ Michigan's Infant Mortality Reduction Plan

# July 2013 Perinatal & Infant Oral Health Quality Improvement (PIOHQI) Pilot Grant Program

- To integrate community-based approach to accomplish statewide availability and increased utilization of **preventive** dental care and **restorative** services for pregnant women and infants.
- The long-term goal: to achieve sustainable improvement in the oral health care status of this MCH population.
- Documentation of successful outcomes and lessons learned will be applied to the development of a **national strategic framework** for serving the oral health care needs of this targeted MCH population.
- Who?
  - ▣ Governments: State, County, City, Township
  - ▣ Nonprofits
  - ▣ Private institutions of higher education

# \$1.58 million to study link between oral bacteria and preterm birth July 2013

- Yiping Han: Professor of Periodontics Case Western
- Identified the link between Fusobacterium & preterm birth.
- Detected Fusobacterium in the amniotic fluid of women who went into preterm labor. Many of the women had tested **negative** for infection by the hospital lab, which did not use the DNA technique.
- “I think it’s becoming more and more obvious that the bacteria in the mouth don’t just stay in the oral cavity. Even bacteria that are harmless can become dangerous pathogens in other parts of the body.
- “The mouth is the gateway to our overall health. Good oral hygiene is very important, and a dentist’s job needs to go far beyond just ‘drill, fill and bill’.”



Pregnancy & EARly Lifestyle Improvement Study

Dr. Joshipouri 2013

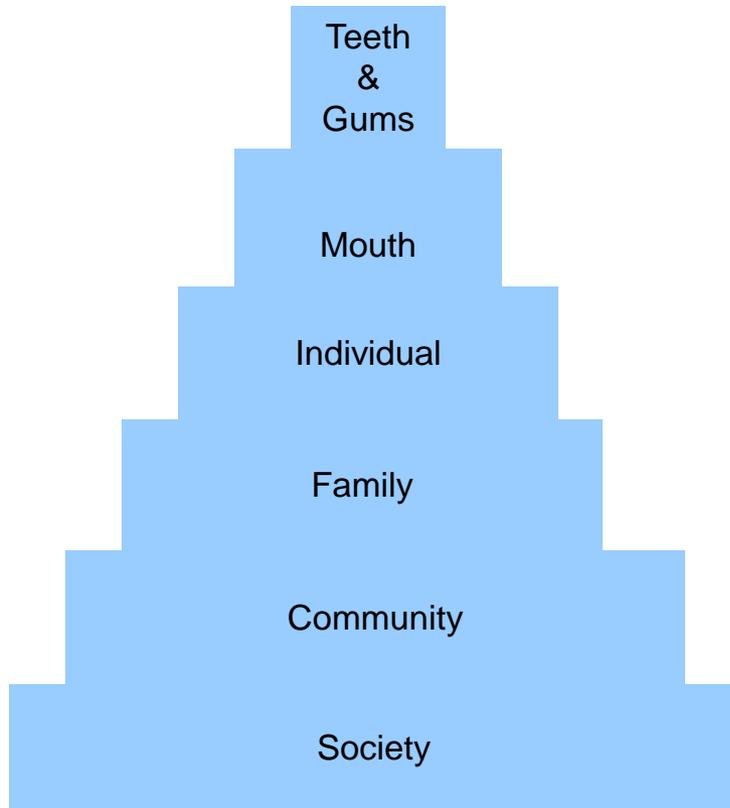
## **Pregnancy and EARly Lifestyle improvement Study:**

- **Funded for 5 years by NICHD & NIH Office of the Director**
- **Part of a consortium with six other US institutions and NIH**
- **Population will include overweight/obese non-diabetic pregnant women and their infants**
- **Nutrition & Physical activity Interventions during pregnancy & early childhood**
- **Outcomes include gestational weight gain, early infant growth and metabolic outcomes**

# Improving Birth Outcomes and Maternal Oral Health in Malawi with Xylitol

- Dr. Aagard's proposal to evaluate effect of maternal use of xylitol on birth outcomes
- Data from Finland demonstrated that mothers who chewed xylitol gum while breastfeeding preventing gum disease and caries in themselves and in their children
- Intervention: Pregnant women will be randomized to using xylitol products or placebo during pregnancy
- Outcome: decrease in rate of premature birth.

# Interventions – How to be most effective



- **Tooth: xylitol gum, chlorhexidene, fluoride varnish**
- **Mouth: brushing & flossing**
- **Individual: dental visit**
- **Family: Insurance coverage**
- **Community: education, water fluoridation, access to care**
- **Society: public policies**

# Dental care during pregnancy and early childhood should be as routine as an ultrasound.



Help me brush my teeth now and teach me how to take care of my mouth in the future.

